REPORT OF FINDINGS
OU-2 BULK PRODUCT TANK AREA
SOIL INVESTIGATION

GM WILMINGTON ASSEMBLY PLANT

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LIST OF ACRONYMS

AST	Aboveground Storage Tank
COC	Chain of Custody
COCR	Certificate of Completion of Remedy
CRA	Conestoga-Rovers & Associates
DNREC	Delaware Department of Natural Resources and Environmental Control
ECSA	Ecologically Sensitive Area
GM	General Motors
HSCA	Hazardous Substance Cleanup Act
PCB	Polychlorinated Biphenyl
PID	Photoionization Detector
QAPP	Quality Assurance Project Plan
SIRB	Site Investigation and Restoration Branch
STL	Severn Trent Laboratories
SVOC	Semi-Volatile Organic Compound
TAL	Target Analyte List
TCL	Target Compound List
URS	Uniform Risk-Based Standard
USCS	Unified Soil Classification System
VOC	Volatile Organic Compound
WRPA	Water Resource Protection Area

EXECUTIVE SUMMARY

General Motors (GM) operates an active vehicle assembly plant in Wilmington, Delaware. Operational Units 1 and 2 (OU-1 and OU-2), which are located in the bulk product storage areas, were the subject of a previous environmental assessment conducted by GM in 1998. The results from the investigation were provided to the Delaware Department of Natural Resources and Environmental Control (DNREC), and a review of the data showed minimal exceedances of DNREC Uniform Risk Based Standards (URS). Further investigation activities and subsequent remedial activities were conducted at OU-1 to address exceedances identified. The additional work at OU-1 resulted in no further action, as documented by DNREC's January 15, 2004 letter to GM. This report discusses additional investigation activities undertaken by GM to further investigate the minimal exceedances identified at OU-2.

The objectives of the investigation conducted by Conestoga-Rovers & Associates (CRA) in May 2005 was to further characterize the nature and extent of regulated substances at the OU-2 Area. This report discusses the findings from the surface and subsurface soil investigation. The results from the groundwater investigation will be presented under separate cover.

The soil investigation activities involved the installation of 38 soil borings. Surface soil samples were collected from 20 locations across the OU-2 Area and screened by the DNREC Site Investigation and Restoration Branch (SIRB) laboratory for Target Compound List (TCL) Volatile Organic Compounds (VOCs), TCL Semi-Volatile Organic Compounds (SVOCs), Polychlorinated Biphenyls (PCBs), and Target Analyte List (TAL) metals. Based on the SIRB screening results, 11 of the samples were sent for laboratory analysis. Samples were also collected from four former locations to allow for confirmation and delineation of impacts identified in the previous investigations.

Analytical data were compared to the URS for Restricted Use as provided in the DNREC Remediation and Standards Guidance. Comparison of data to the Restricted Use URS would be most appropriate for the current Site conditions and anticipated future use of the Site and is consistent with GM's approach at other similar facilities. The Restricted Use URS was exceeded for benzo (a) pyrene at four locations in the 0 to 2-foot below ground surface (bgs) interval. Since benzo(a)pyrene is the only parameter that exceeds the Restricted Use URS of 0.8 mg/kg, a modified URS of 8.0 mg/kg for benzo(a)pyrene was determined to be appropriate for the Site based on the Site Specific Standard development provisions provided in the DNREC Remediation Standards Guidance. The detected concentrations of benzo(a)pyrene at OU-2 are below the modified URS. Therefore, no further action to address benzo(a)pyrene is warranted.

Analytical results were compared to the URS for Restricted Use and the Modified URS for benzo(a)pyrene. A review of the data shows that there are no exceedances of the applicable

standards. A deed restriction will be placed on the property to limit future use to industrial/commercial activities. GM is requesting written concurrence form DNREC that no further action is required with regard to the soils in the OU-2 Area.

1.0 INTRODUCTION

1.1 BACKGROUND

General Motors Corporation (GM) operates an active vehicle assembly plant in Wilmington, Delaware (Site). A Site location map is provided as Figure 1.1. Bulk product storage areas occupy approximately 1.5 acres near the center of the plant and are divided into Operational Units 1 and 2 (OU-1 and OU-2) as shown on Figure 1.2. The OU-1 Area includes the pump house and the Tank L through Tank O aboveground storage tank (AST) containment area. The OU-2 area includes the Large AST Containment/Truck Unloading Rack and surrounding areas.

In 1998, GM conducted environmental assessments of the Large AST Area and the AST Containment/Truck Unloading Area. The results of the 1998 environmental assessments were provided to the Delaware Department of Natural Resources and Environmental Control (DNREC) in the following reports:

- Environmental Assessment Report - Large AST Area (EnecoTech Midwest, Inc., October 1998); and
- Environmental Assessment Report - AST Containment/Truck Unloading Rack (EnecoTech Midwest, Inc., October 1998).

Prior to 2002, there were no identified or documented releases of petroleum products or other hazardous substances, as reported in the two 1998 reports. On January 11, 2002, the GM Plant experienced a release of power steering fluid from Tank L, located in the AST containment areas in OU-1. A focused soil sampling plan was implemented followed by removal of impacted soils and additional soil characterization. A report on the findings of OU-1 soils was submitted DNREC in January 2004. DNREC approved the OU-1 soil findings and issued a no further action letter for OU-1 soils on January 15, 2004.

A review of the 1998 data showed minimal exceedances of DNREC Uniform Risk Based Standards (URS) in soils and groundwater in OU-2. GM prepared and submitted a work plan to investigate the soil and groundwater exceedances identified in 1998. The work plan was reviewed and approved by DNREC in February, 2005. The purpose of the OU-2 soil and groundwater investigation was to further characterize the nature and extent of regulated substances at the OU-2 Area.

This report discusses the findings from the surface and subsurface soil investigation in OU-2 area. The results from the groundwater investigation will be presented under separate cover.

1.2 SOIL INVESTIGATION OBJECTIVES

The objectives of the investigation were to further characterize the nature and extent of regulated substances identified in surface and subsurface soils of the OU-2 area during the 1998 investigation.

The investigation was conducted in accordance with protocols established under Delaware's Hazardous Substance Cleanup Act (HSCA) and implemented with the intent of obtaining sufficient Site data to develop remedial alternatives, if necessary, and/or to obtain a Certificate of Completion of Remedy (COCR) for the OU-2 area.

1.3 DESCRIPTION OF OU-2 AREA

Three existing tanks (Tanks A, B, and C) are located in the Large AST Area (see Figure 1.2). These tanks were installed prior to September 1955. The size and content of these ASTs are as follows:

- A - 39,000-gallon AST currently empty, formerly containing thinner;
- B - 60,900-gallon AST currently containing (less than 10,000 gallons) diesel fuel oil; and
- C - 40,000-gallon AST currently containing unleaded gasoline.

AST containment areas are located around each of the large ASTs and are constructed of approximately 4-foot earthen berm walls covered with crushed gravel. Product piping from the ASTs runs to a pump house to the east.

In addition, the former large AST known as AST A2 was identified by GM as a 39,000-gallon AST, which had previously contained thinner. This tank was decommissioned in the early 1980s. The former AST and its associated containment area were located directly north of the existing 40,000-gallon AST containing unleaded gasoline (Tank C). This area is currently utilized as a paved drive.

There are two AST containment areas and a pump house in the adjacent AST Containment/Truck Unloading Area. The northern AST containment area is constructed with 5-foot concrete walls and a stone-filled base. The southern AST containment area is constructed with 5-foot concrete walls and a concrete base. Each area contains four 12,000-gallon ASTs, which are identified by GM as Tanks H through O. Tanks H through K are located in the northern AST containment area, and Tanks L through O are located in the southern AST containment area. These containment areas were constructed prior to 1955. The contents of the ASTs were identified as:

OU-2 Area

- H - 12,000 gallon AST currently empty, formerly containing thinner;
- I - 12,000 gallon AST currently empty, formerly containing diesel oil;
- J - 12,000 gallon AST currently empty, formerly containing thinner;
- K - 12,000 gallon AST currently containing glycol (approximately 2.5%) and water (approximately 97.5%), formerly containing glycol;

OU-1 Area

- L - 12,000 gallon AST currently containing power steering fluid, formerly containing rear axle fluid;
- M - 12,000 gallon AST currently and formerly containing glycol;
- N - 12,000 gallon AST currently and formerly containing automatic transmission fluid; and
- O - 12,000 gallon AST currently and formerly containing manual transmission fluid.

OU-1, for which no further action is required, is comprised of the southern AST containment area (housing Tanks L through O) and the pump house. The remainder of the area described above comprises the OU-2 area, which is the subject of this investigation.

The truck unloading station is located directly west of the northern and southern AST containment areas and consists of a stone-filled area between two paved driveways, with steel pits housing the unloading piping. Product piping from the truck unloading station runs underground to the pump house, located between the two AST containment areas, and then to the respective ASTs. Additional piping runs from the ASTs to the plant for use.

1.4 GEOLOGY

A review of soil borings advanced during this and previous investigations show the presence of a fill material from ground surface to depths ranging from approximately 5 feet below ground surface (bgs) to 10 feet bgs throughout much of the storage tank areas. The fill generally consists of sands, silts, and clays. In some areas, such as within the diked containment areas, a few inches to more than a foot of crushed stone is present.

As part of this investigation, five soil borings were installed to a depth of 40 feet bgs to determine if a continuous sand layer was present below the fill, as was suggested by the 1998 cross sections. The soil boring logs from this investigation indicate the presence of a continuous sand layer ranging from 16 to 30 feet in thickness with starting depths ranging from approximately 7.8 feet bgs to 11.5 feet bgs and extending to depths ranging from approximately 23.8 feet bgs to 40 feet bgs. The sand layer is underlain by reddish-brown clay.

The natural soils present in this area are associated with the Cretaceous Age (65-136 MY) Potomac Formation. The Potomac Formation is principally variegated silt and/or clay with interbedded quartzitic sands. This soil description agrees with the stratigraphic logs from the previous investigations. The Potomac Formation consists of deltaic fluvial deposits which rest unconformably upon Precambrian-Age (> 570 MY) basement rock, which is considered to be the Wilmington Complex gneiss in the vicinity of the Site. The thickness of the Potomac Formation on-Site is unknown, however published literature indicates that the Potomac Formation can be relatively thin (less than 50 feet) in areas near the Fall Line, as is the case with this Site. The Fall Line represents a lineament (fault) separating the igneous and metamorphic rocks of the Piedmont Province from the unconsolidated, flat-lying sediments of the Atlantic Coastal Plain.

2.0 OU-2 SOIL INVESTIGATION ACTIVITIES

The soil investigation activities included the installation of 38 soil borings. Surface and subsurface soil samples were collected and analyzed in order to determine the nature and extent of regulated substances at OU-2. Soil boring installation and soil sampling activities took place from May 2, 2005 to May 12, 2005.

2.1 SURFACE SOIL SCREENING

At the request of the DNREC, and with the intent of obtaining a COCR, surface soil samples (i.e., 0 to 2 feet bgs) were collected from 20 locations across the OU-2 area as illustrated on Figure 2.1. Soil borings were advanced using a direct push (i.e., Geoprobe) drill rig. Samples were collected using a macro core sampler (4 feet in length and 2 inches in diameter) lined with a disposable acetate liner. Upon retrieval, soil samples were logged noting soil type, color, stratigraphy, moisture, visual evidence of impact, and field screened for VOCs using a photoionization detector (PID). All collected soil samples were described and classified according to the Unified Soil Classification System (USCS). Soil boring logs are provided in Appendix A.

The purpose of the surface soil sampling was to identify other potentially impacted areas that may require further investigation. The surface soil samples were split; one set of samples was sent to DNREC's Site Investigation and Restoration Branch (SIRB) laboratory and the other set was sent to Severn Trent Laboratories of Edison, New Jersey (STL Edison) to be held pending direction from DNREC. The samples sent to DNREC's SIRB laboratory were screened for Target Compound List (TCL) Volatile Organic Compounds (VOCs), TCL Semi-Volatile Organic Compounds (SVOCs), Polychlorinated Biphenyls (PCBs), and Target Analyte List (TAL) metals. Based on the results of the screening, DNREC requested analysis of the following samples:

Sample Location	*Parameters*
SB2-05	TCL VOCs and total metals
SB4-05	TCL VOCs
SB5-05	TCL SVOCs and total metals
SB6-05	TCL SVOCs
SB8-05	TCL SVOCs
SB12-05	TCL VOCs, TCL SVOCs, and total metals
SB14-05	TCL VOCs, TCL SVOCs, and total metals
SB17-05	Total metals

SB18-05	TCL SVOCs and total metals
SB19-05	PCBs and Pesticides
SB20-05	PCBs and Pesticides

2.2 FURTHER CHARACTERIZATION OF 1998 SOIL DATA

Samples were collected from the following areas to allow for further characterization of impacts identified in the 1998 investigations:

- Former Location HA-2
- Former Location HA-4
- Former Location PH-49
- Former Location PH-50

These areas were sampled to confirm and delineate potential impacts identified in the previous investigations. The sample locations are also shown on Figure 2.1.

Soil borings PH-202, PH-206, PH-205, PH-HA-2, and PH-HA-4 were completed with a hand auger. All other borings were advanced using a direct push (i.e., Geoprobe) drill rig. Samples were collected using a macro core sampler (4 feet in length and 2 inches in diameter) lined with a disposable acetate liner. Upon retrieval, soil samples were logged noting soil type, color, stratigraphy, moisture, visual evidence of impact, and field screened for VOCs using a PID. All collected soil samples were described and classified according to the USCS. Soil boring logs are provided in Appendix A.

Samples were shipped to STL Edison under standard chain of custody (COC) protocols. Additional details on the sampling for each area are provided in the following sections.

2.2.1 FORMER HA-2 LOCATION

Previous near-surface water samples from this area had detections of PCBs that were considered suspect due to the lack of corresponding detections in the soil samples. As part of this investigation, two near-surface soil samples were collected from locations PH-201 and PH-202. The samples were collected from the 0.5-foot interval immediately above the level of near-surface water identified in the borings. Water samples (PH-203

and PH-204) were collected from borings PH-201 and PH-202, respectively. A third soil sample was collected at a depth of 3 to 4 feet bgs at the original HA-2 location.

The soil samples were analyzed for PCBs. As stated in the work plan, the water samples were to be analyzed for PCBs based on the results of the soil samples. Soil analytical results for PH-201 were non-detect for PCBs, and therefore the corresponding water sample was not analyzed. PCBs were detected, however, in the soil sample from location PH-202. As such, the corresponding water sample (PH-203) was analyzed for PCBs.

2.2.2 FORMER HA-4 LOCATION

The 1998 HA-4 soil sample, collected from a depth of 2 to 2.5 feet bgs, exceeded the unrestricted use URS for ethylbenzene, toluene, and xylenes. As part of this investigation, eight soil samples were collected from this area to confirm and delineate the VOC impacts. One sample (PH-HA4) was collected from the 3 to 4-foot interval at the original HA-4 location. Six samples were also collected from the 2 to 2.5-foot and 3 to 4-foot intervals at locations approximately 8 feet to the north (PH-205), east (PH-206), and west (PH-208) of the original HA-4 location. One sample was collected south of HA-4 (PH-207) from 0 to 2 feet bgs. All of the aforementioned samples were analyzed for TCL VOCs.

2.2.3 FORMER PH-49 LOCATION

The PH-49 soil sample collected in 1998 from a depth of 2 to 4 feet bgs exceeded the restricted use URS for benzo (a) pyrene. During this investigation, fourteen soil samples were collected from the PH-49 location. One sample was collected at the original PH-49 location from the 0 to 2 feet bgs interval, and one sample was collected from 4 to 6 feet bgs. Both of these samples were analyzed for TCL SVOCs. Samples were collected from the 0 to 2 feet bgs, 2 to 4 feet bgs, and 4 to 6 feet bgs intervals at four locations north (PH-210), west (PH-211), south (PH-212), and east (PH-213) of the original PH-49 location. The samples were analyzed for TCL SVOCs. The deeper samples (4 to 6 feet bgs interval) at these locations were held for analyses pending the results from the two shallow samples (0 to 2 feet bgs and 2 to 4 feet bgs) collected at each location. Based on the results of the shallower samples, only the 4 to 6 feet bgs sample from PH-211 was analyzed for TCL SVOCs.

2.2.4 FORMER PH-50 LOCATION

The PH-50 soil sample collected in 1998 from a depth of 2 to 4 feet bgs exceeded the unrestricted use URS for benzo (a) pyrene. Soil samples collected during a sample event in May 2002 exceeded the URS reference criteria for benzo (a) pyrene at 3 of 4 additional sampling locations around PH-50 at depths of 2 to 3 feet bgs. In May 2005, an additional fourteen soil samples were collected from the PH-50 location. Two samples (0 to 2 feet bgs and 4 to 6 feet bgs) were collected from the original PH-50 location. Samples were collected at the 0 to 2 feet bgs, 2 to 4 feet bgs, and 4 to 6 feet bgs intervals at four locations (PH-214, PH-215, PH-216, and PH-217) around the original PH-50 location. The samples were analyzed for TCL SVOCs. The deeper samples (4 to 6 feet bgs interval) at these locations were held for analyses pending the results from the two shallow samples (0 to 2 feet bgs and 2 to 4 feet bgs) collected at each location. Based on the results of the shallower samples, the 4.0 to 6.0 feet bgs samples from PH-215 and PH-217 were analyzed for TCL SVOCs.

3.0 SELECTION OF REFERENCE CRITERIA

3.1 REFERENCE CRITERIA

DNREC provides Remediation Standards Guidance (Guidance) under HSCA. The Guidance offers three remediation standard options:

- Background Standards;
- Uniform Risk-Based Standards; and
- Site Specific Standards.

In order to determine the need for additional investigations and/or remediation at the Site, the sample data obtained during this investigation were compared to the URS for protection of human health in a non-critical water resource area restricted use setting (updated in December 1999). Any one of the three standards listed above may be used as clean-up levels. HSCA also states that a site may use a combination of the three standards in different areas of a site for different chemicals of concern within the same or different areas.

The URS are provided in the Guidance for both Restricted Use Settings and Unrestricted Use Settings. For soil, the URS are different for the two settings. In this report, both the restricted and unrestricted URS for soil are cited as reference criteria.

A restricted use setting is one in which the current or future use of the site will be restricted in some way (e.g., through deed restriction or engineering controls) to ensure protection of human health. An unrestricted use setting is one in which the current or future use will not be restricted in any way.

GM has elected to use the restricted use criteria as this would be most appropriate for the current Site conditions and anticipated future use of the Site and is consistent with the approach at other similar facilities.

3.2 CONFIRMATION OF NON-CRITICAL WATER RESOURCE STATUS

In preparation for this investigation, GM determined the status of the investigation area relative to its watershed status in accordance with HSCA. The purpose of making this determination was to help select the reference criteria for chemical concentrations. For

example, the URS are different for soils in a Critical versus Non-Critical Water Resource Area.

Relative to the Site, located in New Castle County, a Critical Water Resource Area would be an area that is either:

1) Within 500 feet of a public or private water supply well;
2) Within 500 feet of a public or private surface water supply source; or
3) Any area within a designated New Castle County Water Resource Protection Area (WRPA) or other areas in New Castle County within a delineated wellhead or groundwater protection area.

The tank areas are centrally located in the approximate 140-acre plant, more than 500 feet from the property boundaries. There are no wells or surface water supplies within 500 feet of the area of investigation.

The following map was obtained from the University of Delaware to check Condition (3) above: "Water Resource Protection Areas for City of Newark, City of Wilmington, New Castle County, Delaware (Revised May 2001), Map 1 of 3". This reference shows that the GM Plant is not within a WRPA or protection area of any other category. DNREC has previously concurred with this categorization. Therefore, critical water resource area remediation standards are not applicable to the OU-2 Area. Data comparisons in this report were made to the URS for protection of human health in a non-critical water resource area restricted use setting.

4.0 OU-2 SOIL INVESTIGATION RESULTS

Analytical results for soil samples are summarized and compared to DNREC URS Remediation Standards in Table 4.1 and Table 4.2. Table 4.1 presents the data for the surface soil samples that were collected as per DNREC's request. Table 4.2 presents the data for the samples that were collected as part of the investigation into Former Locations HA-2, HA-4, PH-49, and PH-50. Near-surface water results are summarized and compared to DNREC URS Remediation Standards for a non-critical water resource area in Table 4.3.

4.1 DATA VALIDATION

Quality assurance analyses performed in conjunction with the sample analyses included field duplicate samples, laboratory surrogate analyses, method blanks, blank spikes, and matrix spike/matrix spike duplicate samples. Prior to use in this report, analytical data were reviewed by an independent third party (CRA) for quality assurance. The quality control criteria used to assess the data were established by the methods and the Quality Assurance Project Plan (QAPP). Application of quality assurance criteria was consistent with the following guidance documents:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999; and

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Review", USEPA-540/R-94/013, February 1994.

Data validation reports are provided in Appendix B. Laboratory data reports are provided in Appendix C.

4.2 SOIL RESULTS

The objective of this project with respect to soil impacts is to meet the DNREC URS for restricted use. Delineation to the restricted use criteria is appropriate for the Site based on current and future use and would be consistent with GM's approach at similar facilities.

The following sections describe the results of the analysis performed on the soil samples that were collected as part of this investigation. Exceedances of the restricted use URS

for the surface samples (0 to 2 feet bgs) are shown on Figure 4.1. No exceedances of the restricted use criteria were identified below 2 feet bgs.

4.2.1 SURFACE SOIL SCREENING

As mentioned in Section 2.1, soil borings were advanced at 20 locations across the OU-2 area from 0 to 2 feet bgs. Soil samples were collected from each of the 20 locations and screened by the DNREC SIRB laboratory. Based on DNREC's screening results, 11 of the 20 samples were submitted for chemical analysis.

The restricted use URS was exceeded for benzo (a) pyrene at locations SB6-05 and SB12-05. The exceedances from the surface soil sampling activities described above are shown on Figure 4.1. Further evaluation of this exceedance is discussed in Section 4.3.

4.2.2 FORMER HA-2 LOCATION

Analytical results for the soil sample collected from inside the containment for Tanks H, I, J, K at the original HA-2 location from 3 feet to 4 feet bgs were non detect for PCBs. The soil sample from PH-201 located outside the containment was collected from 1.5 feet bgs and was also non-detect for PCBs. Based on the non detect result at PH-201, it was not necessary to analyze the corresponding water sample. The soil sample from PH-202, located inside the containment, was collected from 0 feet to 0.5 feet bgs due to the presence of water beneath the ballast within six inches of the surface. Aroclor 1254 was detected in the soil sample at a concentration of 270 µg/kg, which is below the restricted use URS of 3,000 µg/kg. The corresponding water sample (PH-203) result from the PH-202 location had a detection of Aroclor 1260 at a concentration of 4.7 µg/L.

The surface water URS for protection of the environment for Aroclor 1260 is 94 µg/L. The groundwater URS for the protection of human health is 0.03 µg/L. Based on Section 4.2 of the HSCA Guidance, the URS criteria for the protection of the environment is applicable to sites which are retained for further ecological evaluation after preliminary screening or have been determined to pose a threat to the environment, which is not the case for the OU-2 Area (see Section 5.0). There is no surface water URS for the protection of human health. Since the sample is not representative of groundwater, the groundwater standards would not apply. Likewise, the surface water standards for the protection of the environment are not applicable to this area. Used only as a screening tool, the surface water standard would be more appropriate for the sample (i.e., collected within 6 inches of the surface within a containment area). A

comparison of the sample concentration (4.7 µg/L) to the URS (94 µg/L) indicates that no further action is required at this location.

4.2.3 FORMER HA-4 LOCATION

There were no exceedances of the restricted use URS in any of the samples collected from the former HA-4 location or surrounding locations. No further activities are planned for this area.

4.2.4 FORMER PH-49 LOCATION

The restricted use URS was exceeded at location PH-211 for benzo (a) pyrene in the 0 to 2-foot bgs sample. Further evaluation of this exceedance is discussed in Section 4.3. No other exceedances of the restricted use URS were identified in samples from the PH-49 area.

4.2.5 FORMER PH-50 LOCATION

The restricted use URS was exceeded for benzo (a) pyrene at the PH-214 location. Further evaluation of this exceedance is discussed in Section 4.3. No other exceedances of the restricted use URS were identified in the PH-50 area.

4.3 DISCUSSION OF BENZO (A) PYRENE SOIL RESULTS

Benzo (a) pyrene was the only parameter detected in soil samples from OU-2 which exceeds the Restricted Use URS. Four locations (SB6-05, SB12-05, PH-211, and PH-214) showed detections of benzo (a) pyrene at concentrations above the Restricted Use URS at 0 to 2 feet bgs. The detected concentrations were less than one order of magnitude above the Restricted Use URS. Although there are detections of benzo (a) pyrene and other analytes both in the surface soil and also at depths greater than 2 feet bgs, they do not exceed the restricted use URS.

In addition to the DNREC URS approach, which was used for the initial screening of the soil data results, the Guidance under HSCA allows a Site-Specific Standard (SSS) approach to be used in lieu of the URS where appropriate. Under the SSS approach,

there are several site-specific methodologies that can be employed to derive site-specific standards. The methodologies are as follows:

Method 1 - Modified URS Approach;
Method 2 - Pathway Analysis Approach; and
Method 3 - Quantitative Risk Assessment Approach.

The modified URS approach provides a means to develop site-specific standards by modifying some of the basic assumptions used in the URS approach to reflect actual site conditions or data. The method provides several approaches, one of which is the "Site-Specific Standard Calculation for a Single Analyte". In cases where there is a single analyte found at concentrations exceeding the URS, but at concentrations generally less than an order of magnitude above the URS, the respective URS may be modified to reflect the 1 in 100,000 risk level or hazard index of 1.

Applying this modification to the URS for benzo (a) pyrene, increases the criteria from 0.8 mg/kg to 8.0 mg/kg. The detected concentrations of benzo (a) pyrene in Site soils from 0 to 2 feet bgs range from 0.21 mg/kg (estimated) to 3.2 mg/kg, all of which are below the modified URS of 8.0 mg/kg. As noted earlier in this section, soil samples from depths greater than 2 feet bgs did not contain any concentrations of benzo (a) pyrene greater than the URS of 0.8 mg/kg. As a result, no further action is warranted to address soils in OU-2 impacted by benzo (a) pyrene.

5.0 ECOLOGICALLY SENSITIVE AREAS ANALYSIS

The DNREC Remediation Standards Guidance was used in order to determine if ecologically sensitive areas (ESCA) exist at the Site and if endangered and/or threatened species are expected to be present at the Site currently.

The initial screening tools provided in the guidance provide a method for ascertaining whether further ecological evaluation is warranted at the Site. The answers to these preliminary screening questions are discussed in detail below.

a) There are no federal or state parks, preserves, forests, wildlife refuges or other federal or state administered natural or recreational areas, as well as other recognized parklands, open spaces, or other mapped natural areas managed by local governments, non-profit organizations, or others present on-Site or immediately adjacent to the Site.

b) There are no developed and/or undeveloped private and/or public beaches present on-Site or immediately adjacent to the Site.

c) There are no waterways (streams, rivers, lakes, tidal waters), including associated wetlands, floodplains, and riparian zones present on-Site or immediately adjacent to the Site.

d) There are no woodlands/forests in excess of 20 acres in size present on-Site or immediately adjacent to the Site.

e) Based on the answers to a) through d), therefore, the Site is not within 2,000 feet of an ecologically sensitive area.

f) The Site does not support a sufficient area (i.e., greater than ¼ acre) of vegetation which could offer fauna either shelter or a food source.

g) There is no evidence of stressed vegetation, barren soil, dead animals, fish kills, or other ecological detriments in the OU-2 Area.

Maps and figures supporting the statements made above are provided in Appendix E.

In addition, GM obtained data from DNREC Division of Fish and Wildlife (Delaware Natural Heritage Program) with regards to Critical Habitats. A data search was

conducted in order to provide GM with the following information under the jurisdiction of the DNREC Fish and Wildlife Division.

- Critical Habitat, including breeding areas, migratory areas, and wintering areas for State or Federal designated endangered or threatened species, or habitat known to be used by designated, proposed, or under review endangered or threatened species;

- Spawning, migration, and feeding areas critical for the maintenance or anadromous fish/shellfish species within river, lake, or coastal tidal water; and

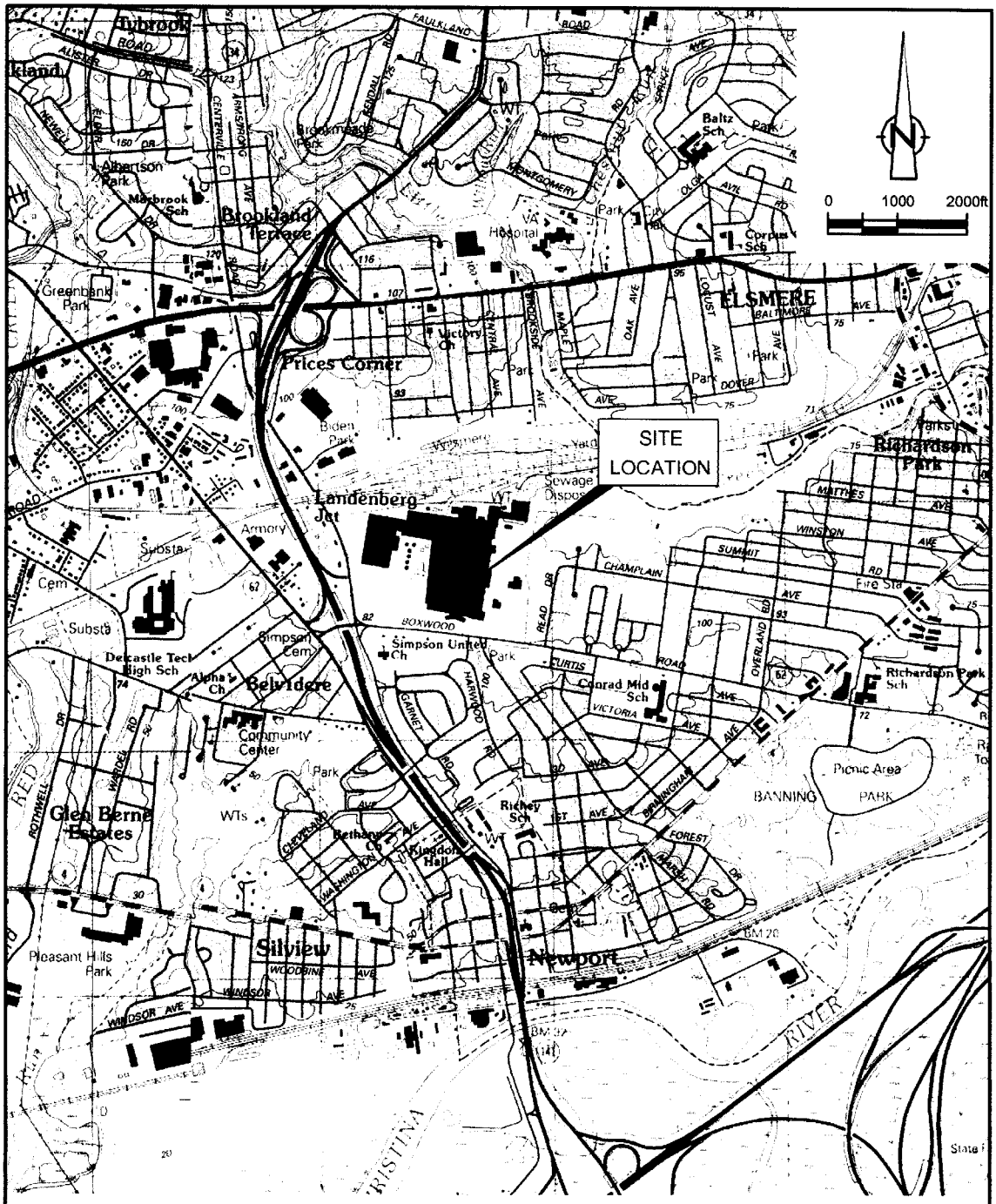
- Recognized critical habitats for State listed species having the Delaware Natural Heritage Program Ranking of S1, S2, S3, S4, SU, SH, SX, and SE.

Correspondence from the Division of Fish and Wildlife is provided in Appendix D.

Based on these observations, and the results of the Critical Habitat data search, no environmentally sensitive habitats exist at the Site and no endangered and/or threatened species are expected to be present at the Site currently. In addition, the Site is located in a highly developed area bordered by residential properties, railway tracks and Delaware State Road 141, which further supports that ecologically sensitive areas are not present at the Site.

6.0 DISCUSSIONS AND CONCLUSIONS

Analytical results were compared to the URS for Restricted Use and the Modified URS for benzo(a)pyrene. A review of the data shows that there are no exceedances of the applicable standards. A deed restriction will be placed on the property to limit future use to industrial/commercial activities. GM is requesting written concurrence from DNREC that no further action is required with regard to the soils in the OU-2 Area.



REFERENCE:

UNITED STATES GEOLOGIC SURVEY
WILMINGTON SOUTH QUADRANGLE, DEL
TOPOGRAPHIC, 7.5 MINUTES SERIES 1997
SCALE: 1:24,000

figure 1.1

SITE LOCATION MAP
GENERAL MOTORS PLANT
Wilmington, Delaware

17338-00(006)GN-WA001 AUG 19/2005

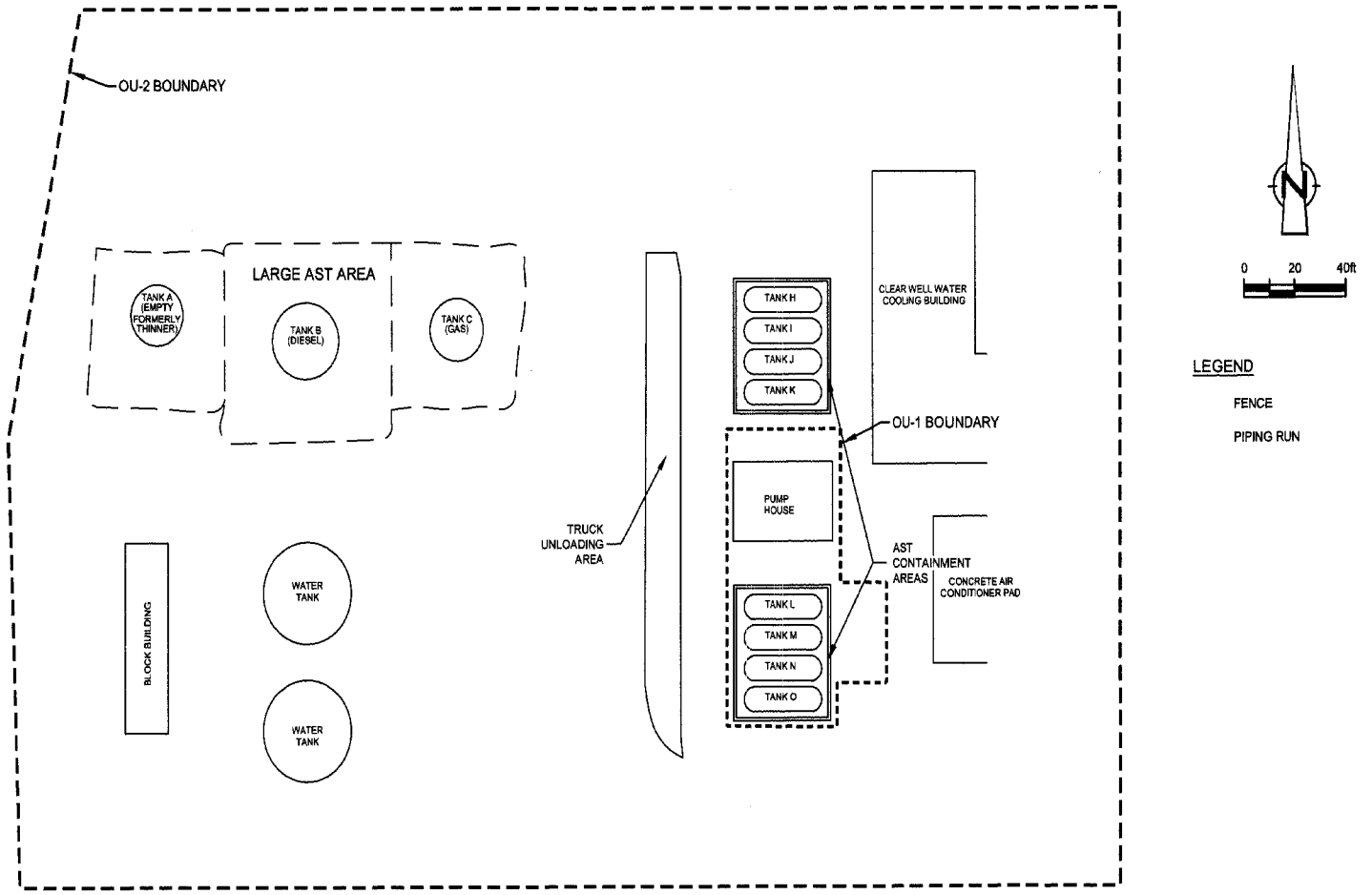


figure 1.2

LOCATION OF OU-1 AND OU-2
GENERAL MOTORS PLANT
Wilmington, Delaware

17338-00(006)GN-WA002 AUG 23/2005

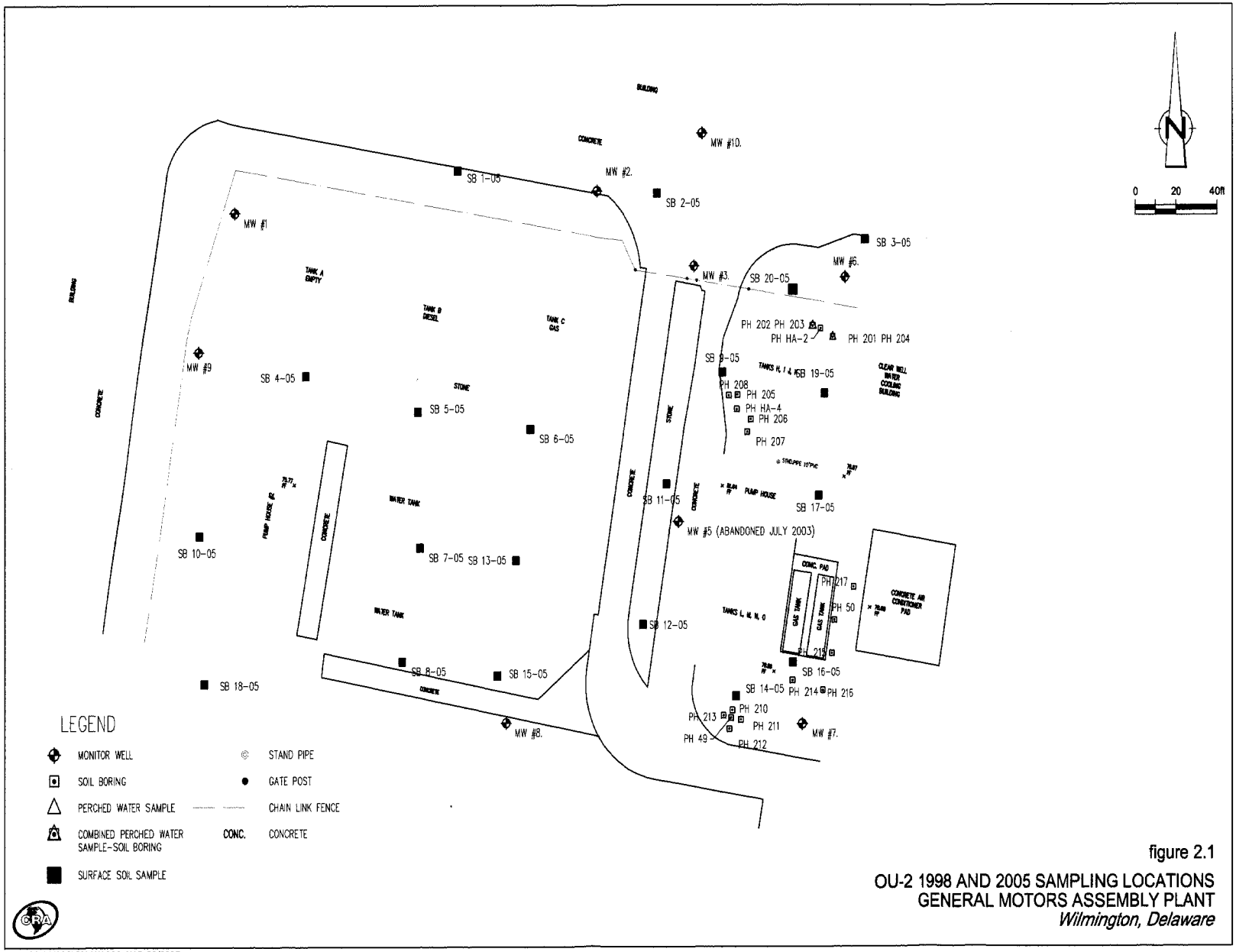
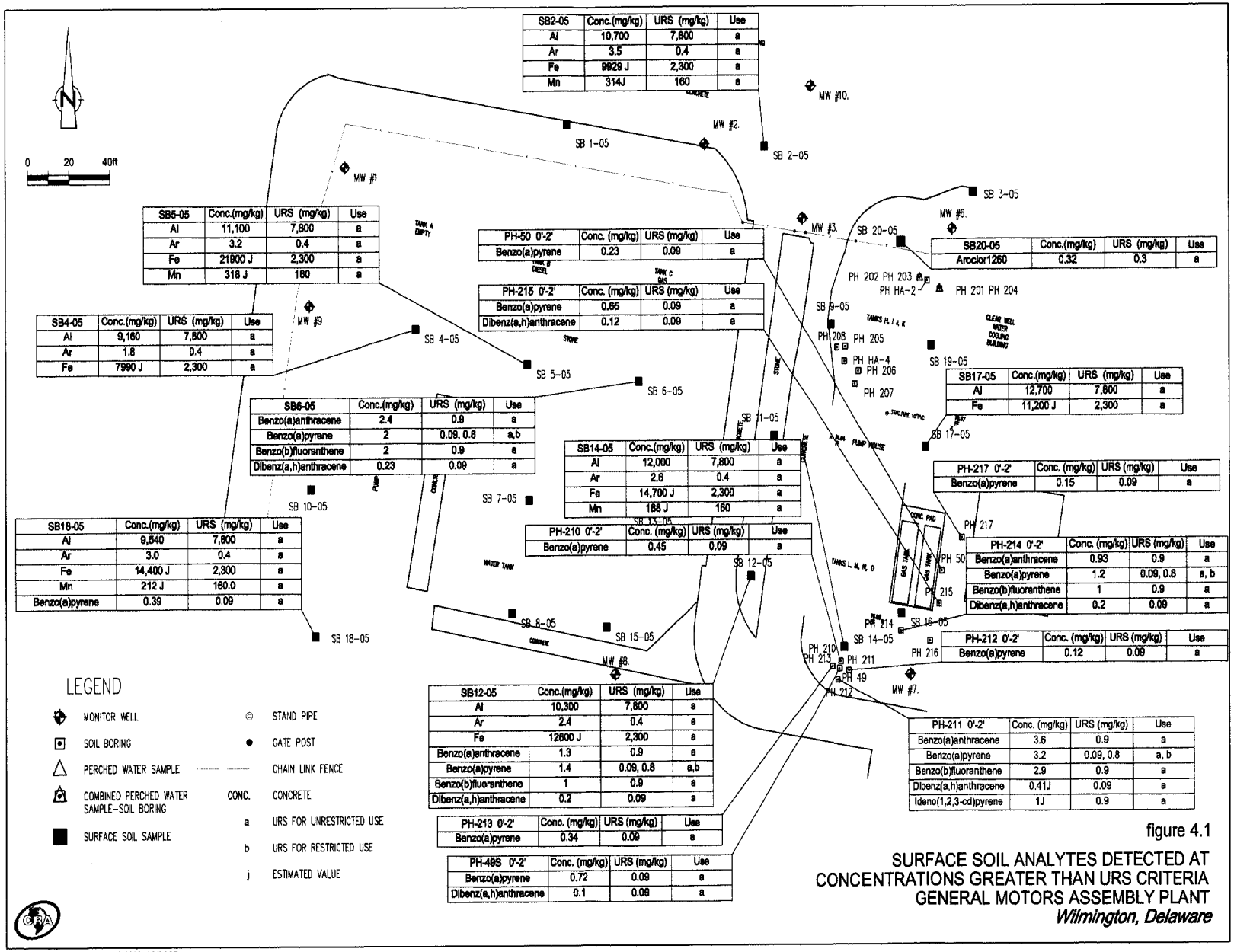


figure 2.1

OU-2 1998 AND 2005 SAMPLING LOCATIONS
GENERAL MOTORS ASSEMBLY PLANT
Wilmington, Delaware

17338-00(006)GN-WA003 AUG 23/2005



SB2-05	Conc.(mg/kg)	URS (mg/kg)	Use
Al	10,700	7,800	a
Ar	3.5	0.4	a
Fe	9929 J	2,300	a
Mn	314J	160	a

SB5-05	Conc.(mg/kg)	URS (mg/kg)	Use
Al	11,100	7,800	a
Ar	3.2	0.4	a
Fe	21900 J	2,300	a
Mn	318 J	160	a

SB4-05	Conc.(mg/kg)	URS (mg/kg)	Use
Al	9,160	7,800	a
Ar	1.8	0.4	a
Fe	7990 J	2,300	a

SB6-05	Conc.(mg/kg)	URS (mg/kg)	Use
Benzo(a)anthracene	2.4	0.9	a
Benzo(a)pyrene	2	0.09, 0.8	a,b
Benzo(b)fluoranthene	2	0.9	a
Dibenz(a,h)anthracene	0.23	0.09	a

SB18-05	Conc.(mg/kg)	URS (mg/kg)	Use
Al	9,540	7,800	a
Ar	3.0	0.4	a
Fe	14,400 J	2,300	a
Mn	212 J	160.0	a
Benzo(a)pyrene	0.39	0.09	a

PH-50 0'-2'	Conc. (mg/kg)	URS (mg/kg)	Use
Benzo(a)pyrene	0.23	0.09	a

PH-215 0'-2'	Conc. (mg/kg)	URS (mg/kg)	Use
Benzo(a)pyrene	0.65	0.09	a
Dibenz(a,h)anthracene	0.12	0.09	a

SB14-05	Conc.(mg/kg)	URS (mg/kg)	Use
Al	12,000	7,800	a
Ar	2.6	0.4	a
Fe	14,700 J	2,300	a
Mn	188 J	160	a

PH-210 0'-2'	Conc. (mg/kg)	URS (mg/kg)	Use
Benzo(a)pyrene	0.45	0.09	a

SB12-05	Conc.(mg/kg)	URS (mg/kg)	Use
Al	10,300	7,800	a
Ar	2.4	0.4	a
Fe	12800 J	2,300	a
Benzo(a)anthracene	1.3	0.9	a
Benzo(a)pyrene	1.4	0.09, 0.8	a,b
Benzo(b)fluoranthene	1	0.9	a
Dibenz(a,h)anthracene	0.2	0.09	a

PH-213 0'-2'	Conc. (mg/kg)	URS (mg/kg)	Use
Benzo(a)pyrene	0.34	0.09	a

PH-49S 0'-2'	Conc. (mg/kg)	URS (mg/kg)	Use
Benzo(a)pyrene	0.72	0.09	a
Dibenz(a,h)anthracene	0.1	0.09	a

SB20-05	Conc.(mg/kg)	URS (mg/kg)	Use
Aroclor1260	0.32	0.3	a

SB17-05	Conc.(mg/kg)	URS (mg/kg)	Use
Al	12,700	7,800	a
Fe	11,200 J	2,300	a

PH-217 0'-2'	Conc. (mg/kg)	URS (mg/kg)	Use
Benzo(a)pyrene	0.15	0.09	a

PH-214 0'-2'	Conc. (mg/kg)	URS (mg/kg)	Use
Benzo(a)anthracene	0.93	0.9	a
Benzo(a)pyrene	1.2	0.09, 0.8	a, b
Benzo(b)fluoranthene	1	0.9	a
Dibenz(a,h)anthracene	0.2	0.09	a

PH-212 0'-2'	Conc. (mg/kg)	URS (mg/kg)	Use
Benzo(a)pyrene	0.12	0.09	a

PH-211 0'-2'	Conc. (mg/kg)	URS (mg/kg)	Use
Benzo(a)anthracene	3.6	0.9	a
Benzo(a)pyrene	3.2	0.09, 0.8	a, b
Benzo(b)fluoranthene	2.9	0.9	a
Dibenz(a,h)anthracene	0.41J	0.09	a
Ideno(1,2,3-cd)pyrene	1J	0.9	a

figure 4.1

SURFACE SOIL ANALYTES DETECTED AT CONCENTRATIONS GREATER THAN URS CRITERIA
GENERAL MOTORS ASSEMBLY PLANT
Wilmington, Delaware

17338-00(006)GN-WA004 AUG 19/2005

TABLE 4.1

SURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location				Non-Critical Water Resource Area (1)		*SB2-05*	*SB4-05*	*SB5-05*	*SB5-05*	*SB6-05*	*SB8-05*	*SB12-05*	*SB14-05*
Sample Identification						*050205-EAP-002*	*050305-EAP-006*	*050305-EAP-005*	*050305-EAP-0055*	*050305-EAP-004*	*050305-EAP-025*	*050205-EAP-009*	*050205-EAP-010*
Sample Date		Typical DE Soil	Default	Unrestricted Use	Restricted Use	*5/2/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/2/2005*	*5/2/2005*
Sample Depth		Conc.	Background	Surface Soil	Surface Soil	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*
Sample Type									*Duplicate*				
Volatile Organic Compounds	*Units*			a	b								
1,1,1-Trichloroethane	mg/kg	NA	NA	160	4100	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
1,1,2,2-Tetrachloroethane	mg/kg	NA	NA	0.6	29	0.12 U	0.12 U	--	--	--	--	0.11 U	0.11 U
1,1,2-Trichloroethane	mg/kg	NA	NA	1	100	0.34 U	0.35 U	--	--	--	--	0.34 U	0.33 U
1,1-Dichloroethane	mg/kg	NA	NA	780	5000	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
1,1-Dichloroethene	mg/kg	NA	NA	0.07	10	0.23 U	0.23 U	--	--	--	--	0.23 U	0.22 U
1,2,4-Trichlorobenzene	mg/kg	NA	NA	78	2000	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	NA	0.5	4	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
1,2-Dibromoethane (Ethylene Dibromide)	mg/kg	NA	NA	0.008	0.07	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
1,2-Dichlorobenzene	mg/kg	NA	NA	560	5000	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
1,2-Dichloroethane	mg/kg	NA	NA	0.4	63	0.23 U	0.23 U	--	--	--	--	0.23 U	0.22 U
1,2-Dichloropropane	mg/kg	NA	NA	9	84	0.12 U	0.12 U	--	--	--	--	0.11 U	0.11 U
1,3-Dichlorobenzene	mg/kg	NA	NA	230	5000	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
1,4-Dichlorobenzene	mg/kg	NA	NA	27	240	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
2-Butanone (Methyl Ethyl Ketone)	mg/kg	NA	NA	1000	5000	R	R	--	--	--	--	R	R
2-Hexanone	mg/kg	NA	NA	310	5000	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	mg/kg	NA	NA	630	5000	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Acetone	mg/kg	NA	NA	780	5000	R	R	--	--	--	--	R	R
Benzene	mg/kg	NA	NA	0.8	200	0.12 U	0.12 U	--	--	--	--	0.11 U	0.11 U
Bromodichloromethane	mg/kg	NA	NA	10	92	0.12 U	0.12 U	--	--	--	--	0.11 U	0.11 U
Bromoform	mg/kg	NA	NA	53	720	0.46 U	0.47 U	--	--	--	--	0.45 U	0.44 U
Bromomethane (Methyl Bromide)	mg/kg	NA	NA	11	290	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Carbon disulfide	mg/kg	NA	NA	780	5000	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Carbon tetrachloride	mg/kg	NA	NA	0.3	44	0.23 U	0.23 U	--	--	--	--	0.23 U	0.22 U
Chlorobenzene	mg/kg	NA	NA	130	4100	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Chloroethane	mg/kg	NA	NA	220	2000	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Chloroform (Trichloromethane)	mg/kg	NA	NA	0.3	940	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Chloromethane (Methyl Chloride)	mg/kg	NA	NA	49	440	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
cis-1,2-Dichloroethene	mg/kg	NA	NA	78	2000	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Cyclohexane	mg/kg	NA	NA			1.6	0.58 U	--	--	--	--	2.9	0.55 U
Dibromochloromethane	mg/kg	NA	NA	8	68	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	NA	1000	5000	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Ethylbenzene	mg/kg	NA	NA	400	5000	21	0.47 U	--	--	--	--	14	0.44 U
Isopropylbenzene	mg/kg	NA	NA	780	5000	0.78	0.58 U	--	--	--	--	5	0.55 U
Methyl acetate	mg/kg	NA	NA	1000	5000	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Methyl cyclohexane	mg/kg	NA	NA			8.8	0.58 U	--	--	--	--	18	0.55 U
Methyl Tert Butyl Ether	mg/kg	NA	NA	39	1000	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Methylene chloride	mg/kg	NA	NA	13	760	0.34 U	0.35 U	--	--	--	--	0.34 U	0.33 U
Styrene	mg/kg	NA	NA	1000	5000	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Tetrachloroethene	mg/kg	NA	NA	11	110	0.12 U	0.12 U	--	--	--	--	0.11 U	0.11 U
Toluene	mg/kg	NA	NA	650	5000	5.7	0.58 U	--	--	--	--	0.57 U	0.55 U
trans-1,2-Dichloroethene	mg/kg	NA	NA	160	4100	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Trichloroethene	mg/kg	NA	NA	5	320	0.12 U	0.12 U	--	--	--	--	0.11 U	0.11 U

TABLE 4.1

SURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location						*SB2-05*	*SB4-05*	*SB5-05*	*SB5-05*	*SB6-05*	*SB8-05*	*SB12-05*	*SB14-05*
Sample Identification				Non-Critical Water Resource Area (1)		*050205-EAP-002*	*050305-EAP-006*	*050305-EAP-005*	*050305-EAP-0055*	*050305-EAP-004*	*050305-EAP-025*	*050205-EAP-009*	*050205-EAP-010*
Sample Date		Typical DE Soil	Default	Unrestricted Use	Restricted Use	*5/2/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/2/2005*	*5/2/2005*
Sample Depth		Conc.	Background	Surface Soil	Surface Soil	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*
Sample Type									*Duplicate*				
	Units			a	b								
Trichlorofluoromethane (CFC-11)	mg/kg	NA	NA	1000	5000	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	NA	1000	5000	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Vinyl chloride	mg/kg	NA	NA	0.03	3	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
Xylene (total)	mg/kg	NA	NA	420	5000	44	0.58 U	--	--	--	--	1.1	0.55 U
cis-1,3-Dichloropropene	mg/kg	NA	NA	0.1	32	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
trans-1,3-Dichloropropene	mg/kg	NA	NA	0.1	32	0.58 U	0.58 U	--	--	--	--	0.57 U	0.55 U
1,3-Dichloropropene - total	mg/kg	NA	NA	0.1	32								
Semi-volatile Organic Compounds													
2,2'-oxybis(1-Chloropropane)	mg/kg	NA	NA	9	82	--	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
2,4,5-Trichlorophenol	mg/kg	NA	NA	780	5000	--	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
2,4,6-Trichlorophenol	mg/kg	NA	NA	58	520	--	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
2,4-Dichlorophenol	mg/kg	NA	NA	23	610	--	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
2,4-Dimethylphenol	mg/kg	NA	NA	160	4100	--	0.39 U	0.38 U	0.37 U	0.027 J	0.4 U	0.38 U	0.37 U
2,4-Dinitrophenol	mg/kg	NA	NA	16	410	--	1.6 U	1.5 U	1.5 U	1.5 U	1.6 U	1.5 U	1.5 U
2,4-Dinitrotoluene	mg/kg	NA	NA	16	410	--	0.078 U	0.076 U	0.075 U	0.074 U	0.08 U	0.076 U	0.074 U
2,6-Dinitrotoluene	mg/kg	NA	NA	8	200	--	0.078 U	0.076 U	0.075 U	0.074 U	0.08 U	0.076 U	0.074 U
2-Chloronaphthalene	mg/kg	NA	NA	630	5000	--	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
2-Chlorophenol	mg/kg	NA	NA	39	1000	--	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
2-Methylnaphthalene	mg/kg	NA	NA	160	4100	--	0.39 U	0.38 U	0.37 U	0.27 J	0.4 U	3	0.011 J
2-Methylphenol	mg/kg	NA	NA	390	5000	--	0.39 U	0.38 U	0.37 U	0.012 J	0.4 U	0.38 U	0.37 U
2-Nitroaniline	mg/kg	NA	NA	0.5	12	--	0.78 U	0.76 U	0.75 U	0.74 U	0.8 U	0.76 U	0.74 U
2-Nitrophenol	mg/kg	NA	NA			--	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
3,3'-Dichlorobenzidine	mg/kg	NA	NA	1	13	--	0.78 U	0.76 U	0.75 U	0.74 U	0.8 U	0.76 U	0.74 U
3-Nitroaniline	mg/kg	NA	NA			--	0.78 U	0.76 U	0.75 U	0.74 U	0.8 U	0.76 U	0.74 U
4,6-Dinitro-2-methylphenol	mg/kg	NA	NA	0.08	2	--	1.6 U	1.5 U	1.5 U	1.5 U	1.6 U	1.5 U	1.5 U
4-Bromophenyl phenyl ether	mg/kg	NA	NA			--	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
4-Chloro-3-methylphenol	mg/kg	NA	NA			--	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
4-Chloroaniline	mg/kg	NA	NA	31	820	--	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
4-Chlorophenyl phenyl ether	mg/kg	NA	NA			--	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
4-Methylphenol	mg/kg	NA	NA	39	5000	--	0.39 U	0.38 U	0.37 U	0.03 J	0.4 U	0.38 U	0.37 U
4-Nitroaniline	mg/kg	NA	NA			--	0.78 U	0.76 U	0.75 U	0.74 U	0.8 U	0.76 U	0.74 U
4-Nitrophenol	mg/kg	NA	NA	63	1600	--	1.6 U	1.5 U	1.5 U	1.5 U	1.6 U	1.5 U	1.5 U
Acenaphthene	mg/kg	NA	NA	470	5000	--	0.39 U	0.008 J	0.37 U	1.1	0.4 U	0.27 J	0.03 J
Acenaphthylene	mg/kg	NA	NA			--	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
Acetophenone	mg/kg	NA	NA	780	5000	--	0.39 U	0.38 U	0.37 U	0.008 J	0.4 U	0.38 U	0.37 U
Anthracene	mg/kg	NA	NA	1000	5000	--	0.016 J	0.013 J	0.37 U	1.5	0.4 U	0.33 J	0.043 J
Atrazine	mg/kg	NA	NA	3	26	--	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
Benzaldehyde	mg/kg	NA	NA	780	5000	--	0.39 UJ	0.38 UJ	0.37 UJ	0.025 J	0.4 UJ	0.38 UJ	0.37 UJ
Benzo(a)anthracene	mg/kg	NA	NA	0.9	8	--	0.076	0.036 J	0.021 J	2.4[a]	0.04 U	1.3[a]	0.091
Benzo(a)pyrene	mg/kg	NA	NA	0.09	0.8	--	0.078	0.035 J	0.021 J	2[a]	0.04 U	1.4[a]	0.089
Benzo(b)fluoranthene	mg/kg	NA	NA	0.9	8	--	0.067	0.028 J	0.026 J	2[a]	0.04 U	1.1[a]	0.07
Benzo(g,h,i)perylene	mg/kg	NA	NA			--	0.052 J	0.022 J	0.018 J	0.5	0.4 U	0.55	0.065 J

TABLE 4.1

SURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location				Non-Critical Water Resource Area (1)		*SB2-05*	*SB4-05*	*SB5-05*	*SB5-05*	*SB6-05*	*SB8-05*	*SB12-05*	*SB14-05*
Sample Identification						*050205-EAP-002*	*050305-EAP-006*	*050305-EAP-005*	*050305-EAP-0055*	*050305-EAP-004*	*050305-EAP-025*	*050205-EAP-009*	*050205-EAP-010*
Sample Date						*5/2/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/2/2005*	*5/2/2005*
Sample Depth						*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*
Sample Type									*Duplicate*				
	Units	Typical DE Soil Conc.	Default Background	Unrestricted Use Surface Soil	Restricted Use Surface Soil								
				a	b								
Benzo(k)fluoranthene	mg/kg	NA	NA	9	78	–	0.068	0.038	0.021 J	2.3	0.04 U	1.3	0.074
Biphenyl	mg/kg	NA	NA	390	5000	–	0.39 U	0.38 U	0.37 U	0.07 J	0.4 U	0.21 J	0.37 U
bis(2-Chloroethoxy)methane	mg/kg	NA	NA			–	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
bis(2-Chloroethyl)ether	mg/kg	NA	NA	0.2	5	–	0.039 U	0.038 U	0.037 U	0.037 U	0.04 U	0.038 U	0.037 U
bis(2-Ethylhexyl)phthalate	mg/kg	NA	NA	46	410	–	0.34 J	0.27 J	0.1 J	0.085 J	0.33 J	0.38 U	0.37 U
Butyl benzylphthalate	mg/kg	NA	NA	930	5000	–	0.53	0.38 U	0.14 J	3.7	0.4 U	0.38 U	0.37 U
Caprolactam	mg/kg	NA	NA	1000	5000	–	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
Carbazole	mg/kg	NA	NA	32	290	–	0.39 U	0.38 U	0.37 U	0.61	0.4 U	0.051 J	0.017 J
Chrysene	mg/kg	NA	NA	87	780	–	0.098 J	0.045 J	0.03 J	2.7	0.4 U	1.3	0.1 J
Dibenz(a,h)anthracene	mg/kg	NA	NA	0.09	0.8	–	0.021 J	0.038 U	0.037 U	0.23[4]	0.04 U	0.2[4]	0.019 J
Dibenzofuran	mg/kg	NA	NA	31	820	–	0.39 U	0.38 U	0.37 U	0.4	0.4 U	0.18 J	0.017 J
Diethyl phthalate	mg/kg	NA	NA	1000	5000	–	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
Dimethyl phthalate	mg/kg	NA	NA	1000	5000	–	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
Di-n-butylphthalate	mg/kg	NA	NA	780	5000	–	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
Di-n-octyl phthalate	mg/kg	NA	NA	160	4100	–	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
Fluoranthene	mg/kg	NA	NA	310	5000	–	0.12 J	0.069 J	0.043 J	5.2	0.0097 J	2.5	0.18 J
Fluorene	mg/kg	NA	NA	310	5000	–	0.39 U	0.38 U	0.37 U	0.77	0.4 U	0.32 J	0.029 J
Hexachlorobenzene	mg/kg	NA	NA	0.4	4	–	0.039 U	0.038 U	0.037 U	0.037 U	0.04 U	0.038 U	0.037 U
Hexachlorobutadiene	mg/kg	NA	NA	8	73	–	0.078 U	0.076 U	0.075 U	0.074 U	0.08 U	0.076 U	0.074 U
Hexachlorocyclopentadiene	mg/kg	NA	NA	10	1400	–	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
Hexachloroethane	mg/kg	NA	NA	46	410	–	0.039 U	0.038 U	0.037 U	0.037 U	0.04 U	0.038 U	0.037 U
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NA	0.9	8	–	0.043	0.022 J	0.016 J	0.56	0.04 U	0.56	0.054
Isophorone	mg/kg	NA	NA	670	5000	–	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
Naphthalene	mg/kg	NA	NA	160	4100	–	0.39 U	0.38 U	0.37 U	0.39	0.4 U	0.84	0.37 U
Nitrobenzene	mg/kg	NA	NA	4	100	–	0.039 U	0.038 U	0.037 U	0.037 U	0.04 U	0.038 U	0.037 U
N-Nitrosodi-n-propylamine	mg/kg	NA	NA	0.09	0.8	–	0.039 U	0.038 U	0.037 U	0.037 U	0.04 U	0.038 U	0.037 U
N-Nitrosodiphenylamine	mg/kg	NA	NA	130	1200	–	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
Pentachlorophenol	mg/kg	NA	NA	5	48	–	1.6 U	1.5 U	1.5 U	1.5 U	1.6 U	1.5 U	1.5 U
Phenanthrene	mg/kg	NA	NA	1000	5000	–	0.068 J	0.047 J	0.03 J	4.8	0.4 U	1.4	0.12 J
Phenol	mg/kg	NA	NA	1000	5000	–	0.39 U	0.38 U	0.37 U	0.37 U	0.4 U	0.38 U	0.37 U
Pyrene	mg/kg	NA	NA	230	5000	–	0.19 J	0.083 J	0.05 J	4.7	0.013 J	2.6	0.2 J
Polychlorinated Biphenyls													
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	5	82	–	0.078 U	–	–	–	–	–	–
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	0.3	3	–	0.078 U	–	–	–	–	–	–
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	0.3	3	–	0.078 U	–	–	–	–	–	–
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	0.3	3	–	0.078 U	–	–	–	–	–	–
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	0.3	3	–	0.078 U	–	–	–	–	–	–
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	0.3	3	–	0.078 U	–	–	–	–	–	–
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	0.3	3	–	0.078 U	–	–	–	–	–	–

TABLE 4.1

SURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location				Non-Critical Water Resource Area (1)		*SB2-05*	*SB4-05*	*SB5-05*	*SB5-05*	*SB6-05*	*SB8-05*	*SB12-05*	*SB14-05*
Sample Identification						*050205-EAP-002*	*050305-EAP-006*	*050305-EAP-005*	*050305-EAP-0055*	*050305-EAP-004*	*050305-EAP-025*	*050205-EAP-009*	*050205-EAP-010*
Sample Date						*5/2/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/2/2005*	*5/2/2005*
Sample Depth		Typical DE Soil Conc.	Default Background	Unrestricted Use Surface Soil	Restricted Use Surface Soil	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*
Sample Type									*Duplicate*				
Metals	***Units***			a	b								
Aluminum	mg/kg	4,800-12,000	7,800	7800	200000	10700[a]	9610[a]	11100[a]	11200[a]	--	--	10300[a]	12000[a]
Antimony	mg/kg	<0.5	<0.5	3	82	2.8 UJ	2.8 UJ	2.8 UJ	2.8 UJ	--	--	2.8 UJ	2.8 UJ
Arsenic	mg/kg	1-10	0.4	0.4	4	3.5[a]	1.8[a]	3.2[a]	3.1[a]	--	--	2.4[a]	2.6[a]
Barium	mg/kg	40-80	82	550	14000	180	117	82.8	82.4	--	--	69.5	84.1
Beryllium	mg/kg	0.6-1.0	10	16	410	0.55	0.55	0.51	0.52	--	--	0.42	0.47
Cadmium	mg/kg	1-3	3	4	100	1.5 U	1.5 U	1.4 U	1.4 U	--	--	1.4 U	1.4 U
Calcium	mg/kg	-				6920	846	724	757	--	--	453	831
Chromium Total*	mg/kg	5-30 (Cr III)	0.4	270	610	12.1 J	12.9 J	24.5 J	21.0 J	--	--	15.2 J	13.1 J
Cobalt	mg/kg	4-13	20	470	12000	2.9	2.7	11.0	12.8	--	--	5.0	5.2
Copper	mg/kg	15-40	50	310	8200	6.8 J	7.5 J	13.0 J	15.9 J	--	--	5.4 J	5.7 J
Iron	mg/kg	3,000-22,000	2,300	2300	61000	9920 J[a]	7990 J[a]	21900 J[a]	25700 J[a]	--	--	12600 J[a]	14700 J[a]
Lead	mg/kg	30-100	41	400	1000	13.8 J	14.7 J	11.7 J	11.8 J	--	--	10.9 J	6.8 J
Magnesium	mg/kg	-	-			1120	863	1100	1100	--	--	939	945
Manganese	mg/kg	60-350	180	160	4100	314 J[a]	61.6 J	318 J[a]	337 J[a]	--	--	132 J	188 J[a]
Mercury	mg/kg	0.1-0.3	0.0005	10	610	0.028 U	0.04	0.03	0.02	--	--	0.028 U	0.027 U
Nickel	mg/kg	5-15	30	160	4100	6.1	5.5	10.0	12.1	--	--	6.2	6.9
Potassium	mg/kg	-	-			577	375	571	595	--	--	367	371
Selenium	mg/kg	0.1-0.5	0.2	39	1000	1.2 U	1.2 U	1.2 U	1.2 U	--	--	1.2 U	1.2 U
Silver	mg/kg	1-2	2	39	1000	3.5 U	3.5 U	3.4 U	3.4 U	--	--	3.4 U	3.2 U
Sodium	mg/kg	-	-			1050	246	1100 U	1100 U	--	--	113	1100 U
Thallium	mg/kg	1	1	18	220	2.5 U	2.5 U	2.5 U	2.5 U	--	--	2.5 U	2.5 U
Vanadium	mg/kg	15-40	2	55	1400	21.5 J	19.7 J	40.9 J	34.2 J	--	--	21.9 J	24.6 J
Zinc	mg/kg	60-90	8	2300	61000	20.0 J	39.9 J	24.8 J	33.3 J	--	--	21.2 J	17.6 J
Pesticides													
4,4'-DDD	mg/kg	NA	NA	3	24	--	0.0075 U	--	--	--	--	--	--
4,4'-DDE	mg/kg	NA	NA	2	17	--	0.0075 U	--	--	--	--	--	--
4,4'-DDT	mg/kg	NA	NA	2	17	--	0.0075 U	--	--	--	--	--	--
Aldrin	mg/kg	NA	NA	0.04	0.3	--	0.0075 U	--	--	--	--	--	--
alpha-BHC	mg/kg	NA	NA	0.1	0.9	--	0.0075 U	--	--	--	--	--	--
beta-BHC	mg/kg	NA	NA	0.4	3	--	0.0075 U	--	--	--	--	--	--
Chlordane	mg/kg	NA	NA	2	16	--	0.075 U	--	--	--	--	--	--
delta-BHC	mg/kg	NA	NA			--	0.0075 U	--	--	--	--	--	--
Dieldrin	mg/kg	NA	NA	0.04	0.4	--	0.0075 U	--	--	--	--	--	--
Endosulfan I	mg/kg	NA	NA			--	0.0075 U	--	--	--	--	--	--
Endosulfan II	mg/kg	NA	NA			--	0.0075 U	--	--	--	--	--	--
Endosulfan sulfate	mg/kg	NA	NA			--	0.0075 U	--	--	--	--	--	--
Endrin	mg/kg	NA	NA	2	61	--	0.0075 U	--	--	--	--	--	--
Endrin aldehyde	mg/kg	NA	NA			--	0.0075 U	--	--	--	--	--	--
gamma-BHC (Lindane)	mg/kg	NA	NA	0.5	4	--	0.0075 U	--	--	--	--	--	--
Heptachlor	mg/kg	NA	NA	0.1	1	--	0.0075 U	--	--	--	--	--	--
Heptachlor epoxide	mg/kg	NA	NA	0.07	0.6	--	0.0075 U	--	--	--	--	--	--
Toxaphene	mg/kg	NA	NA	0.6	5	--	0.075 U	--	--	--	--	--	--

TABLE 4.1

SURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location		*SB17-05*	*SB18-05*	*SB19-05*	*SB20-05*	*PH-49S*	*PH-50*	*PH-202*	*PH-202*	*PH-207*	*PH-210*	*PH-211*	*PH-212*
Sample Identification		*050205-EAP-006*	*050305-EAP-008*	*050205-EAP-005*	*050205-EAP-004*	*050305-EAP-011*	*050305-EAP-037*	*050505-EAP-005*	*050505-EAP-006*	*050505-EAP-019*	*050305-EAP-022*	*050305-EAP-016*	*050305-EAP-013*
Sample Date		*5/2/2005*	*5/3/2005*	*5/2/2005*	*5/2/2005*	*5/3/2005*	*5/3/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*
Sample Depth		*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-0.5 ft BGS*	*0-0.5 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*
Sample Type									*Duplicate*				
Volatile Organic Compounds	*Units*												
1,1,1-Trichloroethane	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
1,1,2,2-Tetrachloroethane	mg/kg	--	--	--	--	--	--	--	--	0.098 U	--	--	--
1,1,2-Trichloroethane	mg/kg	--	--	--	--	--	--	--	--	0.29 U	--	--	--
1,1-Dichloroethane	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
1,1-Dichloroethene	mg/kg	--	--	--	--	--	--	--	--	0.2 U	--	--	--
1,2,4-Trichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
1,2-Dibromoethane (Ethylene Dibromide)	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
1,2-Dichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
1,2-Dichloroethane	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
1,2-Dichloropropane	mg/kg	--	--	--	--	--	--	--	--	0.2 U	--	--	--
1,3-Dichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	0.098 U	--	--	--
1,4-Dichlorobenzene	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
2-Butanone (Methyl Ethyl Ketone)	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
2-Hexanone	mg/kg	--	--	--	--	--	--	--	--	R	--	--	--
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Acetone	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Benzene	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Bromodichloromethane	mg/kg	--	--	--	--	--	--	--	--	0.098 U	--	--	--
Bromoform	mg/kg	--	--	--	--	--	--	--	--	0.098 U	--	--	--
Bromomethane (Methyl Bromide)	mg/kg	--	--	--	--	--	--	--	--	0.39 U	--	--	--
Carbon disulfide	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Carbon tetrachloride	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Chlorobenzene	mg/kg	--	--	--	--	--	--	--	--	0.2 U	--	--	--
Chloroethane	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Chloroform (Trichloromethane)	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Chloromethane (Methyl Chloride)	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
cis-1,2-Dichloroethene	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Cyclohexane	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Dibromochloromethane	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Dichlorodifluoromethane (CFC-12)	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Ethylbenzene	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Isopropylbenzene	mg/kg	--	--	--	--	--	--	--	--	0.39 U	--	--	--
Methyl acetate	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Methyl cyclohexane	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Methyl Tert Butyl Ether	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Methylene chloride	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Styrene	mg/kg	--	--	--	--	--	--	--	--	0.29 U	--	--	--
Tetrachloroethene	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Toluene	mg/kg	--	--	--	--	--	--	--	--	0.098 U	--	--	--
trans-1,2-Dichloroethene	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Trichloroethene	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
										0.098 U	--	--	--

TABLE 4.1

SURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location		*SB17-05*	*SB18-05*	*SB19-05*	*SB20-05*	*PH-49S*	*PH-50*	*PH-202*	*PH-202*	*PH-207*	*PH-210*	*PH-211*	*PH-212*
Sample Identification		*050205-EAP-006*	*050305-EAP-008*	*050205-EAP-005*	*050205-EAP-004*	*050305-EAP-011*	*050305-EAP-037*	*050505-EAP-005*	*050505-EAP-006*	*050505-EAP-019*	*050305-EAP-022*	*050305-EAP-016*	*050305-EAP-013*
Sample Date		*5/2/2005*	*5/3/2005*	*5/2/2005*	*5/2/2005*	*5/3/2005*	*5/3/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*
Sample Depth		*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-0.5 ft BGS*	*0-0.5 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*
Sample Type									*Duplicate*				
	Units												
Trichlorofluoromethane (CFC-11)	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Trifluorotrichloroethane (Freon 113)	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Vinyl chloride	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
Xylene (total)	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
cis-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
trans-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--	--	--	0.49 U	--	--	--
1,3-Dichloropropene - total	mg/kg									0.49 U			
Semi-volatile Organic Compounds													
2,2'-oxybis(1-Chloropropane)	mg/kg	--	0.38 U	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
2,4,6-Trichlorophenol	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
2,4-Dichlorophenol	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
2,4-Dimethylphenol	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
2,4-Dinitrophenol	mg/kg	--	1.5 U	--	--	1.4 UJ	1.5 U	--	--	--	1.6 UJ	1.5 UJ	1.5 UJ
2,4-Dinitrotoluene	mg/kg	--	0.076 U	--	--	0.073 U	0.077 U	--	--	--	0.081 U	0.075 U	0.074 U
2,6-Dinitrotoluene	mg/kg	--	0.076 U	--	--	0.073 U	0.077 U	--	--	--	0.081 U	0.075 U	0.074 U
2-Chloronaphthalene	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
2-Chlorophenol	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
2-Methylnaphthalene	mg/kg	--	0.016 J	--	--	0.0094 J	0.019 J	--	--	--	0.011 J	0.13 J	0.37 U
2-Methylphenol	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
2-Nitroaniline	mg/kg	--	0.76 U	--	--	0.73 U	0.77 U	--	--	--	0.81 U	0.75 U	0.74 U
2-Nitrophenol	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
3,3'-Dichlorobenzidine	mg/kg	--	0.76 U	--	--	0.73 U	0.77 U	--	--	--	0.81 U	0.75 U	0.74 U
3-Nitroaniline	mg/kg	--	0.76 U	--	--	0.73 U	0.77 U	--	--	--	0.81 U	0.75 U	0.74 U
4,6-Dinitro-2-methylphenol	mg/kg	--	1.5 U	--	--	1.4 UJ	1.5 U	--	--	--	1.6 UJ	1.5 UJ	1.5 UJ
4-Bromophenyl phenyl ether	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
4-Chloro-3-methylphenol	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
4-Chloroaniline	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
4-Chlorophenyl phenyl ether	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
4-Methylphenol	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
4-Nitroaniline	mg/kg	--	0.76 U	--	--	0.73 U	0.77 U	--	--	--	0.81 U	0.75 U	0.74 U
4-Nitrophenol	mg/kg	--	1.5 U	--	--	1.4 U	1.5 U	--	--	--	1.6 U	1.5 U	1.5 U
Acenaphthene	mg/kg	--	0.11 J	--	--	0.099 J	0.38 U	--	--	--	0.16 J	0.94	0.018 J
Acenaphthylene	mg/kg	--	0.0088 J	--	--	0.027 J	0.084 J	--	--	--	0.4 U	0.012 J	0.37 U
Acetophenone	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
Anthracene	mg/kg	--	0.15 J	--	--	0.25 J	0.026 J	--	--	--	0.26 J	1.9	0.026 J
Atrazine	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
Benzaldehyde	mg/kg	--	0.019 J	--	--	0.36 UJ	0.38 U	--	--	--	0.4 UJ	0.37 U	0.37 UJ
Benzo(a)anthracene	mg/kg	--	0.41	--	--	0.73	0.17	--	--	--	0.5	3.6[a]	0.12
Benzo(a)pyrene	mg/kg	--	0.39[a]	--	--	0.72[a]	0.23[a]	--	--	--	0.45[a]	3.2[a]	0.12[a]
Benzo(b)fluoranthene	mg/kg	--	0.33	--	--	0.66	0.23	--	--	--	0.39	2.9[a]	0.096
Benzo(g,h,i)perylene	mg/kg	--	0.16 J	--	--	0.3 J	0.098 J	--	--	--	0.26 J	0.98 J	0.062 J

[a]
CRA 17338 (6)

TABLE 4.1

SURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location		*SB17-05*	*SB18-05*	*SB19-05*	*SB20-05*	*PH-49S*	*PH-50*	*PH-202*	*PH-202*	*PH-207*	*PH-210*	*PH-211*	*PH-212*
Sample Identification		*050205-EAP-006*	*050305-EAP-008*	*050205-EAP-005*	*050205-EAP-004*	*050305-EAP-011*	*050305-EAP-037*	*050505-EAP-005*	*050505-EAP-006*	*050505-EAP-019*	*050305-EAP-022*	*050305-EAP-016*	*050305-EAP-013*
Sample Date		*5/2/2005*	*5/3/2005*	*5/2/2005*	*5/2/2005*	*5/3/2005*	*5/3/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*
Sample Depth		*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-0.5 ft BGS*	*0-0.5 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*
Sample Type									*Duplicate*				
	Units												
Benzo(k)fluoranthene	mg/kg	--	0.38	--	--	0.55	0.27 J	--	--	--	0.36	2.9 J	0.098
Biphenyl	mg/kg	--	0.38 U	--	--	0.0093 J	0.0089 J	--	--	--	0.01 J	0.051 J	0.37 U
bis(2-Chloroethoxy)methane	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
bis(2-Chloroethyl)ether	mg/kg	--	0.038 U	--	--	0.036 U	0.038 U	--	--	--	0.04 U	0.037 U	0.037 U
bis(2-Ethylhexyl)phthalate	mg/kg	--	0.43	--	--	0.11 J	1.1	--	--	--	0.34 J	0.11 J	0.43
Butyl benzylphthalate	mg/kg	--	1.2	--	--	0.36 U	0.18 J	--	--	--	0.4 U	0.37 U	1.4
Caprolactam	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.015 J	0.37 U	0.37 U
Carbazole	mg/kg	--	0.069 J	--	--	0.098 J	0.012 J	--	--	--	0.1 J	0.94	0.016 J
Chrysene	mg/kg	--	0.49	--	--	0.8	0.23 J	--	--	--	0.55	3.3	0.13 J
Dibenz(a,h)anthracene	mg/kg	--	0.058	--	--	0.1[F]	0.031 J	--	--	--	0.082	0.41 J[F]	0.013 J
Dibenzofuran	mg/kg	--	0.026 J	--	--	0.042 J	0.012 J	--	--	--	0.081 J	0.39	0.0078 J
Diethyl phthalate	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
Dimethyl phthalate	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
Di-n-butylphthalate	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
Di-n-octyl phthalate	mg/kg	--	0.38 U	--	--	0.36 U	0.38 UJ	--	--	--	0.4 U	0.37 UJ	0.37 U
Fluoranthene	mg/kg	--	0.84	--	--	1.4	0.25 J	--	--	--	1.2	8.4	0.22 J
Fluorene	mg/kg	--	0.062 J	--	--	0.096 J	0.38 U	--	--	--	0.14 J	0.78	0.013 J
Hexachlorobenzene	mg/kg	--	0.038 U	--	--	0.036 U	0.038 U	--	--	--	0.04 U	0.037 U	0.037 U
Hexachlorobutadiene	mg/kg	--	0.076 U	--	--	0.073 U	0.077 U	--	--	--	0.081 U	0.075 U	0.074 U
Hexachlorocyclopentadiene	mg/kg	--	0.38 U	--	--	0.36 UJ	R	--	--	--	0.4 UJ	R	0.37 UJ
Hexachloroethane	mg/kg	--	0.038 U	--	--	0.036 U	0.038 U	--	--	--	0.04 U	0.037 U	0.037 U
Indeno(1,2,3-cd)pyrene	mg/kg	--	0.16	--	--	0.3 J	0.1 J	--	--	--	0.23 J	1 J[F]	0.059 J
Isophorone	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
Naphthalene	mg/kg	--	0.015 J	--	--	0.017 J	0.018 J	--	--	--	0.041 J	0.5	0.37 U
Nitrobenzene	mg/kg	--	0.038 U	--	--	0.036 U	0.038 U	--	--	--	0.04 U	0.037 U	0.037 U
N-Nitrosodi-n-propylamine	mg/kg	--	0.038 U	--	--	0.036 U	0.038 U	--	--	--	0.04 U	0.037 U	0.037 U
N-Nitrosodiphenylamine	mg/kg	--	0.38 U	--	--	0.36 U	0.015 J	--	--	--	0.4 U	0.02 J	0.37 U
Pentachlorophenol	mg/kg	--	1.5 U	--	--	1.4 U	1.5 U	--	--	--	1.6 U	1.5 UJ	1.5 U
Phenanthrene	mg/kg	--	0.6	--	--	0.78	0.078 J	--	--	--	0.78	5.7	0.12 J
Phenol	mg/kg	--	0.38 U	--	--	0.36 U	0.38 U	--	--	--	0.4 U	0.37 U	0.37 U
Pyrene	mg/kg	--	1	--	--	1.4	0.28 J	--	--	--	1.1	7.6	0.24 J
Polychlorinated Biphenyls													
Aroclor-1016 (PCB-1016)	mg/kg	--	--	0.078 U	0.078 U	--	--	0.079 U	0.078 U	--	--	--	--
Aroclor-1221 (PCB-1221)	mg/kg	--	--	0.078 U	0.078 U	--	--	0.079 U	0.078 U	--	--	--	--
Aroclor-1232 (PCB-1232)	mg/kg	--	--	0.078 U	0.078 U	--	--	0.079 U	0.078 U	--	--	--	--
Aroclor-1242 (PCB-1242)	mg/kg	--	--	0.078 U	0.078 U	--	--	0.079 U	0.078 U	--	--	--	--
Aroclor-1248 (PCB-1248)	mg/kg	--	--	0.078 U	0.078 U	--	--	0.079 U	0.078 U	--	--	--	--
Aroclor-1254 (PCB-1254)	mg/kg	--	--	0.078 U	0.078 U	--	--	0.27	0.25	--	--	--	--
Aroclor-1260 (PCB-1260)	mg/kg	--	--	0.078 U	0.32[F]	--	--	0.079 U	0.078 U	--	--	--	--

TABLE 4.1

SURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location		*SB17-05*	*SB18-05*	*SB19-05*	*SB20-05*	*PH-49S*	*PH-50*	*PH-202*	*PH-202*	*PH-207*	*PH-210*	*PH-211*	*PH-212*
Sample Identification		*050205-EAP-006*	*050305-EAP-008*	*050205-EAP-005*	*050205-EAP-004*	*050305-EAP-011*	*050305-EAP-037*	*050505-EAP-005*	*050505-EAP-006*	*050505-EAP-019*	*050305-EAP-022*	*050305-EAP-016*	*050305-EAP-013*
Sample Date		*5/2/2005*	*5/3/2005*	*5/2/2005*	*5/2/2005*	*5/3/2005*	*5/3/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*
Sample Depth		*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-0.5 ft BGS*	*0-0.5 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*
Sample Type									*Duplicate*				
Metals	*Units*												
Aluminum	mg/kg	12700[a]	9540[a]	--	--	--	--	--	--	--	--	--	--
Antimony	mg/kg	3.1 UJ	2.8 UJ	--	--	--	--	--	--	--	--	--	--
Arsenic	mg/kg	1.6 U	3.0[a]	--	--	--	--	--	--	--	--	--	--
Barium	mg/kg	123	109	--	--	--	--	--	--	--	--	--	--
Beryllium	mg/kg	0.42	0.50	--	--	--	--	--	--	--	--	--	--
Cadmium	mg/kg	1.5 U	1.4 U	--	--	--	--	--	--	--	--	--	--
Calcium	mg/kg	1060	1600	--	--	--	--	--	--	--	--	--	--
Chromium Total*	mg/kg	22.7 J	18.3 J	--	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	2.7	5.7	--	--	--	--	--	--	--	--	--	--
Copper	mg/kg	8.0 J	19.8 J	--	--	--	--	--	--	--	--	--	--
Iron	mg/kg	11200 J[a]	14400 J[a]	--	--	--	--	--	--	--	--	--	--
Lead	mg/kg	13.8 J	51.8 J	--	--	--	--	--	--	--	--	--	--
Magnesium	mg/kg	1230	1740	--	--	--	--	--	--	--	--	--	--
Manganese	mg/kg	56.5 J	212 J[a]	--	--	--	--	--	--	--	--	--	--
Mercury	mg/kg	0.02	0.06	--	--	--	--	--	--	--	--	--	--
Nickel	mg/kg	8.0	11.1	--	--	--	--	--	--	--	--	--	--
Potassium	mg/kg	383	591	--	--	--	--	--	--	--	--	--	--
Selenium	mg/kg	1.2 U	1.2 U	--	--	--	--	--	--	--	--	--	--
Silver	mg/kg	3.6 U	3.4 U	--	--	--	--	--	--	--	--	--	--
Sodium	mg/kg	1200 U	1100 U	--	--	--	--	--	--	--	--	--	--
Thallium	mg/kg	2.5 U	2.5 U	--	--	--	--	--	--	--	--	--	--
Vanadium	mg/kg	20.4 J	32.9 J	--	--	--	--	--	--	--	--	--	--
Zinc	mg/kg	26.0 J	109 J	--	--	--	--	--	--	--	--	--	--
Pesticides													
4,4'-DDD	mg/kg	--	--	0.0078 U	0.0078 U	--	--	--	--	--	--	--	--
4,4'-DDE	mg/kg	--	--	0.0078 U	0.0078 U	--	--	--	--	--	--	--	--
4,4'-DDT	mg/kg	--	--	0.0078 U	0.018	--	--	--	--	--	--	--	--
Aldrin	mg/kg	--	--	0.0078 U	0.0078 U	--	--	--	--	--	--	--	--
alpha-BHC	mg/kg	--	--	0.0078 U	0.0078 U	--	--	--	--	--	--	--	--
beta-BHC	mg/kg	--	--	0.0078 U	0.0078 U	--	--	--	--	--	--	--	--
Chlordane	mg/kg	--	--	0.078 U	0.078 U	--	--	--	--	--	--	--	--
delta-BHC	mg/kg	--	--	0.0078 U	0.0078 U	--	--	--	--	--	--	--	--
Dieldrin	mg/kg	--	--	0.0078 U	0.01	--	--	--	--	--	--	--	--
Endosulfan I	mg/kg	--	--	0.0078 U	0.0078 U	--	--	--	--	--	--	--	--
Endosulfan II	mg/kg	--	--	0.0078 U	0.0078 U	--	--	--	--	--	--	--	--
Endosulfan sulfate	mg/kg	--	--	0.0078 U	0.0078 U	--	--	--	--	--	--	--	--
Endrin	mg/kg	--	--	0.0078 U	0.0078 U	--	--	--	--	--	--	--	--
Endrin aldehyde	mg/kg	--	--	0.0078 U	0.0078 U	--	--	--	--	--	--	--	--
gamma-BHC (Lindane)	mg/kg	--	--	0.0078 U	0.0078 U	--	--	--	--	--	--	--	--
Heptachlor	mg/kg	--	--	0.0078 U	0.0078 U	--	--	--	--	--	--	--	--
Heptachlor epoxide	mg/kg	--	--	0.0078 U	0.0078 U	--	--	--	--	--	--	--	--
Toxaphene	mg/kg	--	--	0.078 U	0.078 U	--	--	--	--	--	--	--	--

TABLE 4.1

SURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location		*PH-213*	*PH-214*	*PH-215*	*PH-215*	*PH-216*	*PH-217*
Sample Identification		*050305-EAP-019*	*050305-EAP-027*	*050305-EAP-033*	*050305-EAP-036*	*050305-EAP-030*	*050305-EAP-039*
Sample Date		*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*
Sample Depth		*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*
Sample Type					*Duplicate*		
Volatile Organic Compounds	*Units*						
1,1,1-Trichloroethane	mg/kg	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/kg	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/kg	--	--	--	--	--	--
1,1-Dichloroethane	mg/kg	--	--	--	--	--	--
1,1-Dichloroethene	mg/kg	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/kg	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	--	--	--	--	--	--
1,2-Dibromoethane (Ethylene Dibromide)	mg/kg	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/kg	--	--	--	--	--	--
1,2-Dichloroethane	mg/kg	--	--	--	--	--	--
1,2-Dichloropropane	mg/kg	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/kg	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/kg	--	--	--	--	--	--
2-Butanone (Methyl Ethyl Ketone)	mg/kg	--	--	--	--	--	--
2-Hexanone	mg/kg	--	--	--	--	--	--
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	mg/kg	--	--	--	--	--	--
Acetone	mg/kg	--	--	--	--	--	--
Benzene	mg/kg	--	--	--	--	--	--
Bromodichloromethane	mg/kg	--	--	--	--	--	--
Bromoform	mg/kg	--	--	--	--	--	--
Bromomethane (Methyl Bromide)	mg/kg	--	--	--	--	--	--
Carbon disulfide	mg/kg	--	--	--	--	--	--
Carbon tetrachloride	mg/kg	--	--	--	--	--	--
Chlorobenzene	mg/kg	--	--	--	--	--	--
Chloroethane	mg/kg	--	--	--	--	--	--
Chloroform (Trichloromethane)	mg/kg	--	--	--	--	--	--
Chloromethane (Methyl Chloride)	mg/kg	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/kg	--	--	--	--	--	--
Cyclohexane	mg/kg	--	--	--	--	--	--
Dibromochloromethane	mg/kg	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	mg/kg	--	--	--	--	--	--
Ethylbenzene	mg/kg	--	--	--	--	--	--
Isopropylbenzene	mg/kg	--	--	--	--	--	--
Methyl acetate	mg/kg	--	--	--	--	--	--
Methyl cyclohexane	mg/kg	--	--	--	--	--	--
Methyl Tert Butyl Ether	mg/kg	--	--	--	--	--	--
Methylene chloride	mg/kg	--	--	--	--	--	--
Styrene	mg/kg	--	--	--	--	--	--
Tetrachloroethene	mg/kg	--	--	--	--	--	--
Toluene	mg/kg	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/kg	--	--	--	--	--	--
Trichloroethene	mg/kg	--	--	--	--	--	--

TABLE 4.1

SURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location		*PH-213*	*PH-214*	*PH-215*	*PH-215*	*PH-216*	*PH-217*
Sample Identification		*050305-EAP-019*	*050305-EAP-027*	*050305-EAP-033*	*050305-EAP-036*	*050305-EAP-030*	*050305-EAP-039*
Sample Date		*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*
Sample Depth		*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*
Sample Type					*Duplicate*		
	Units						
Trichlorofluoromethane (CFC-11)	mg/kg	--	--	--	--	--	--
Trifluorotrichloroethane (Freon 113)	mg/kg	--	--	--	--	--	--
Vinyl chloride	mg/kg	--	--	--	--	--	--
Xylene (total)	mg/kg	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/kg	--	--	--	--	--	--
1,3-Dichloropropene - total	mg/kg						
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane)	mg/kg	--	--	--	--	--	--
2,4,5-Trichlorophenol	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
2,4,6-Trichlorophenol	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
2,4-Dichlorophenol	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
2,4-Dimethylphenol	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
2,4-Dinitrophenol	mg/kg	1.5 UJ	3 UJ	3 UJ	3.2 UJ	1.4 UJ	1.5 UJ
2,4-Dinitrotoluene	mg/kg	0.074 U	0.15 U	0.15 U	0.16 U	0.072 U	0.076 U
2,6-Dinitrotoluene	mg/kg	0.074 U	0.15 U	0.15 U	0.16 U	0.072 U	0.076 U
2-Chloronaphthalene	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
2-Chlorophenol	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
2-Methylnaphthalene	mg/kg	0.37 U	0.032 J	0.064 J	0.029 J	0.36 U	0.015 J
2-Methylphenol	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
2-Nitroaniline	mg/kg	0.74 U	1.5 U	1.5 U	1.6 U	0.72 U	0.76 U
2-Nitrophenol	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
3,3'-Dichlorobenzidine	mg/kg	0.74 U	1.5 U	1.5 U	1.6 U	0.72 U	0.76 U
3-Nitroaniline	mg/kg	0.74 U	1.5 U	1.5 U	1.6 U	0.72 U	0.76 U
4,6-Dinitro-2-methylphenol	mg/kg	1.5 UJ	3 U	3 U	3.2 U	1.4 UJ	1.5 UJ
4-Bromophenyl phenyl ether	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
4-Chloro-3-methylphenol	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
4-Chloroaniline	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
4-Chlorophenyl phenyl ether	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
4-Methylphenol	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
4-Nitroaniline	mg/kg	0.74 U	1.5 U	1.5 U	1.6 U	0.72 U	0.76 U
4-Nitrophenol	mg/kg	1.5 U	3 U	3 U	3.2 U	1.4 U	1.5 U
Acenaphthene	mg/kg	0.097 J	0.046 J	0.74 U	0.8 U	0.36 U	0.38 U
Acenaphthylene	mg/kg	0.0076 J	0.63 J	0.15 J	0.089 J	0.36 U	0.052 J
Acetophenone	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
Anthracene	mg/kg	0.18 J	0.29 J	0.077 J	0.057 J	0.0081 J	0.016 J
Atrazine	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
Benzaldehyde	mg/kg	0.37 UJ	0.76 U	0.74 U	0.074 J	0.36 UJ	0.01 J
Benzo(a)anthracene	mg/kg	0.38	0.93[a]	0.62 J	0.2 J	0.028 J	0.12
Benzo(a)pyrene	mg/kg	0.34[a]	1.2[a]	0.68[a]	0.23[a]	0.025 J	0.15[a]
Benzo(b)fluoranthene	mg/kg	0.27	1[a]	0.49	0.22	0.02 J	0.16
Benzo(g,h,i)perylene	mg/kg	0.18 J	0.57 J	0.31 J	0.16 J	0.018 J	0.082 J

TABLE 4.1

SURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location		*PH-213*	*PH-214*	*PH-215*	*PH-215*	*PH-216*	*PH-217*
Sample Identification		*050305-EAP-019*	*050305-EAP-027*	*050305-EAP-033*	*050305-EAP-036*	*050305-EAP-030*	*050305-EAP-039*
Sample Date		*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*
Sample Depth		*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*
Sample Type					*Duplicate*		
	Units						
Benzo(k)fluoranthene	mg/kg	0.27	1.3	0.62	0.26	0.024 J	0.14 J
Biphenyl	mg/kg	0.0083 J	0.022 J	0.74 U	0.8 U	0.0077 J	0.38 U
bis(2-Chloroethoxy)methane	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
bis(2-Chloroethyl)ether	mg/kg	0.037 U	0.076 U	0.074 U	0.08 U	0.036 U	0.038 U
bis(2-Ethylhexyl)phthalate	mg/kg	0.11 J	0.18 J	0.31 J	0.62 J	0.5	1.3 J
Butyl benzylphthalate	mg/kg	0.37 U	0.76 U	0.3 J	0.8 U	0.42	0.34 J
Caprolactam	mg/kg	0.011 J	0.76 U	0.74 U	0.8 U	0.055 J	0.38 U
Carbazole	mg/kg	0.056 J	0.078 J	0.017 J	0.022 J	0.36 U	0.017 J
Chrysene	mg/kg	0.42	1.2	0.84	0.3 J	0.034 J	0.2 J
Dibenz(a,h)anthracene	mg/kg	0.052	0.2[2]	0.12[2]	0.047 J	0.036 U	0.033 J
Dibenzofuran	mg/kg	0.052 J	0.045 J	0.74 U	0.02 J	0.36 U	0.0078 J
Diethyl phthalate	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
Dimethyl phthalate	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
Di-n-butylphthalate	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
Di-n-octyl phthalate	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 UJ
Fluoranthene	mg/kg	0.95	1.4	0.64 J	0.4 J	0.055 J	0.28 J
Fluorene	mg/kg	0.1 J	0.085 J	0.74 U	0.037 J	0.36 U	0.012 J
Hexachlorobenzene	mg/kg	0.037 U	0.076 U	0.074 U	0.08 U	0.036 U	0.038 U
Hexachlorobutadiene	mg/kg	0.074 U	0.15 U	0.15 U	0.16 U	0.072 U	0.076 U
Hexachlorocyclopentadiene	mg/kg	0.37 UJ	0.76 UJ	0.74 UJ	0.8 UJ	0.36 UJ	R
Hexachloroethane	mg/kg	0.037 U	0.076 U	0.074 U	0.08 U	0.036 U	0.038 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.16 J	0.59	0.28	0.14	0.016 J	0.082 J
Isophorone	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
Naphthalene	mg/kg	0.016 J	0.048 J	0.087 J	0.029 J	0.36 U	0.012 J
Nitrobenzene	mg/kg	0.037 U	0.076 U	0.074 U	0.08 U	0.036 U	0.038 U
N-Nitrosodi-n-propylamine	mg/kg	0.037 U	0.076 U	0.074 U	0.08 U	0.036 U	0.038 U
N-Nitrosodiphenylamine	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.023 J
Pentachlorophenol	mg/kg	1.5 U	3 U	3 U	3.2 U	1.4 U	1.5 U
Phenanthrene	mg/kg	0.46	0.36 J	0.11 J	0.23 J	0.031 J	0.18 J
Phenol	mg/kg	0.37 U	0.76 U	0.74 U	0.8 U	0.36 U	0.38 U
Pyrene	mg/kg	0.85	1.4	0.96	0.4 J	0.055 J	0.28 J
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/kg	--	--	--	--	--	--
Aroclor-1221 (PCB-1221)	mg/kg	--	--	--	--	--	--
Aroclor-1232 (PCB-1232)	mg/kg	--	--	--	--	--	--
Aroclor-1242 (PCB-1242)	mg/kg	--	--	--	--	--	--
Aroclor-1248 (PCB-1248)	mg/kg	--	--	--	--	--	--
Aroclor-1254 (PCB-1254)	mg/kg	--	--	--	--	--	--
Aroclor-1260 (PCB-1260)	mg/kg	--	--	--	--	--	--

TABLE 4.1

SURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location		*PH-213*	*PH-214*	*PH-215*	*PH-215*	*PH-216*	*PH-217*
Sample Identification		*050305-EAP-019*	*050305-EAP-027*	*050305-EAP-033*	*050305-EAP-036*	*050305-EAP-030*	*050305-EAP-039*
Sample Date		*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*
Sample Depth		*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*	*0-2 ft BGS*
Sample Type					*Duplicate*		
	Units						
Metals							
Aluminum	mg/kg	--	--	--	--	--	--
Antimony	mg/kg	--	--	--	--	--	--
Arsenic	mg/kg	--	--	--	--	--	--
Barium	mg/kg	--	--	--	--	--	--
Beryllium	mg/kg	--	--	--	--	--	--
Cadmium	mg/kg	--	--	--	--	--	--
Calcium	mg/kg	--	--	--	--	--	--
Chromium Total*	mg/kg	--	--	--	--	--	--
Cobalt	mg/kg	--	--	--	--	--	--
Copper	mg/kg	--	--	--	--	--	--
Iron	mg/kg	--	--	--	--	--	--
Lead	mg/kg	--	--	--	--	--	--
Magnesium	mg/kg	--	--	--	--	--	--
Manganese	mg/kg	--	--	--	--	--	--
Mercury	mg/kg	--	--	--	--	--	--
Nickel	mg/kg	--	--	--	--	--	--
Potassium	mg/kg	--	--	--	--	--	--
Selenium	mg/kg	--	--	--	--	--	--
Silver	mg/kg	--	--	--	--	--	--
Sodium	mg/kg	--	--	--	--	--	--
Thallium	mg/kg	--	--	--	--	--	--
Vanadium	mg/kg	--	--	--	--	--	--
Zinc	mg/kg	--	--	--	--	--	--
Pesticides							
4,4'-DDD	mg/kg	--	--	--	--	--	--
4,4'-DDE	mg/kg	--	--	--	--	--	--
4,4'-DDT	mg/kg	--	--	--	--	--	--
Aldrin	mg/kg	--	--	--	--	--	--
alpha-BHC	mg/kg	--	--	--	--	--	--
beta-BHC	mg/kg	--	--	--	--	--	--
Chlordane	mg/kg	--	--	--	--	--	--
delta-BHC	mg/kg	--	--	--	--	--	--
Dieldrin	mg/kg	--	--	--	--	--	--
Endosulfan I	mg/kg	--	--	--	--	--	--
Endosulfan II	mg/kg	--	--	--	--	--	--
Endosulfan sulfate	mg/kg	--	--	--	--	--	--
Endrin	mg/kg	--	--	--	--	--	--
Endrin aldehyde	mg/kg	--	--	--	--	--	--
gamma-BHC (Lindane)	mg/kg	--	--	--	--	--	--
Heptachlor	mg/kg	--	--	--	--	--	--
Heptachlor epoxide	mg/kg	--	--	--	--	--	--
Toxaphene	mg/kg	--	--	--	--	--	--

TABLE 4.1

SURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Notes:
J - Estimated concentration.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
- - Not analyzed.
(1) - Delaware Uniform Risk-Based Remediation Standards - December 1999
* - Chromium IV and Compounds more Stringent

TABLE 4.2

SUBSURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:				*PH-49D*	*PH-50*	*PH-201*	*PH-201*	*PH-205*	*PH-205*	*PH-205*	*PH-206*
Sample ID:				*050305-EAP-012*	*050305-EAP-038*	*050505-EAP-001*	*050505-EAP-002*	*050505-EAP-013*	*050505-EAP-014*	*050505-EAP-015*	*050505-EAP-010*
Sample Depth:				*4-6 ft BGS*	*4-6 ft BGS*	*1.5-1.5 ft BGS*	*1.5-1.5 ft BGS*	*2-2.5 ft BGS*	*3-4 ft BGS*	*3-4 ft BGS*	*2-2.5 ft BGS*
Sample Date:				*5/3/2005*	*5/3/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*
							Duplicate			*Duplicate*	
		Non-Critical Water Resource Area (1)									
Parameters:	*Units*	Unrestricted Use Surface Soil	Restricted Use Surface Soil								
Volatile Organic Compounds											
1,1,1-Trichloroethane	mg/kg	4100	160	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
1,1,2,2-Tetrachloroethane	mg/kg	29	0.6	-	-	-	-	0.25 U	0.92 U	0.41 U	0.1 U
1,1,2-Trichloroethane	mg/kg	100	1	-	-	-	-	0.76 U	2.8 U	1.2 U	0.3 U
1,1-Dichloroethane	mg/kg	5000	780	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
1,1-Dichloroethene	mg/kg	10	0.07	-	-	-	-	0.5 U	1.8 U	0.82 U	0.2 U
1,2,4-Trichlorobenzene	mg/kg	2000	78	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	4	0.5	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
1,2-Dibromoethane (Ethylene Dibromide)	mg/kg	0.07	0.008	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
1,2-Dichlorobenzene	mg/kg	5000	560	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
1,2-Dichloroethane	mg/kg	63	0.4	-	-	-	-	0.5 U	1.8 U	0.82 U	0.2 U
1,2-Dichloropropane	mg/kg	84	9	-	-	-	-	0.25 U	0.92 U	0.41 U	0.1 U
1,3-Dichlorobenzene	mg/kg	5000	230	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
1,4-Dichlorobenzene	mg/kg	240	27	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
2-Butanone (Methyl Ethyl Ketone)	mg/kg	5000	1000	-	-	-	-	R	R	R	R
2-Hexanone	mg/kg	5000	310	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	mg/kg	5000	630	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Acetone	mg/kg	5000	780	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Benzene	mg/kg	200	0.8	-	-	-	-	0.25 U	0.92 U	0.41 U	0.1 U
Bromodichloromethane	mg/kg	92	10	-	-	-	-	0.25 U	0.92 U	0.41 U	0.1 U
Bromoform	mg/kg	720	53	-	-	-	-	1 U	3.7 U	1.6 U	0.4 U
Bromomethane (Methyl Bromide)	mg/kg	290	11	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Carbon disulfide	mg/kg	5000	780	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Carbon tetrachloride	mg/kg	44	0.3	-	-	-	-	0.5 U	1.8 U	0.82 U	0.2 U
Chlorobenzene	mg/kg	4100	130	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Chloroethane	mg/kg	2000	220	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Chloroform (Trichloromethane)	mg/kg	940	0.3	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Chloromethane (Methyl Chloride)	mg/kg	440	49	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
cis-1,2-Dichloroethene	mg/kg	2000	78	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
cis-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Cyclohexane	mg/kg	-	-	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Dibromochloromethane	mg/kg	68	8	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Dichlorodifluoromethane (CFC-12)	mg/kg	5000	1000	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Ethylbenzene	mg/kg	5000	400	-	-	-	-	9.5	36 J	12 J	0.59
Isopropylbenzene	mg/kg	5000	780	-	-	-	-	0.72 J	0.66 J	0.33 J	0.13 J
Methyl acetate	mg/kg	5000	1000	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Methyl cyclohexane	mg/kg	-	-	-	-	-	-	0.52 J	4.6 U	2.1 U	0.26 J
Methyl Tert Butyl Ether	mg/kg	1000	39	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Methylene chloride	mg/kg	760	13	-	-	-	-	0.76 U	2.8 U	1.2 U	0.3 U
Styrene	mg/kg	5000	1000	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Tetrachloroethene	mg/kg	110	11	-	-	-	-	0.25 U	0.92 U	0.41 U	0.1 U
Toluene	mg/kg	5000	650	-	-	-	-	0.28 J	3.7 J	3.5	0.5 U
trans-1,2-Dichloroethene	mg/kg	4100	160	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
trans-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Trichloroethene	mg/kg	520	5	-	-	-	-	0.25 U	0.92 U	0.41 U	0.1 U
Trichlorofluoromethane (CFC-11)	mg/kg	5000	1000	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Trifluorotrichloroethane (Freon 113)	mg/kg	5000	1000	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Vinyl chloride	mg/kg	3	0.03	-	-	-	-	1.3 U	4.6 U	2.1 U	0.5 U
Xylene (total)	mg/kg	5000	420	-	-	-	-	76	150	78	10

TABLE 4.2

SUBSURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:				*PH-49D*	*PH-50*	*PH-201*	*PH-201*	*PH-205*	*PH-205*	*PH-205*	*PH-206*
Sample ID:				*050305-EAP-012*	*050305-EAP-038*	*050505-EAP-001*	*050505-EAP-002*	*050505-EAP-013*	*050505-EAP-014*	*050505-EAP-015*	*050505-EAP-010*
Sample Depth:				*4-6 ft BGS*	*4-6 ft BGS*	*1.5-1.5 ft BGS*	*1.5-1.5 ft BGS*	*2-2.5 ft BGS*	*3-4 ft BGS*	*3-4 ft BGS*	*2-2.5 ft BGS*
Sample Date:				*5/3/2005*	*5/3/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*
							Duplicate			*Duplicate*	
Parameters:	*Units*	Non-Critical Water Resource Area (1) Unrestricted Use Surface Soil	Restricted Use Surface Soil								
Semi-volatile Organic Compounds											
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	mg/kg	82	9	0.41 U	0.4 U	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	5000	780	0.41 U	0.4 U	-	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	520	58	0.41 U	0.4 U	-	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	610	23	0.41 U	0.4 U	-	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	4100	160	0.41 U	0.4 U	-	-	-	-	-	-
2,4-Dinitrophenol	mg/kg	410	16	1.6 UJ	1.6 UJ	-	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	410	16	0.082 U	0.08 U	-	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	200	8	0.082 U	0.08 U	-	-	-	-	-	-
2-Chloronaphthalene	mg/kg	5000	630	0.41 U	0.4 U	-	-	-	-	-	-
2-Chlorophenol	mg/kg	1000	39	0.41 U	0.4 U	-	-	-	-	-	-
2-Methylnaphthalene	mg/kg	4100	160	0.41 U	0.083 J	-	-	-	-	-	-
2-Methylphenol	mg/kg	5000	390	0.41 U	0.4 U	-	-	-	-	-	-
2-Nitroaniline	mg/kg	12	0.5	0.82 U	0.8 U	-	-	-	-	-	-
2-Nitrophenol	mg/kg	-	-	0.41 U	0.4 U	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg	13	1	0.82 U	0.8 U	-	-	-	-	-	-
3-Nitroaniline	mg/kg	-	-	0.82 U	0.8 U	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	2	0.08	1.6 UJ	1.6 UJ	-	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/kg	-	-	0.41 U	0.4 U	-	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	-	-	0.41 U	0.4 U	-	-	-	-	-	-
4-Chloroaniline	mg/kg	820	31	0.41 U	0.4 U	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	-	-	0.41 U	0.4 U	-	-	-	-	-	-
4-Methylphenol	mg/kg	5000	39	0.41 U	0.4 U	-	-	-	-	-	-
4-Nitroaniline	mg/kg	-	-	0.82 U	0.8 U	-	-	-	-	-	-
4-Nitrophenol	mg/kg	1600	63	1.6 U	1.6 U	-	-	-	-	-	-
Acenaphthene	mg/kg	5000	470	0.41 U	0.092 J	-	-	-	-	-	-
Acenaphthylene	mg/kg	-	-	0.41 U	0.16 J	-	-	-	-	-	-
Acetophenone	mg/kg	5000	780	0.41 U	0.4 U	-	-	-	-	-	-
Anthracene	mg/kg	5000	1000	0.41 U	0.25 J	-	-	-	-	-	-
Atrazine	mg/kg	26	3	0.41 U	0.4 U	-	-	-	-	-	-
Benzaldehyde	mg/kg	5000	780	0.41 UJ	0.014 J	-	-	-	-	-	-
Benzo(a)anthracene	mg/kg	8	0.9	0.041 U	0.47	-	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.8	0.09	0.041 U	0.44*	-	-	-	-	-	-
Benzo(b)fluoranthene	mg/kg	8	0.9	0.041 U	0.42	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	-	-	0.41 UJ	0.16 J	-	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	78	9	0.041 U	0.45 J	-	-	-	-	-	-

TABLE 4.2

SUBSURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:				*PH-49D*	*PH-50*	*PH-201*	*PH-201*	*PH-205*	*PH-205*	*PH-205*	*PH-206*
Sample ID:				*050305-EAP-012*	*050305-EAP-038*	*050505-EAP-001*	*050505-EAP-002*	*050505-EAP-013*	*050505-EAP-014*	*050505-EAP-015*	*050505-EAP-010*
Sample Depth:				*4-6 ft BGS*	*4-6 ft BGS*	*1.5-1.5 ft BGS*	*1.5-1.5 ft BGS*	*2-2.5 ft BGS*	*3-4 ft BGS*	*3-4 ft BGS*	*2-2.5 ft BGS*
Sample Date:				*5/3/2005*	*5/3/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*
		Non-Critical Water Resource Area (1)					*Duplicate*			*Duplicate*	
Parameters:	*Units*	Unrestricted Use	Restricted Use								
		Surface Soil	Surface Soil								
Biphenyl	mg/kg	5000	390	0.41 U	0.029 J	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg	-	-	0.41 U	0.4 U	-	-	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg	5	0.2	0.041 U	0.04 U	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	mg/kg	410	46	0.41 U	1	-	-	-	-	-	-
Butyl benzylphthalate	mg/kg	5000	930	0.41 U	0.4 U	-	-	-	-	-	-
Caprolactam	mg/kg	5000	1000	0.41 U	0.4 U	-	-	-	-	-	-
Carbazole	mg/kg	290	32	0.41 U	0.034 J	-	-	-	-	-	-
Chrysene	mg/kg	780	87	0.41 U	0.52	-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.8	0.09	0.041 U	0.059 J	-	-	-	-	-	-
Dibenzofuran	mg/kg	820	31	0.41 U	0.16 J	-	-	-	-	-	-
Diethyl phthalate	mg/kg	5000	1000	0.41 U	0.4 U	-	-	-	-	-	-
Dimethyl phthalate	mg/kg	5000	1000	0.41 U	0.4 U	-	-	-	-	-	-
Di-n-butylphthalate	mg/kg	5000	780	0.41 U	0.4 U	-	-	-	-	-	-
Di-n-octyl phthalate	mg/kg	4100	160	0.41 U	0.4 UJ	-	-	-	-	-	-
Fluoranthene	mg/kg	5000	310	0.41 U	1.1	-	-	-	-	-	-
Fluorene	mg/kg	5000	310	0.41 U	0.38 J	-	-	-	-	-	-
Hexachlorobenzene	mg/kg	4	0.4	0.041 U	0.04 U	-	-	-	-	-	-
Hexachlorobutadiene	mg/kg	73	8	0.082 U	0.08 U	-	-	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	1400	10	0.41 UJ	R	-	-	-	-	-	-
Hexachloroethane	mg/kg	410	46	0.041 U	0.04 U	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	8	0.9	0.041 UJ	0.16 J	-	-	-	-	-	-
Isophorone	mg/kg	5000	670	0.41 U	0.4 U	-	-	-	-	-	-
Naphthalene	mg/kg	4100	160	0.41 U	0.082 J	-	-	-	-	-	-
Nitrobenzene	mg/kg	100	4	0.041 U	0.04 U	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg	0.8	0.09	0.041 U	0.04 U	-	-	-	-	-	-
N-Nitrosodiphenylamine	mg/kg	1200	130	0.41 U	0.017 J	-	-	-	-	-	-
Pentachlorophenol	mg/kg	48	5	1.6 U	1.6 UJ	-	-	-	-	-	-
Phenanthrene	mg/kg	5000	1000	0.41 U	1.2	-	-	-	-	-	-
Phenol	mg/kg	5000	1000	0.41 U	0.4 U	-	-	-	-	-	-
Pyrene	mg/kg	5000	230	0.41 U	1.1	-	-	-	-	-	-
Polychlorinated Biphenyls											
Aroclor-1016 (PCB-1016)	mg/kg	82	5	-	-	0.076 U	0.076 U	-	-	-	-
Aroclor-1221 (PCB-1221)	mg/kg	3	0.3	-	-	0.076 U	0.076 U	-	-	-	-
Aroclor-1232 (PCB-1232)	mg/kg	3	0.3	-	-	0.076 U	0.076 U	-	-	-	-
Aroclor-1242 (PCB-1242)	mg/kg	3	0.3	-	-	0.076 U	0.076 U	-	-	-	-
Aroclor-1248 (PCB-1248)	mg/kg	3	0.3	-	-	0.076 U	0.076 U	-	-	-	-
Aroclor-1254 (PCB-1254)	mg/kg	3	0.3	-	-	0.076 U	0.076 U	-	-	-	-
Aroclor-1260 (PCB-1260)	mg/kg	3	0.3	-	-	0.076 U	0.076 U	-	-	-	-

TABLE 4.2

SUBSURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*PH-206*	*PH-208*	*PH-209*	*PH-209*	*PH-210*	*PH-211*	*PH-211*	*PH-212*	*PH-213*	*PH-214*	*PH-215*
Sample ID:		*050505-EAP-011*	*050505-EAP-016*	*050505-EAP-017*	*050505-EAP-018*	*050305-EAP-023*	*050305-EAP-017*	*050305-EAP-018*	*050305-EAP-014*	*050305-EAP-020*	*050305-EAP-028*	*050305-EAP-034*
Sample Depth:		*3-4 ft BGS*	*2-2.5 ft BGS*	*3-4 ft BGS*	*3-4 ft BGS*	*2-4 ft BGS*	*2-4 ft BGS*	*4-6 ft BGS*	*2-4 ft BGS*	*2-4 ft BGS*	*2-4 ft BGS*	*2-4 ft BGS*
Sample Date:		*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*
					Duplicate							
Parameters:	*Units*											
Volatile Organic Compounds												
1,1,1-Trichloroethane	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg	0.1 U	0.096 U	0.1 U	0.094 U	-	-	-	-	-	-	-
1,1,2-Trichloroethane	mg/kg	0.31 U	0.29 U	0.31 U	0.28 U	-	-	-	-	-	-	-
1,1-Dichloroethane	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
1,1-Dichloroethene	mg/kg	0.21 U	0.19 U	0.2 U	0.19 U	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene Dibromide)	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
1,2-Dichloroethane	mg/kg	0.21 U	0.19 U	0.2 U	0.19 U	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/kg	0.1 U	0.096 U	0.1 U	0.094 U	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	mg/kg	R	R	R	R	-	-	-	-	-	-	-
2-Hexanone	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Acetone	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Benzene	mg/kg	0.1 U	0.096 U	0.1 U	0.094 U	-	-	-	-	-	-	-
Bromodichloromethane	mg/kg	0.1 U	0.096 U	0.1 U	0.094 U	-	-	-	-	-	-	-
Bromoform	mg/kg	0.42 U	0.38 U	0.41 U	0.38 U	-	-	-	-	-	-	-
Bromomethane (Methyl Bromide)	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Carbon disulfide	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Carbon tetrachloride	mg/kg	0.21 U	0.19 U	0.2 U	0.19 U	-	-	-	-	-	-	-
Chlorobenzene	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Chloroethane	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Chloromethane (Methyl Chloride)	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Cyclohexane	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Dibromochloromethane	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Ethylbenzene	mg/kg	3.6	3.5	4.9	3.8	-	-	-	-	-	-	-
Isopropylbenzene	mg/kg	0.14 J	0.066 J	0.091 J	0.06 J	-	-	-	-	-	-	-
Methyl acetate	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Methyl cyclohexane	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Methyl Tert Butyl Ether	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Methylene chloride	mg/kg	0.31 U	0.29 U	0.31 U	0.28 U	-	-	-	-	-	-	-
Styrene	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Tetrachloroethene	mg/kg	0.1 U	0.096 U	0.1 U	0.094 U	-	-	-	-	-	-	-
Toluene	mg/kg	0.52 U	0.05 J	3.9	2.5	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Trichloroethene	mg/kg	0.1 U	0.096 U	0.1 U	0.094 U	-	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Vinyl chloride	mg/kg	0.52 U	0.48 U	0.51 U	0.47 U	-	-	-	-	-	-	-
Xylene (total)	mg/kg	8.6	12	33	25	-	-	-	-	-	-	-

TABLE 4.2

SUBSURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*PH-206*	*PH-208*	*PH-208*	*PH-208*	*PH-210*	*PH-211*	*PH-211*	*PH-212*	*PH-213*	*PH-214*	*PH-215*
Sample ID:		*050505-EAP-011*	*050505-EAP-016*	*050505-EAP-017*	*050505-EAP-018*	*050305-EAP-023*	*050305-EAP-017*	*050305-EAP-018*	*050305-EAP-014*	*050305-EAP-020*	*050305-EAP-028*	*050305-EAP-034*
Sample Depth:		*3-4 ft BGS*	*2-2.5 ft BGS*	*3-4 ft BGS*	*3-4 ft BGS*	*2-4 ft BGS*	*2-4 ft BGS*	*4-6 ft BGS*	*2-4 ft BGS*	*2-4 ft BGS*	*2-4 ft BGS*	*2-4 ft BGS*
Sample Date:		*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005* *Duplicate*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*
Parameters:	***Units***											
Semi-volatile Organic Compounds												
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
2,4,5-Trichlorophenol	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
2,4,6-Trichlorophenol	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
2,4-Dichlorophenol	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
2,4-Dimethylphenol	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
2,4-Dinitrophenol	mg/kg	-	-	-	-	1.6 UJ	1.5 UJ	1.5 UJ	1.5 UJ	1.5 UJ	1.6 UJ	3.2 UJ
2,4-Dinitrotoluene	mg/kg	-	-	-	-	0.083 U	0.075 U	0.075 U	0.075 U	0.076 U	0.083 U	0.16 U
2,6-Dinitrotoluene	mg/kg	-	-	-	-	0.083 U	0.075 U	0.075 U	0.075 U	0.076 U	0.083 U	0.16 U
2-Chloronaphthalene	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
2-Chlorophenol	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
2-Methylnaphthalene	mg/kg	-	-	-	-	0.41 U	0.37 U	0.0076 J	0.38 U	0.38 U	0.41 U	0.03 J
2-Methylphenol	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
2-Nitroaniline	mg/kg	-	-	-	-	0.83 U	0.75 U	0.75 U	0.75 U	0.76 U	0.83 U	1.6 U
2-Nitrophenol	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
3,3'-Dichlorobenzidine	mg/kg	-	-	-	-	0.83 U	0.75 U	0.75 U	0.75 U	0.76 U	0.83 U	1.6 U
3-Nitroaniline	mg/kg	-	-	-	-	0.83 U	0.75 U	0.75 U	0.75 U	0.76 U	0.83 U	1.6 U
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	1.6 UJ	1.5 UJ	1.5 U	1.5 UJ	1.5 UJ	1.6 UJ	3.2 U
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
4-Chloro-3-methylphenol	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
4-Chloroaniline	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
4-Methylphenol	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.0082 J	0.41 U	0.8 U
4-Nitroaniline	mg/kg	-	-	-	-	0.83 U	0.75 U	0.75 U	0.75 U	0.76 U	0.83 U	1.6 U
4-Nitrophenol	mg/kg	-	-	-	-	1.6 U	1.5 U	1.5 U	1.5 U	1.5 U	1.6 U	3.2 U
Acenaphthene	mg/kg	-	-	-	-	0.41 U	0.052 J	0.058 J	0.38 U	0.04 J	0.41 U	0.8 U
Acenaphthylene	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.066 J
Acetophenone	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
Anthracene	mg/kg	-	-	-	-	0.41 U	0.058 J	0.1 J	0.38 U	0.018 J	0.41 U	0.04 J
Atrazine	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
Benzaldehyde	mg/kg	-	-	-	-	0.41 UJ	0.37 UJ	0.37 UJ	0.38 UJ	0.38 UJ	0.41 UJ	0.8 U
Benzo(a)anthracene	mg/kg	-	-	-	-	0.041 U	0.11	0.21	0.013 J	0.022 J	0.041 U	0.12
Benzo(a)pyrene	mg/kg	-	-	-	-	0.041 U	**0.091***	**0.17***	0.015 J	0.019 J	0.041 U	**0.14***
Benzo(b)fluoranthene	mg/kg	-	-	-	-	0.041 U	0.073	0.13	0.012 J	0.014 J	0.041 U	0.16
Benzo(g,h,i)perylene	mg/kg	-	-	-	-	0.41 UJ	0.05 J	0.098 J	0.38 UJ	0.0088 J	0.41 UJ	0.061 J
Benzo(k)fluoranthene	mg/kg	-	-	-	-	0.041 U	0.069	0.16	0.013 J	0.014 J	0.041 U	0.18

TABLE 4.2

SUBSURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*PH-206*	*PH-208*	*PH-208*	*PH-208*	*PH-210*	*PH-211*	*PH-211*	*PH-212*	*PH-213*	*PH-214*	*PH-215*
Sample ID:		*050505-EAP-011*	*050505-EAP-016*	*050505-EAP-017*	*050505-EAP-018*	*050305-EAP-023*	*050305-EAP-017*	*050305-EAP-018*	*050305-EAP-014*	*050305-EAP-020*	*050305-EAP-028*	*050305-EAP-034*
Sample Depth:		*3-4 ft BGS*	*2-2.5 ft BGS*	*3-4 ft BGS*	*3-4 ft BGS*	*2-4 ft BGS*	*2-4 ft BGS*	*4-6 ft BGS*	*2-4 ft BGS*	*2-4 ft BGS*	*2-4 ft BGS*	*2-4 ft BGS*
Sample Date:		*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/5/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*
					Duplicate							
Parameters:	*Units*											
Biphenyl	mg/kg	-	-	-	-	0.41 U	0.0079 J	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
bis(2-Chloroethyl)ether	mg/kg	-	-	-	-	0.041 U	0.037 U	0.037 U	0.038 U	0.038 U	0.041 U	0.08 U
bis(2-Ethylhexyl)phthalate	mg/kg	-	-	-	-	0.22 J	0.14 J	0.37 U	0.28 J	0.093 J	0.2 J	0.51 J
Butyl benzylphthalate	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
Caprolactam	mg/kg	-	-	-	-	0.41 U	0.014 J	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
Carbazole	mg/kg	-	-	-	-	0.41 U	0.026 J	0.042 J	0.38 U	0.38 U	0.41 U	0.8 U
Chrysene	mg/kg	-	-	-	-	0.41 U	0.11 J	0.23 J	0.018 J	0.025 J	0.41 U	0.2 J
Dibenz(a,h)anthracene	mg/kg	-	-	-	-	0.041 U	0.037 U	0.035 J	0.038 U	0.038 U	0.041 U	0.08 U
Dibenzofuran	mg/kg	-	-	-	-	0.41 U	0.037 J	0.041 J	0.38 U	0.016 J	0.41 U	0.8 U
Diethyl phthalate	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
Dimethyl phthalate	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
Di-n-butylphthalate	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
Di-n-octyl phthalate	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
Fluoranthene	mg/kg	-	-	-	-	0.012 J	0.26 J	0.41	0.032 J	0.062 J	0.41 U	0.23 J
Fluorene	mg/kg	-	-	-	-	0.41 U	0.052 J	0.054 J	0.38 U	0.03 J	0.41 U	0.8 U
Hexachlorobenzene	mg/kg	-	-	-	-	0.041 U	0.037 U	0.037 U	0.038 U	0.038 U	0.041 U	0.08 U
Hexachlorobutadiene	mg/kg	-	-	-	-	0.083 U	0.075 U	0.075 U	0.075 U	0.076 U	0.083 U	0.16 U
Hexachlorocyclopentadiene	mg/kg	-	-	-	-	0.41 UJ	0.37 UJ	0.37 UJ	0.38 UJ	0.38 UJ	0.41 UJ	0.8 UJ
Hexachloroethane	mg/kg	-	-	-	-	0.041 U	0.037 U	0.037 U	0.038 U	0.038 U	0.041 U	0.08 U
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	-	0.041 UJ	0.046 J	0.094	0.038 UJ	0.038 UJ	0.041 UJ	0.046 J
Isophorone	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
Naphthalene	mg/kg	-	-	-	-	0.41 U	0.018 J	0.018 J	0.38 U	0.38 U	0.41 U	0.035 J
Nitrobenzene	mg/kg	-	-	-	-	0.041 U	0.037 U	0.037 U	0.038 U	0.038 U	0.041 U	0.08 U
N-Nitrosodi-n-propylamine	mg/kg	-	-	-	-	0.041 U	0.037 U	0.037 U	0.038 U	0.038 U	0.041 U	0.08 U
N-Nitrosodiphenylamine	mg/kg	-	-	-	-	0.41 U	0.37 U	0.37 U	0.38 U	0.38 U	0.41 U	0.8 U
Pentachlorophenol	mg/kg	-	-	-	-	1.6 U	1.5 U	1.5 U	1.5 U	1.5 U	1.6 U	3.2 U
Phenanthrene	mg/kg	-	-	-	-	0.0092 J	0.18 J	0.29 J	0.0096 J	0.034 J	0.41 U	0.16 J
Phenol	mg/kg	-	-	-	-	0.41 U	0.37 U	0.0083 J	0.38 U	0.38 U	0.41 U	0.8 U
Pyrene	mg/kg	-	-	-	-	0.011 J	0.24 J	0.41	0.033 J	0.063 J	0.41 U	0.28 J
Polychlorinated Biphenyls												
Aroclor-1016 (PCB-1016)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1221 (PCB-1221)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1232 (PCB-1232)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1242 (PCB-1242)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1248 (PCB-1248)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1254 (PCB-1254)	mg/kg	-	-	-	-	-	-	-	-	-	-	-
Aroclor-1260 (PCB-1260)	mg/kg	-	-	-	-	-	-	-	-	-	-	-

TABLE 4.2

SUBSURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*PH-215*	*PH-216*	*PH-217*	*PH-217*	*PH-HA-2*	*PH-HA-4*
Sample ID:		*050305-EAP-035*	*050305-EAP-031*	*050305-EAP-040*	*050305-EAP-041*	*050505-EAP-009*	*050505-EAP-012*
Sample Depth:		*4-6 ft BGS*	*2-4 ft BGS*	*2-4 ft BGS*	*4-6 ft BGS*	*3-4 ft BGS*	*3-4 ft BGS*
Sample Date:		*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/5/2005*	*5/5/2005*
Parameters:	***Units***						
Volatile Organic Compounds							
1,1,1-Trichloroethane	mg/kg	-	-	-	-	-	50 U
1,1,2,2-Tetrachloroethane	mg/kg	-	-	-	-	-	10 U
1,1,2-Trichloroethane	mg/kg	-	-	-	-	-	30 U
1,1-Dichloroethane	mg/kg	-	-	-	-	-	50 U
1,1-Dichloroethene	mg/kg	-	-	-	-	-	20 U
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	50 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	-	-	-	-	-	50 U
1,2-Dibromoethane (Ethylene Dibromide)	mg/kg	-	-	-	-	-	50 U
1,2-Dichlorobenzene	mg/kg	-	-	-	-	-	50 U
1,2-Dichloroethane	mg/kg	-	-	-	-	-	20 U
1,2-Dichloropropane	mg/kg	-	-	-	-	-	10 U
1,3-Dichlorobenzene	mg/kg	-	-	-	-	-	50 U
1,4-Dichlorobenzene	mg/kg	-	-	-	-	-	50 U
2-Butanone (Methyl Ethyl Ketone)	mg/kg	-	-	-	-	-	R
2-Hexanone	mg/kg	-	-	-	-	-	50 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	mg/kg	-	-	-	-	-	50 U
Acetone	mg/kg	-	-	-	-	-	50 U
Benzene	mg/kg	-	-	-	-	-	10 U
Bromodichloromethane	mg/kg	-	-	-	-	-	10 U
Bromoform	mg/kg	-	-	-	-	-	40 U
Bromomethane (Methyl Bromide)	mg/kg	-	-	-	-	-	50 U
Carbon disulfide	mg/kg	-	-	-	-	-	50 U
Carbon tetrachloride	mg/kg	-	-	-	-	-	20 U
Chlorobenzene	mg/kg	-	-	-	-	-	50 U
Chloroethane	mg/kg	-	-	-	-	-	50 U
Chloroform (Trichloromethane)	mg/kg	-	-	-	-	-	50 U
Chloromethane (Methyl Chloride)	mg/kg	-	-	-	-	-	50 U
cis-1,2-Dichloroethene	mg/kg	-	-	-	-	-	50 U
cis-1,3-Dichloropropene	mg/kg	-	-	-	-	-	50 U
Cyclohexane	mg/kg	-	-	-	-	-	50 U
Dibromochloromethane	mg/kg	-	-	-	-	-	50 U
Dichlorodifluoromethane (CFC-12)	mg/kg	-	-	-	-	-	50 U
Ethylbenzene	mg/kg	-	-	-	-	-	**410***
Isopropylbenzene	mg/kg	-	-	-	-	-	11 J
Methyl acetate	mg/kg	-	-	-	-	-	50 U
Methyl cyclohexane	mg/kg	-	-	-	-	-	11 J
Methyl Tert Butyl Ether	mg/kg	-	-	-	-	-	50 U
Methylene chloride	mg/kg	-	-	-	-	-	30 U
Styrene	mg/kg	-	-	-	-	-	50 U
Tetrachloroethene	mg/kg	-	-	-	-	-	10 U
Toluene	mg/kg	-	-	-	-	-	7.5 J
trans-1,2-Dichloroethene	mg/kg	-	-	-	-	-	50 U
trans-1,3-Dichloropropene	mg/kg	-	-	-	-	-	50 U
Trichloroethene	mg/kg	-	-	-	-	-	10 U
Trichlorofluoromethane (CFC-11)	mg/kg	-	-	-	-	-	50 U
Trifluorotrichloroethane (Freon 113)	mg/kg	-	-	-	-	-	50 U
Vinyl chloride	mg/kg	-	-	-	-	-	50 U
Xylene (total)	mg/kg	-	-	-	-	-	**2500***

TABLE 4.2

SUBSURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*PH-215*	*PH-216*	*PH-217*	*PH-217*	*PH-HA-2*	*PH-HA-4*
Sample ID:		*050305-EAP-035*	*050305-EAP-031*	*050305-EAP-040*	*050305-EAP-041*	*050505-EAP-009*	*050505-EAP-012*
Sample Depth:		*4-6 ft BGS*	*2-4 ft BGS*	*2-4 ft BGS*	*4-6 ft BGS*	*3-4 ft BGS*	*3-4 ft BGS*
Sample Date:		*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/5/2005*	*5/5/2005*
Parameters:	*Units*						
Semi-volatile Organic Compounds							
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
2,4,5-Trichlorophenol	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
2,4,6-Trichlorophenol	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
2,4-Dichlorophenol	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
2,4-Dimethylphenol	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
2,4-Dinitrophenol	mg/kg	1.6 UJ	1.6 UJ	1.6 UJ	1.6 UJ	-	-
2,4-Dinitrotoluene	mg/kg	0.079 U	0.081 U	0.079 U	0.078 U	-	-
2,6-Dinitrotoluene	mg/kg	0.079 U	0.081 U	0.079 U	0.078 U	-	-
2-Chloronaphthalene	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
2-Chlorophenol	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
2-Methylnaphthalene	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
2-Methylphenol	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
2-Nitroaniline	mg/kg	0.79 U	0.81 U	0.79 U	0.78 U	-	-
2-Nitrophenol	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
3,3'-Dichlorobenzidine	mg/kg	0.79 U	0.81 U	0.79 U	0.78 U	-	-
3-Nitroaniline	mg/kg	0.79 U	0.81 U	0.79 U	0.78 U	-	-
4,6-Dinitro-2-methylphenol	mg/kg	1.6 U	1.6 UJ	1.6 UJ	1.6 U	-	-
4-Bromophenyl phenyl ether	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
4-Chloro-3-methylphenol	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
4-Chloroaniline	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
4-Methylphenol	mg/kg	0.39 U	0.018 J	0.4 U	0.39 U	-	-
4-Nitroaniline	mg/kg	0.79 U	0.81 U	0.79 U	0.78 U	-	-
4-Nitrophenol	mg/kg	1.6 U	1.6 U	1.6 U	1.6 U	-	-
Acenaphthene	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
Acenaphthylene	mg/kg	0.39 U	0.4 U	0.036 J	0.39 U	-	-
Acetophenone	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
Anthracene	mg/kg	0.39 U	0.4 U	0.014 J	0.39 U	-	-
Atrazine	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
Benzaldehyde	mg/kg	0.39 UJ	0.03 J	0.4 U	0.39 UJ	-	-
Benzo(a)anthracene	mg/kg	0.039 U	0.04 U	0.097	0.039 U	-	-
Benzo(a)pyrene	mg/kg	0.039 U	0.04 U	0.1	0.039 U	-	-
Benzo(b)fluoranthene	mg/kg	0.039 U	0.04 U	0.091	0.039 U	-	-
Benzo(g,h,i)perylene	mg/kg	0.39 U	0.4 UJ	0.045 J	0.39 U	-	-
Benzo(k)fluoranthene	mg/kg	0.039 U	0.04 UJ	0.11 J	0.039 U	-	-

TABLE 4.2

SUBSURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*PH-215*	*PH-216*	*PH-217*	*PH-217*	*PH-HA-2*	*PH-HA-4*
Sample ID:		*050305-EAP-035*	*050305-EAP-031*	*050305-EAP-040*	*050305-EAP-041*	*050505-EAP-009*	*050505-EAP-012*
Sample Depth:		*4-6 ft BGS*	*2-4 ft BGS*	*2-4 ft BGS*	*4-6 ft BGS*	*3-4 ft BGS*	*3-4 ft BGS*
Sample Date:		*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/3/2005*	*5/5/2005*	*5/5/2005*
Parameters:	***Units***						
Biphenyl	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
bis(2-Chloroethoxy)methane	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
bis(2-Chloroethyl)ether	mg/kg	0.039 U	0.04 U	0.04 U	0.039 U	-	-
bis(2-Ethylhexyl)phthalate	mg/kg	0.39 U	0.091 J	1.5 J	0.39 U	-	-
Butyl benzylphthalate	mg/kg	0.39 U	0.4 U	0.11 J	0.39 U	-	-
Caprolactam	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
Carbazole	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
Chrysene	mg/kg	0.39 U	0.0095 J	0.12 J	0.39 U	-	-
Dibenz(a,h)anthracene	mg/kg	0.039 U	0.04 UJ	0.016 J	0.039 U	-	-
Dibenzofuran	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
Diethyl phthalate	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
Dimethyl phthalate	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
Di-n-butylphthalate	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
Di-n-octyl phthalate	mg/kg	0.39 U	0.4 UJ	0.4 UJ	0.39 U	-	-
Fluoranthene	mg/kg	0.39 U	0.015 J	0.17 J	0.39 U	-	-
Fluorene	mg/kg	0.39 U	0.4 U	0.0085 J	0.39 U	-	-
Hexachlorobenzene	mg/kg	0.039 U	0.04 U	0.04 U	0.039 U	-	-
Hexachlorobutadiene	mg/kg	0.079 U	0.081 U	0.079 U	0.078 U	-	-
Hexachlorocyclopentadiene	mg/kg	0.39 UJ	R	R	0.39 UJ	-	-
Hexachloroethane	mg/kg	0.039 U	0.04 U	0.04 U	0.039 U	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.039 U	0.04 UJ	0.044 J	0.039 U	-	-
Isophorone	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
Naphthalene	mg/kg	0.39 U	0.0085 J	0.4 U	0.39 U	-	-
Nitrobenzene	mg/kg	0.039 U	0.04 U	0.04 U	0.039 U	-	-
N-Nitrosodi-n-propylamine	mg/kg	0.039 U	0.04 U	0.04 U	0.039 U	-	-
N-Nitrosodiphenylamine	mg/kg	0.39 U	0.4 U	0.019 J	0.39 U	-	-
Pentachlorophenol	mg/kg	1.6 U	1.6 UJ	1.6 U	1.6 U	-	-
Phenanthrene	mg/kg	0.39 U	0.012 J	0.055 J	0.39 U	-	-
Phenol	mg/kg	0.39 U	0.4 U	0.4 U	0.39 U	-	-
Pyrene	mg/kg	0.0079 J	0.013 J	0.17 J	0.39 U	-	-
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/kg	-	-	-	-	0.085 U	-
Aroclor-1221 (PCB-1221)	mg/kg	-	-	-	-	0.085 U	-
Aroclor-1232 (PCB-1232)	mg/kg	-	-	-	-	0.085 U	-
Aroclor-1242 (PCB-1242)	mg/kg	-	-	-	-	0.085 U	-
Aroclor-1248 (PCB-1248)	mg/kg	-	-	-	-	0.085 U	-
Aroclor-1254 (PCB-1254)	mg/kg	-	-	-	-	0.085 U	-
Aroclor-1260 (PCB-1260)	mg/kg	-	-	-	-	0.085 U	-

TABLE 4.2

SUBSURFACE SOIL SAMPLING ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Notes:

J - Estimated concentration.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
- - Not analyzed.

TABLE 4.3

NEAR-SURFACE WATER ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:			*PH-203*	*PH-203*
Sample ID:			*050505-EAP-007*	*050505-EAP-008*
Sample Depth:			*2.5 ft BGS*	*2.5 ft BGS*
Sample Date:			*5/5/2005*	*5/5/2005*
				Duplicate
Parameters:	*Units*	DELAWARE GROUNDWATER [a]		
Volatile Organic Compounds				
1,1,1-Trichloroethane	ug/L	200	-	-
1,1,2,2-Tetrachloroethane	ug/L	0.05	-	-
1,1,2-Trichloroethane	ug/L	0.2	-	-
1,1-Dichloromethane	ug/L	81	-	-
1,1-Dichloroethene	ug/L	0.04	-	-
1,2,4-Trichlorobenzene	ug/L	70	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.05	-	-
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	0.001	-	-
1,2-Dichlorobenzene	ug/L	64	-	-
1,2-Dichloroethane	ug/L	0.1	-	-
1,2-Dichloropropane	ug/L	0.2	-	-
1,3-Dichlorobenzene	ug/L	0.5	-	-
1,4-Dichlorobenzene	ug/L	0.4	-	-
2-Butanone (Methyl Ethyl Ketone)	ug/L	190	-	-
2-Hexanone	ug/L	150	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	14	-	-
Acetone	ug/L	61	-	-
Benzene	ug/L	0.4	-	-
Bromodichloromethane	ug/L	0.2	-	-
Bromoform	ug/L	8	-	-
Bromomethane (Methyl Bromide)	ug/L	9	-	-
Carbon disulfide	ug/L	100	-	-
Carbon tetrachloride	ug/L	2	-	-
Chlorobenzene	ug/L	11	-	-
Chloroethane	ug/L	4	-	-
Chloroform (Trichloromethane)	ug/L	0.1	-	-
Chloromethane (Methyl Chloride)	ug/L	2	-	-
cis-1,2-Dichloroethene	ug/L	51	-	-
cis-1,3-Dichloropropene	ug/L	-	-	-
Cyclohexane	ug/L	-	-	-
Dibromochloromethane	ug/L	0.1	-	-
Dichlorodifluoromethane (CFC-12)	ug/L	350	-	-
Ethylbenzene	ug/L	700	-	-
Isopropylbenzene	ug/L	66	-	-
Methyl acetate	ug/L	610	-	-
Methyl cyclohexane	ug/L	-	-	-
Methyl Tert Butyl Ether	ug/L	20	-	-
Methylene chloride	ug/L	4	-	-
Styrene	ug/L	100	-	-
Tetrachloroethene	ug/L	1	-	-
Toluene	ug/L	750	-	-
trans-1,2-Dichloroethene	ug/L	100	-	-
trans-1,3-Dichloropropene	ug/L	-	-	-
Trichloroethene	ug/L	2	-	-
Trichlorofluoromethane (CFC-11)	ug/L	1300	-	-
Trifluorotrichloroethane (Freon 113)	ug/L	5900	-	-
Vinyl chloride	ug/L	0.02	-	-
Xylene (total)	ug/L	1200	-	-
Semi-volatile Organic Compounds				
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/L	0.3	-	-
2,4,5-Trichlorophenol	ug/L	370	-	-
2,4,6-Trichlorophenol	ug/L	6	-	-
2,4-Dichlorophenol	ug/L	20	-	-
2,4-Dimethylphenol	ug/L	73	-	-
2,4-Dinitrophenol	ug/L	7	-	-
2,4-Dinitrotoluene	ug/L	7	-	-
2,6-Dinitrotoluene	ug/L	4	-	-
2-Chloronaphthalene	ug/L	49	-	-
2-Chlorophenol	ug/L	30	-	-
2-Methylnaphthalene	ug/L	12	-	-
2-Methylphenol	ug/L	180	-	-
2-Nitroaniline	ug/L	0.2	-	-
2-Nitrophenol	ug/L	-	-	-
3,3'-Dichlorobenzidine	ug/L	0.2	-	-
3-Nitroaniline	ug/L	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	0.4	-	-

TABLE 4.3

NEAR-SURFACE WATER ANALYTICAL RESULTS
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:			*PH-203*	*PH-203*
Sample ID:			*050505-EAP-007*	*050505-EAP-008*
Sample Depth:			*2.5 ft BGS*	*2.5 ft BGS*
Sample Date:			*5/5/2005*	*5/5/2005*
				Duplicate
Parameters:	***Units***	DELAWARE-GROUNDWATER [a]		
4-Bromophenyl phenyl ether	ug/L	-	-	-
4-Chloro-3-methylphenol	ug/L	-	-	-
4-Chloroaniline	ug/L	15	-	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-
4-Methylphenol	ug/L	18	-	-
4-Nitroaniline	ug/L	-	-	-
4-Nitrophenol	ug/L	60	-	-
Acenaphthene	ug/L	37	-	-
Acenaphthylene	ug/L	-	-	-
Acetophenone	ug/L	0.004	-	-
Anthracene	ug/L	180	-	-
Atrazine	ug/L	0.3	-	-
Benzaldehyde	ug/L	370	-	-
Benzo(a)anthracene	ug/L	0.09	-	-
Benzo(a)pyrene	ug/L	0.01	-	-
Benzo(b)fluoranthene	ug/L	0.09	-	-
Benzo(g,h,i)perylene	ug/L	-	-	-
Benzo(k)fluoranthene	ug/L	0.9	-	-
Biphenyl	ug/L	30	-	-
bis(2-Chloroethoxy)methane	ug/L	-	-	-
bis(2-Chloroethyl)ether	ug/L	0.01	-	-
bis(2-Ethylhexyl)phthalate	ug/L	5	-	-
Butyl benzylphthalate	ug/L	730	-	-
Caprolactam	ug/L	1800	-	-
Carbazole	ug/L	3	-	-
Chrysene	ug/L	9	-	-
Dibenz(a,h)anthracene	ug/L	0.01	-	-
Dibenzofuran	ug/L	2	-	-
Diethyl phthalate	ug/L	5000	-	-
Dimethyl phthalate	ug/L	37000	-	-
Di-n-butylphthalate	ug/L	370	-	-
Di-n-octyl phthalate	ug/L	73	-	-
Fluoranthene	ug/L	150	-	-
Fluorene	ug/L	24	-	-
Hexachlorobenzene	ug/L	0.04	-	-
Hexachlorobutadiene	ug/L	0.9	-	-
Hexachlorocyclopentadiene	ug/L	26	-	-
Hexachloroethane	ug/L	1	-	-
Indeno(1,2,3-cd)pyrene	ug/L	0.09	-	-
Isophorone	ug/L	71	-	-
Naphthalene	ug/L	0.7	-	-
Nitrobenzene	ug/L	0.4	-	-
N-Nitrosodi-n-propylamine	ug/L	0.01	-	-
N-Nitrosodiphenylamine	ug/L	14	-	-
Pentachlorophenol	ug/L	0.6	-	-
Phenanthrene	ug/L	120	-	-
Phenol	ug/L	22	-	-
Pyrene	ug/L	18	-	-
Polychlorinated Biphenyls				
Aroclor-1016 (PCB-1016)	ug/L	0.10	1.0 U	1.5 U
Aroclor-1221 (PCB-1221)	ug/L	0.03	1.0 U	1.5 U
Aroclor-1232 (PCB-1232)	ug/L	0.03	1.0 U	1.5 U
Aroclor-1242 (PCB-1242)	ug/L	0.03	1.0 U	1.5 U
Aroclor-1248 (PCB-1248)	ug/L	0.03	1.0 U	1.5 U
Aroclor-1254 (PCB-1254)	ug/L	0.03	1.0 U	1.5 UJ
Aroclor-1260 (PCB-1260)	ug/L	0.03	4.7	12 J

Notes:

J - Estimated concentration.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

- - Not analyzed.

APPENDIX A

SOIL BORING STRATIGRAPHIC LOGS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: SB1-05
DATE COMPLETED: May 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	SM-SILTY SAND, medium to coarse grained		BENTONITE	001				0
2	END OF BOREHOLE @ 2.0ft BGS	2.00	2" Ø BOREHOLE					
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 6/10/05

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: SB3-05
DATE COMPLETED: May 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	SM-SILTY SAND, medium to coarse grained, no odor		BENTONITE 2" Ø BOREHOLE	003				0
2	END OF BOREHOLE @ 2.0ft BGS	2.00						
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 6/10/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: SB5-05
DATE COMPLETED: May 3, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	SWG-SAND, coarse grained, with gravel, no odor							0
	MLS-SANDY SILT, fine grained, no odor	1.00	BENTONITE 2" Ø BOREHOLE	005	X			0
2	END OF BOREHOLE @ 2.0ft BGS	2.00						
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (005)

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 6/10/05

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: SB7-05
DATE COMPLETED: May 3, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	SP-SAND, coarse grained with gravel and silt, no odor							0
	MLS-SANDY SILT, fine grained, no odor	1.00	BENTONITE	026				0
2	END OF BOREHOLE @ 2.0ft BGS	2.00	2" Ø BOREHOLE					
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (026)

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 6/10/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: SB9-05
DATE COMPLETED: May 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	SPG-SAND, medium to coarse grained, with gravel, saturated at 1 ft BGS, no odor		BENTONITE 2" Ø BOREHOLE	007	X			3.4
2	END OF BOREHOLE @ 2.0ft BGS	2.00						7.4
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 6/10/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: SB11-05
DATE COMPLETED: May 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	SM-SILTY SAND, medium to coarse grained		BENTONITE	008				0
2	MLS-SANDY SILT, fine grained, slight odor	1.50	2" Ø BOREHOLE					67.4
	END OF BOREHOLE @ 2.0ft BGS	2.00						
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 6/10/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: SB13-05
DATE COMPLETED: May 3, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	MLS-SANDY SILT, fine grained, no odor		BENTONITE 2" Ø BOREHOLE	003				0
2	END OF BOREHOLE @ 2.0ft BGS	2.00						0
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 6/10/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: SB15-05
DATE COMPLETED: May 3, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	SW-SAND, coarse grained							1.5
	MLS-SANDY SILT, fine to medium grained, no odor	1.00	BENTONITE 2" Ø BOREHOLE	002				
2	END OF BOREHOLE @ 2.0ft BGS	2.00						
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 6/10/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: SB17-05
DATE COMPLETED: May 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	SWG-SAND, coarse grained, with gravel, no odor							
2	ML-SANDY SILT, fine grained, no odor	1.00	BENTONITE 2" Ø BOREHOLE	006	X			0
	END OF BOREHOLE @ 2.0ft BGS	2.00						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (006)

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 6/10/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: SB19-05
DATE COMPLETED: May 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	SP-SAND, medium to coarse grained, no odor		BENTONITE	005				4.4
2	END OF BOREHOLE @ 2.0ft BGS	2.00	2" Ø BOREHOLE					0
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (005)

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 6/10/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: PH-HA2
DATE COMPLETED: May 5, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft FT NGVD	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	NORTHING: 629695.92 EASTING: 600895.73 GROUND SURFACE	78.55						
0	SWG-SAND, fine grained, with gravel, brownish-grey, moist	78.05	BENTONITE					500-600
2	SM-SILTY SAND, fine to coarse grained, brownish-grey, moist	76.05	2" Ø BOREHOLE	009				
4	MLS-SANDY SILT, trace clay, brownish grey, slightly cohesive, moist	74.55						
	END OF BOREHOLE @ 4.0ft BGS							
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 7/14/05

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: PH-49S
DATE COMPLETED: May 3, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft FT NGVD	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	NORTHING: 629534.09 EASTING: 600852.96 GROUND SURFACE	78.45						
0	SP-SAND, medium to coarse grained			011				0
2	ML-SANDY SILT, fine grained	76.45	BENTONITE					0
4			2" Ø BOREHOLE					
6	CL-SILTY CLAY	73.95		012				0
	END OF BOREHOLE @ 6.0ft BGS	72.45						
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

LABORATORY ANALYSIS

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 7/14/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: PH-201
DATE COMPLETED: May 5, 2004
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft FT NGVD	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	NORTHING: 629692.34 EASTING: 600902.03 GROUND SURFACE	78.15						
2	SM-SILTY SAND, medium to coarse grained, light brown - perched water		BENTONITE	(001, 002)				74.6
4	MLS-SANDY SILT, fine grained, grey	75.15	2" Ø BOREHOLE					176
	END OF BOREHOLE @ 5.0ft BGS	73.15						43.4
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

LABORATORY ANALYSIS (001, 002)

OVERBURDEN LOG 17338 GPJ CRA_CORP.GDT 7/14/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: PH-206
DATE COMPLETED: May 5, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft FT NGVD	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	NORTHING: 629658.19 EASTING: 600862.49 GROUND SURFACE	79.00						
0	SPG-SAND, medium to coarse grained, with gravel, dark grey		BENTONITE					76
2	SP-SM-SAND, medium to coarse grained, with silt	76.50	2" Ø BOREHOLE	010				70
4	END OF BOREHOLE @ 4.0ft BGS	75.00		011				34
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

LABORATORY ANALYSIS

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 7/14/05

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: PH-208
DATE COMPLETED: May 5, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft FT NGVD	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	NORTHING: 629668.08 EASTING: 600851.91 GROUND SURFACE	78.17						
0	FILL-pea gravel	77.17	BENTONITE	016				70
2	SP-SAND, medium to coarse grained, with silt and gravel,		2" Ø BOREHOLE	017				240
4	END OF BOREHOLE @ 4.0ft BGS	74.17						85
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

LABORATORY ANALYSIS

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 7/14/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: PH-211
DATE COMPLETED: May 3, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft FT NGVD	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	NORTHING: 629533.37 EASTING: 600857.72 GROUND SURFACE	78.37						
0	SP-SAND, medium to coarse grained, no odor			016				0
2	- silt from 2 ft to 4 ft BGS		BENTONITE	017				0.4
4	MLS-SANDY SILT, fine grained, no odor	74.37	2" Ø BOREHOLE	018				1.6
6	END OF BOREHOLE @ 6.0ft BGS	72.37						
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

LABORATORY ANALYSIS ( )

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 7/14/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: PH-213
DATE COMPLETED: May 3, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft FT NGVD	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	NORTHING: 629535.13 EASTING: 600849.33 GROUND SURFACE	78.41						
0	SM-SILTY SAND, fine to medium grained, no odor			019				0
2	MLS-SANDY SILT, fine grained, no odor	76.41	BENTONITE	020				0
4	SM-SILTY SAND, fine grained	74.41	2" Ø BOREHOLE	021				
6	END OF BOREHOLE @ 6.0ft BGS	72.41						
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

LABORATORY ANALYSIS

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 7/14/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: PH-215
DATE COMPLETED: May 3, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft FT NGVD	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	NORTHING: 629560.93 EASTING: 600901.47 GROUND SURFACE	78.25						
0	SM-SILTY SAND, medium to coarse grained, no odor			033				0
2	MLS-SANDY SILT, fine grained, no odor	76.25	BENTONITE	034				0
4			2" Ø BOREHOLE	035				0
6	END OF BOREHOLE @ 6.0ft BGS	72.25						
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

LABORATORY ANALYSIS

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 7/14/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: PH-217
DATE COMPLETED: May 3, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft FT NGVD	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	NORTHING: 629588.5 EASTING: 600912.71 GROUND SURFACE	78.28						
0	SWG-SAND, coarse grained, with gravel, no odor			039				0
2	MLS-SANDY SILT, fine grained, no odor	76.28	BENTONITE					
4			2" Ø BOREHOLE	040				0
6	END OF BOREHOLE @ 6.0ft BGS	72.28		041				0
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

LABORATORY ANALYSIS (039)

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 7/14/05

APPENDIX B

DATA VALIDATION REPORTS

CONESTOGA-ROVERS & ASSOCIATES

2055 Niagara Falls Blvd., Suite #3
Niagara Falls, New York 14304
Telephone: (716) 297-6150 Fax: (716) 297-2265
www.CRAworld.com

MEMORANDUM

TO: Greg Carli

REF. NO.: 17307-091001

FROM: Susan Scrocchi/js/1

DATE: June 16, 2005

C.C.: Chris Barton

PREVIOUSLY TRANSMITTED BY E-MAIL

RE: Data Quality Assessment and Validation
OU-2 Area Investigation - Soil and Groundwater
Wilmington, Delaware

The following details a quality assessment and validation of the analytical data resulting from the May 2-3, 2005, collection of 11 samples, and four quality control (QC) samples from the General Motors (GM) Assembly Plant Site in Wilmington, Delaware. The sample summary detailing sample identification, sample location, quality control samples, and analytical parameters is presented in Table 1. Sample analysis was completed at Severn Trent Laboratory in Edison, New Jersey (STL) in accordance with the methodologies presented in Table 2.

The quality control criteria used to assess the data were established by the methods and the Quality Assurance Project Plan (QAPP). Application of quality assurance criteria was consistent with following guidance documents:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999; and

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Review", USEPA-540/R-94/013, February 1994.

These guidelines are collectively referred to as "Guidelines" in this memorandum.

Sample Quantitation

The laboratory reported detected concentrations of volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), pesticides, polychlorinated biphenyls (PCB) and inorganics below the laboratory's practical quantitation limit (PQL)/report limit (RL) but above the laboratory's method detection limit (MDL). The laboratory flagged these sample concentrations with a "J" or a "B" for organics and inorganics respectively. These concentrations should be qualified as estimated (J) values unless qualified otherwise in this memorandum. The laboratory "B" flags may be disregarded.

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Sample Preservation and Holding Times

Sample holding time periods and preservation requirements are summarized in the analytical methods. All sample extractions and/or analytes were performed within the specified holding times.

All samples were properly preserved and cooled to 4°C(±2°C) after collection.

Gas Chromatography/Mass Spectrometer (GC/MS) - Tuning and Mass Calibration (Instrument Performance Check) - Organic Analyses

To ensure adequate mass resolution, identification, and to some degree, sensitivity; the performance of each GC/MS instrument used for VOC and SVOC analyses was checked at the beginning of each 12-hour period using bromofluorobenzene (BFB) and decafluorotriphenylphosphine (DFTPP), respectively. The resulting spectra must meet the criteria cited in the Guidelines before initiating an analysis sequence.

Instrument performance check data were reviewed. These tuning compounds were analyzed at the required frequency throughout the VOC and SVOC analyses. The results of all instrument performance checks were within the acceptance criteria, indicating acceptable instrument performance.

Initial Calibration - Organic Analyses

Initial calibration data are used to demonstrate that each instrument is capable of generating acceptable quantitative data. A five-point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each over a specific concentration range.

Initial calibration criteria for organic analyses are evaluated against the following criteria:

i) GC/MS (all compounds) - must meet a minimum mean relative response factor (RRF) of 0.05;

ii) GC/MS (all compounds) - the percent relative standard deviation (%RSD) values must not exceed 30.0 percent or a minimum coefficient of determination of 0.99 if quadratic equation calibration curves are used; and

iii) GC (all compounds using an average for multi-response compounds) - the %RSD must not exceed 20 percent or a correlation coefficient of 0.995 when linear regression calibration curves are used.

Calibration standards were analyzed at the required frequency and the results met the above criteria for linearity and sensitivity with the following exceptions:

i) the response factors of 2-butanone and acetone were less than 0.05. All associated sample results were non-detect and rejected due to poor analyte sensitivity; and

ii) the benzaldehyde curve yielded a standard deviation greater than 30 percent. All associated sample results were qualified as estimated.

A summary of the qualified samples is presented in Table 3.

Continuing Calibration - Organic Analyses

To ensure that each instrument was capable of producing acceptable quantitative data over the analysis period, continuing calibration standards must be analyzed every 12 hours for GC/MS analyses and every 10 samples by GC. The following criteria are employed to evaluate the continuing calibration data:

i) GC/MS (all compounds) - must meet a minimum mean RRF of 0.05;

ii) GC/MS (all compounds) - the percent difference (%D) between the mean initial calibration RRF and the continuing calibration RRF must not exceed 25 percent;

iii) GC/MS (compounds determined by quadratic curve) - the percent drift between the true value and the continuing calibration value must not exceed 25 percent;

iv) GC (all compounds using average for multi-response compounds) - the %D between mean initial calibration factor and the continuing calibration factor must not exceed 15 percent; and

v) GC (compounds determined by linear regression) - the percent drift between the true value and the continuing calibration value must not exceed 15 percent.

Calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity and linearity of response for all analytes of interest.

Initial Calibration - Inorganic Analyses

The initial calibration includes a blank and at least one standard for inductively coupled plasma (ICP) and ICP/MS to establish the analytical curve. Mercury analysis by cold vapor atomic absorption spectroscopy (CVAA) requires the analysis of a calibration blank and a minimum of five standards to establish the calibration curve. The coefficient of variation for calibration curves must exceed 0.995.

Initial calibration is verified with an initial calibration verification (ICV) standard which must recover within 90 to 110 percent for metals by ICP and 80 to 120 percent for mercury by CVAA.

A review of the laboratory data showed that all inorganic initial calibration curves and ICVs were analyzed at the appropriate frequency and were within the acceptance criteria.

Continuing Calibration - Inorganic Analyses

Continuing calibration verification (CCV) standards are analyzed at method specified frequency (one every 10 samples). The CCVs must meet the percent recovery control limits specified above for the ICVs. Criteria for inorganic analyses are the same criteria as used for assessing the initial calibration data.

A review of the laboratory data showed that CCVs were analyzed at the appropriate frequency and the data were within the acceptance criteria.

Method Blank Samples

Method blank samples are prepared from a purified sample matrix and are processed concurrently with investigative samples to assess the presence and the magnitude of sample contamination introduced during

sample analysis. Method blank samples are analyzed at a minimum frequency of one per analytical batch and target analytes should be non-detect.

Method blanks were analyzed at the recommended frequency and the results were non-detect for all analytes of interest.

Laboratory Blank Samples - Inorganic Analyses

Metals analyses include the analysis of initial calibration blanks (ICB) and continuing calibration blanks (CCB) to assess the presence and the magnitude of sample contamination introduced during sample analysis. The CCBs are analyzed at a minimum frequency of one every 10 samples and target analytes should be non-detect.

All ICBs and CCBs were non-detect.

Surrogate Compounds - Organic Analyses

Individual sample performance for organic analyses was monitored by assessing the results of surrogate compound percent recoveries. Surrogate percent recoveries are reviewed against the laboratory developed control limits provided in the analytical report.

All surrogate recoveries were within the laboratory control limits, demonstrating acceptable analytical efficiency for these analyses.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)Analyses
and Matrix Spike/Laboratory Duplicate Analyses (MS/Dup)

To assess the long term accuracy and precision of the analytical methods on various matrices, MS/MSD or MS/Dup percent recoveries and relative percent differences (RPD) of the concentrations were determined. The organic MS/MSD percent recovery and RPD control limits are established by the laboratory. The inorganic control limits are defined by the methods and the Guidelines, which require recoveries between 75 to 125 percent with RPDs less than 20 percent for water samples and 30 percent for soil samples. The samples selected for MS/MSD analysis are identified in Table 1.

All MS/MSD or MS/Dup recoveries were acceptable with the following exceptions:

i) some high SVOC recoveries were observed. All associated sample results were non-detect and would not have been impacted by the implied high bias;

ii) some outlying recoveries were observed for some metals. All associated sample results were qualified as estimated (see Table 4); and

iii) variability was observed between some metals results. All associated sample results were qualified as estimated to reflect the implied variability (see Table 5).

Laboratory Control Sample (LCS)

The LCS analysis serves as a monitor of the overall performance in all steps of the sample analysis and are analyzed with each sample batch. The LCS percent recoveries were evaluated against method and laboratory established control limits.

The LCS percent recoveries were within the laboratory control limits with the exception of some high SVOC and pesticide recoveries. All associated sample results were non-detect and would not have been impacted by the implied high bias.

Internal Standard (IS) Summaries - Organic Analyses

To correct for variability in the GC/MS response and sensitivity, IS compounds are added to all samples. All results are calculated as a ratio of the compound and associated IS response. Overall instrument stability and performance for VOC and SVOC analyses were monitored using IS peak area and retention time (RT) data. The IS peak areas and RTs of the samples are required to meet the following criteria:

i) IS area counts must not vary by more than a factor of two (-50 percent to +100 percent) from the associated continuing calibration standard IS area counts; and

ii) the RT of the IS must not vary by more than plus or minus 30 seconds from the associated continuing calibration standard.

A review of the VOC and SVOC internal standard data showed that the IS area counts and retention time data were within the acceptance criteria for all samples.

ICP Interference Check Sample Analysis - Inorganic Analyses

To verify that proper inter-element and background correction factors had been established by the laboratory for metals analyses, the ICP interference check samples (ICS) are analyzed. The ICSs are evaluated against recovery control limits of 80 to 120 percent.

The ICS analysis results were evaluated for all samples and were within the control limits.

Serial Dilution - Inorganic Analyses

The %D between a serial dilution of a sample for each matrix was monitored to determine physical or chemical interference. A minimum of one sample per 20 investigative samples is analyzed at a five-fold dilution. The serial dilution results must agree within 10 %D of the original results for samples with detected concentrations greater than 50 times the instrument detection limit.

The %D acceptance criteria was met for all metals.

Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and mass spectra (if applicable) were evaluated according to identification criteria

established by the methods. The organic compounds reported adhered to the specified identification criteria.

Target Compound Quantitation

The reported quantitation results and detection limits were checked to ensure results reported were accurate. No discrepancies were found between the raw data and the sample results reported by the laboratory.

Field QA/QC

The field QA/QC consisted of one field blanks (rinsate) sample, one field duplicate sample set, and three trip blank samples.

To assess the efficiency of field decontamination procedures and cleanliness of sample containers, the rinsate sample identified in Table 1 was collected and analyzed.

Most rinse blank results were non-detect with the exception of low level concentrations of phthalates and metals. All associated sample results with similar concentrations were qualified as non-detect (see Table 6).

Overall precision for the sampling event and laboratory procedures was monitored using the results of the field duplicate sample sets. The RPDs associated with these duplicate samples must be less than 50 and 100 percent for water and soil samples, respectively. If the reported concentration in either the investigative sample or its duplicate is less than five times the RL, the evaluation criteria is one or two times the RL value for water and soil samples, respectively.

All field duplicate results were acceptable.

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, a trip blank was submitted to the laboratory for VOC analysis with each shipping cooler containing multiple samples.

All trip blank results were non-detect for the compounds of interest.

Tentative Identified Compounds (TICs)

TICs were evaluated for all samples submitted for VOC and SVOC analyses. A summary of the reported TICs and estimated concentrations is presented in Table 7. TICs which were present in the blanks or which were identified as aldol condensation products and/or siloxanes were not reported.

System Performance

System performance between various quality control checks was evaluated to monitor for changes that may have caused the degradation of data quality. No technical problems or chromatographic anomalies were observed which would require qualification of the data.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted with the exception of the following:

i) acetone data were rejected in a number of samples due to an initial calibration violation; and

ii) 2-butanone data were rejected in several samples due to an initial calibration violation.

TABLE 7

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION - SOIL AND GROUNDWATER
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 2-3, 2005

Sample Location	*Volatile Organics*	*Estimated Concentration (µg/Kg)*	*Semi-Volatile Organics*	*Estimated Concentration (µg/Kg)*
SO-17338-050205-EAP-002	C_7H_{16} Alkane	5100J	Not Analyzed	
	C_8H_{18} Alkane	12000J		
	Ethylmethylbenzene Isomer	5000J		
	Unknown Aromatic	2900J		
	Trimethylbenzene Isomer	5900J		
	Diethylbenzene Isomer	4000J		
	Methylmethylethylbenzene Isomer	1700J		
	Ethyldimethylbenzene Isomer	1800J		
	2,3-dihydro-methyl-1H-Indene Isomer	1900J		
SO-17338-050205-EAP-009	C_7H_{16} Alkane	19000J	$C_{12}H_{26}$ Alkane	1900J
	C_9H_{18} Cycloalkane	14000J	Unknown Alkanes	3700J
	Benzene, propyl-	17000J	Unknowns	3000J
	$C_{10}H_{22}$ Alkane	49000J	2,3-dihydro-trimethyl-1H-Indene Isomer	2400J
	Ethylmethylbenzene Isomer	18000J	Naphthalene, 1-methyl-	2500J
	$C_{10}H_{20}$ Cycloalkane	19000J	$C_{15}H_{32}$ Alkane	1200J
	$C_{11}H_{24}$ Alkane	18000J	Dimethylnaphthalene Isomer	5500J
	2,3-dihydro-methyl-1H-Indene Isomer	17000J	Unknown Cycloalkane	4500J
	2,3-dihydro-dimethyl-1H-Indene Isomer	16000J	Ethylmethylnaphthalene Isomer	1400J
	Methylnaphthalene Isomer	20000J	Trimethylnaphthalene Isomers	5300J
			$C_{18}H_{38}$ Alkane	2900J
			$C_{19}H_{40}$ Alkane	3700J
			$C_{20}H_{42}$ Alkane	2000J
SO-17338-050205-EAP-010	None		Unknown	470J
SO-17338-050305-EAP-004	Not Analyzed		Unknowns	1500J
			$C_{15}H_{12}$ PAHs	1800J
			$C_{15}H_{10}$ PAH	1400J
			$C_{17}H_{12}$ PAHs	2800J
			Benzo(b)naphthothiophene Isomer	450J
			$C_{18}H_{12}$ PAHs	780J
			$C_{18}H_{10}$ PAH	380J
			Benzocarbazole Isomer	690J
			$C_{19}H_{14}$ PAH	570J
			$C_{20}H_{12}$ PAHs	2300J
SO-17338-050305-EAP-005	Not Analyzed		Unknown	310J
SO-17338-050305-EAP-0055	Not Analyzed		Unknowns	2100J
SO-17338-050305-EAP-006	None		Unknowns	2000J
			Unknown Alkanes	780J
SO-17338-050305-EAP-008	Not Analyzed		Unknown	550J
			Unknown Alkane	370J
			$C_{20}H_{12}$ PAH	450J
SO-17338-050305-EAP-025	Not Analyzed		Unknown	390J

Note:
J Estimated.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
OU-2 AREA INVESTIGATION - SOIL AND GROUNDWATER
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 2-3, 2005

					Analysis/Parameters					
Sample I.D.	*Location I.D.*	*Matrix*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*VOCs*	*SVOCs*	*PCBs*	*Metals*	*Pesticides*	*Comments*
SO-17338-050205-EAP-002	SB2-05	Soil	05/02/05	12:56	X			X		
SO-17338-050205-EAP-004	SB20-05	Soil	05/02/05	13:25			X		X	
SO-17338-050205-EAP-005	SB19-05	Soil	05/02/05	13:45			X		X	
SO-17338-050205-EAP-006	SB17-05	Soil	05/02/05	14:00				X		
SO-17338-050205-EAP-009	SB12-05	Soil	05/02/05	14:45	X	X		X		
SO-17388-050205-EAP-010	SB14-05	Soil	05/02/05	14:50	X	X		X		
TB-17338-EAP-011	Trip Blank	Groundwater	05/02/05	-	X					
SO-17338-050305-EAP-004	SB6-05	Soil	05/03/05	8:10		X				
SO-17338-050305-EAP-005	SB5-05	Soil	05/03/05	8:20		X		X		
SO-17338-050305-EAP-055	SB5-05	Soil	05/03/05	8:20		X		X		Field duplicate of SO-17338-050305-EAP-005
SO-17338-050305-EAP-006	SB4-05	Soil	05/03/05	8:50	X	X	X	X	X	MS/MSD
SO-17338-050305-EAP-008	SB18-05	Soil	05/03/05	9:30		X		X		
TB-17338-EAP-009	Trip Blank	Groundwater	05/03/05	-	X					
FB-17338-EAP-010	Field Blank	Soil	05/03/05	10:00	X	X	X	X	X	
SO-17338-050305-EAP-025	SB8-05	Soil	05/03/05	12:30		X				

Notes:
MS Matrix Spike.
MSD Matrix Spike Duplicate.
PCB Polychlorinated Biphenyl.
SVOC Semi-Volatile Organic Compound.
VOC Volatile Organic Compound.

TABLE 2

SUMMARY OF ANALYTICAL METHODS
OU-2 AREA INVESTIGATION - SOIL AND GROUNDWATER
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 2-3, 2005

Parameter	*Method* [1]
TCL VOCs plus TICs	SW-846 8260B
TCL SVOCs plus TICs	SW-846 8270C
TCL Pesticides	SW-846 8081
Polychlorinated Biphenyls	SW-846 8082
TAL Metals	SW-846 6020/7470A

Notes:

[1] "Test Methods for Solid Waste/Physical Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

SVOCs Semi-Volatile Organic Compounds.
TAL Target Analyte List.
TCL Target Compound List.
TICs Tentatively Identified Compounds.
VOC Volatile Organic Compounds.

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INITIAL CALIBRATION RESULTS
OU-2 AREA INVESTIGATION - SOIL AND GROUNDWATER
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 2-3, 2005

Parameter	*Compound*	*Calibration Date*	*%RSD*	*RF*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
VOCs	2-Butanone (Methyl Ethyl Ketone)	4/20/05	<30	0.031	050205-EAP-002	580 U	µg/kg	R
					050205-EAP-009	570 U	µg/kg	R
					050205-EAP-010	550 U	µg/kg	R
					050305-EAP-006	580 U	µg/kg	R
VOCs	Acetone	4/20/05	<30	0.017	050205-EAP-002	580 U	µg/kg	R
					050205-EAP-009	570 U	µg/kg	R
					050205-EAP-010	550 U	µg/kg	R
					050305-EAP-006	580 U	µg/kg	R
SVOCs	Benzaldehyde	5/11/05	50	>0.05	050205-EAP-009	380 U	µg/kg	UJ
					050205-EAP-010	370 U	µg/kg	UJ
					050305-EAP-004	25 J	µg/kg	J
					050305-EAP-005	380 U	µg/kg	UJ
					050305-EAP-0055	370 U	µg/kg	UJ
					050305-EAP-006	390 U	µg/kg	UJ
					050305-EAP-008	19 J	µg/kg	J
					050305-EAP-025	400 U	µg/kg	UJ

Notes:
%RSD Percent Relative Standard Deviation.
J Estimated.
R Rejected.
RF Response Factor.
SVOC Semi-Volatile Organic Compound.
U Non-detect at associated value.
UJ The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.
VOC Volatile Organic Compound.

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES
OU-2 AREA INVESTIGATION - SOIL AND GROUNDWATER
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 2-3, 2005

Analyte	*Spike ID*	*MS Recovery (percent)*	*Control Limits (percent)*	*Associated Samples*	*Sample Results*	*Units*	*Qualifier*
Antimony	050305-EAP-006	46	75 - 125	050205-EAP-002	2.8 U	mg/kg	UJ
				050205-EAP-006	3.1 U	mg/kg	UJ
				050205-EAP-009	2.8 U	mg/kg	UJ
				050205-EAP-010	2.8 U	mg/kg	UJ
				050305-EAP-005	2.8 U	mg/kg	UJ
				050305-EAP-0055	2.8 U	mg/kg	UJ
				050305-EAP-006	2.8 U	mg/kg	UJ
				050305-EAP-008	2.8 U	mg/kg	UJ
Lead	050305-EAP-006	131	75 - 125	050205-EAP-002	13.8	mg/kg	J
				050205-EAP-006	13.8	mg/kg	J
				050205-EAP-009	10.9	mg/kg	J
				050205-EAP-010	6.8	mg/kg	J
				050305-EAP-005	11.7	mg/kg	J
				050305-EAP-0055	11.8	mg/kg	J
				050305-EAP-006	14.7	mg/kg	J
				050305-EAP-008	51.8	mg/kg	J
Manganese	050305-EAP-006	182	75 - 125	050205-EAP-002	314	mg/kg	J
				050205-EAP-006	56.5	mg/kg	J
				050205-EAP-009	132	mg/kg	J
				050205-EAP-010	188	mg/kg	J
				050305-EAP-005	318	mg/kg	J
				050305-EAP-0055	337	mg/kg	J
				050305-EAP-006	61.6	mg/kg	J
				050305-EAP-008	212	mg/kg	J
Zinc	050305-EAP-006	151	75 - 125	050205-EAP-002	20.0	mg/kg	J
				050205-EAP-006	26.0	mg/kg	J
				050205-EAP-009	21.2	mg/kg	J
				050205-EAP-010	17.6	mg/kg	J
				050305-EAP-005	24.8	mg/kg	J
				050305-EAP-0055	33.3	mg/kg	J
				050305-EAP-006	39.9	mg/kg	J
				050305-EAP-008	109	mg/kg	J

Notes:

J Estimated.
MS Matrix Spike.
U Non-detect at associated value.
UJ The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.

TABLE 5

QUALIFIED SAMPLE DATA DUE TO POOR LABORATORY DUPLICATE PRECISION
OU-2 AREA INVESTIGATION - SOIL AND GROUNDWATER
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 2-3, 2005

Analyte	*Sample ID*	*Original Result*	*Duplicate Result*	*RPD*	*RPD Control Limit*	*Associated Sample IDs*	*Sample Results*	*Units*	*Qualifier*
Chromium Total	050305-EAP-006	12.9	17.6	31	30	050205-EAP-002	12.1	mg/kg	J
						050205-EAP-006	22.7	mg/kg	J
						050205-EAP-009	15.2	mg/kg	J
						050205-EAP-010	13.1	mg/kg	J
						050305-EAP-005	24.5	mg/kg	J
						050305-EAP-0055	21.0	mg/kg	J
						050305-EAP-006	12.9	mg/kg	J
						050305-EAP-008	18.3	mg/kg	J
Copper	050305-EAP-006	7.5	13.6	58	30	050205-EAP-002	6.8	mg/kg	J
						050205-EAP-006	8.0	mg/kg	J
						050205-EAP-009	5.4	mg/kg	J
						050205-EAP-010	5.7	mg/kg	J
						050305-EAP-005	13.0	mg/kg	J
						050305-EAP-0055	15.9	mg/kg	J
						050305-EAP-006	7.5	mg/kg	J
						050305-EAP-008	19.8	mg/kg	J
Iron	050305-EAP-006	7990	13900	54	30	050205-EAP-002	9920	mg/kg	J
						050205-EAP-006	11200	mg/kg	J
						050205-EAP-009	12600	mg/kg	J
						050205-EAP-010	14700	mg/kg	J
						050305-EAP-005	21900	mg/kg	J
						050305-EAP-0055	25700	mg/kg	J
						050305-EAP-006	7990	mg/kg	J
						050305-EAP-008	14400	mg/kg	J
Vanadium	050305-EAP-006	19.7	29.4	40	30	050205-EAP-002	21.5	mg/kg	J
						050205-EAP-006	20.4	mg/kg	J
						050205-EAP-009	21.9	mg/kg	J
						050205-EAP-010	24.6	mg/kg	J
						050305-EAP-005	40.9	mg/kg	J
						050305-EAP-0055	34.2	mg/kg	J
						050305-EAP-006	19.7	mg/kg	J
						050305-EAP-008	32.9	mg/kg	J
Lead	050305-EAP-006	14.7	32.1	74	30	050205-EAP-002	13.8	mg/kg	J
						050205-EAP-006	13.8	mg/kg	J
						050205-EAP-009	10.9	mg/kg	J
						050205-EAP-010	6.8	mg/kg	J
						050305-EAP-005	11.7	mg/kg	J
						050305-EAP-0055	11.8	mg/kg	J
						050305-EAP-006	14.7	mg/kg	J
						050305-EAP-008	51.8	mg/kg	J
Manganese	050305-EAP-006	61.6	148	83	30	050205-EAP-002	314	mg/kg	J
						050205-EAP-006	56.5	mg/kg	J
						050205-EAP-009	132	mg/kg	J
						050205-EAP-010	188	mg/kg	J
						050305-EAP-005	318	mg/kg	J
						050305-EAP-0055	337	mg/kg	J
						050305-EAP-006	61.6	mg/kg	J
						050305-EAP-008	212	mg/kg	J
Zinc	050305-EAP-006	39.9	70.3	55	30	050205-EAP-002	20.0	mg/kg	J
						050205-EAP-006	26.0	mg/kg	J
						050205-EAP-009	21.2	mg/kg	J
						050205-EAP-010	17.6	mg/kg	J
						050305-EAP-005	24.8	mg/kg	J
						050305-EAP-0055	33.3	mg/kg	J
						050305-EAP-006	39.9	mg/kg	J
						050305-EAP-008	109	mg/kg	J

Notes:
J Estimated.
RPD Relative Percent Difference.

TABLE 6

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE RINSE BLANKS
OU-2 AREA INVESTIGATION - SOIL AND GROUNDWATER
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 2-3, 2005

Parameter	*Rinse Blank Date*	*Analyte*	*Blank Result*	*Sample ID*	*Sample Result*	*Qualified Sample Result*	*Units*
SVOCs	05/03/05	bis(2-Ethylhexyl)phthalate	180	050305-EAP-004	85	370 U	µg/Kg
				050305-EAP-005	270	380 U	µg/Kg
				050305-EAP-0055	100	370 U	µg/Kg
				050305-EAP-006	340	390 U	µg/Kg
				050305-EAP-008	430	380 U	µg/Kg
				050305-EAP-025	330	400 U	µg/Kg

Notes:
SVOCs Semi-Volatile Organic Compounds.
U Non-detect at associated value.

TABLE 7

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION - SOIL AND GROUNDWATER
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 2-3, 2005

Sample Location	*Volatile Organics*	*Estimated Concentration (µg/Kg)*	*Semi-Volatile Organics*	*Estimated Concentration (µg/Kg)*
SO-17338-050205-EAP-002	C_7H_{16} Alkane	5100J	Not Analyzed	
	C_8H_{18} Alkane	12000J		
	Ethylmethylbenzene Isomer	5000J		
	Unknown Aromatic	2900J		
	Trimethylbenzene Isomer	5900J		
	Diethylbenzene Isomer	4000J		
	Methylmethylethylbenzene Isomer	1700J		
	Ethyldimethylbenzene Isomer	1800J		
	2,3-dihydro-methyl-1H-Indene Isomer	1900J		
SO-17338-050205-EAP-009	C_7H_{16} Alkane	19000J	$C_{12}H_{26}$ Alkane	1900J
	C_9H_{18} Cycloalkane	14000J	Unknown Alkanes	3700J
	Benzene, propyl-	17000J	Unknowns	3000J
	$C_{10}H_{22}$ Alkane	49000J	2,3-dihydro-trimethyl-1H-Indene Isomer	2400J
	Ethylmethylbenzene Isomer	18000J	Naphthalene, 1-methyl-	2500J
	$C_{10}H_{20}$ Cycloalkane	19000J	$C_{15}H_{32}$ Alkane	1200J
	$C_{11}H_{24}$ Alkane	18000J	Dimethylnaphthalene Isomer	5500J
	2,3-dihydro-methyl-1H-Indene Isomer	17000J	Unknown Cycloalkane	4500J
	2,3-dihydro-dimethyl-1H-Indene Isomer	16000J	Ethylmethylnaphthalene Isomer	1400J
	Methylnaphthalene Isomer	20000J	Trimethylnaphthalene Isomers	5300J
			$C_{18}H_{38}$ Alkane	2900J
			$C_{19}H_{40}$ Alkane	3700J
			$C_{20}H_{42}$ Alkane	2000J
SO-17338-050205-EAP-010	None		Unknown	470J
SO-17338-050305-EAP-004	Not Analyzed		Unknowns	1500J
			$C_{15}H_{12}$ PAHs	1800J
			$C_{15}H_{10}$ PAH	1400J
			$C_{17}H_{12}$ PAHs	2800J
			Benzo(b)naphthothiophene Isomer	450J
			$C_{18}H_{12}$ PAHs	780J
			$C_{18}H_{10}$ PAH	380J
			Benzocarbazole Isomer	690J
			$C_{19}H_{14}$ PAH	570J
			$C_{20}H_{12}$ PAHs	2300J
SO-17338-050305-EAP-005	Not Analyzed		Unknown	310J
SO-17338-050305-EAP-0055	Not Analyzed		Unknowns	2100J
SO-17338-050305-EAP-006	None		Unknowns	2000J
			Unknown Alkanes	780J
SO-17338-050305-EAP-008	Not Analyzed		Unknown	550J
			Unknown Alkane	370J
			$C_{20}H_{12}$ PAH	450J
SO-17338-050305-EAP-025	Not Analyzed		Unknown	390J

Note:
J Estimated.

APPENDIX C

LABORATORY DATA REPORTS

SEVERN TRENT STL

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel: 732 549 3900 Fax: 732 549 3679
www.stl-inc.com

05/23/2005

Conestoga Rovers Associates, Inc.
651 Colby Drive
Waterloo
OntarioCanada, - N2V 1C2

Attention: Mr. Greg Carti

Laboratory Results
Job No. X740 - GM Wilmington-17338

Dear Mr. Carti:

Enclosed are the results you requested for the following sample(s) received at our laboratory on May 3, 2005.

Lab No.	Client ID	Analysis Required
629457	050205-EAP-002	TCL VOA+10
		TAL Metals
629459	050205-EAP-004	PP Pest/PCB
629460	050205-EAP-005	PP Pest/PCB
629461	050205-EAP-006	TAL Metals
629464	050205-EAP-009	TCL VOA+10
		TCL BNA+20
		TAL Metals
629465	050205-EAP-010	TCL VOA+10
		TCL BNA+20
		TAL Metals
629466	TB-17338-EAP-011	TCL VOA+10
630155	050305-EAP-004	TCL BNA+20
630156	050305-EAP-005	TCL BNA+20
		TAL Metals
630157	050305-EAP-0055	TCL BNA+20
		TAL Metals
630158	050305-EAP-006	TCL VOA+10

SEVERN TRENT STL

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel: 732 549 3900 Fax: 732 549 3679
www.stl-inc.com

Laboratory Results
Job No. X740 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
		TCL BNA+20
		PP Pest/PCB
		TAL Metals
630159	FB-17338EAP-010M	TAL Metals
630161	050305-EAP-008	TCL BNA+20
		TAL Metals
630162	TB-17338-EAP-009	TCL VOA+10
630163	FB-17338-EAP-010	TCL VOA+10
		TCL BNA+20
		PCBs

SEVERN TRENT STL

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel: 732 549 3900 Fax: 732 549 3679
www.stl-inc.com

Laboratory Results
Job No. X740 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
630178	050305-EAP-025	TCL BNA+20

If you have any questions please contact your Project Manager, Joy Kelly, at (732) 549-3900.

Very Truly Yours,

Michael J. Urban

Michael J. Urban
Laboratory Manager

SEVERN TRENT STL

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SEVERN TRENT STL

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Analytical Results Summary

Client ID: **050205-EAP-002**
Site: GM Wilmington-17338

Lab Sample No: **629457**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57770.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 13

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	580
Bromomethane	ND	580
Vinyl Chloride	ND	580
Chloroethane	ND	580
Methylene Chloride	ND	340
Acetone	ND	580
Carbon Disulfide	ND	580
Trichlorofluoromethane	ND	580
1,1-Dichloroethene	ND	230
1,1-Dichloroethane	ND	580
trans-1,2-Dichloroethene	ND	580
cis-1,2-Dichloroethene	ND	580
Chloroform	ND	580
1,2-Dichloroethane	ND	230
2-Butanone	ND	580
1,1,1-Trichloroethane	ND	580
Carbon Tetrachloride	ND	230
Bromodichloromethane	ND	120
1,2-Dichloropropane	ND	120
cis-1,3-Dichloropropene	ND	580
Trichloroethene	ND	120
Dibromochloromethane	ND	580
1,1,2-Trichloroethane	ND	340
Benzene	ND	120
trans-1,3-Dichloropropene	ND	580
Bromoform	ND	460
4-Methyl-2-Pentanone	ND	580
2-Hexanone	ND	580
Tetrachloroethene	ND	120
1,1,2,2-Tetrachloroethane	ND	120
Toluene	5700	580
Chlorobenzene	ND	580
Ethylbenzene	21000	460
Styrene	ND	580

Client ID: **050205-EAP-002**
Site: GM Wilmington-17338

Lab Sample No: **629457**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57770.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 13

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	44000	580
Freon TF	ND	580
MTBE	ND	580
Cyclohexane	1600	580
1,2-Dibromoethane	ND	580
1,3-Dichlorobenzene	ND	580
1,4-Dichlorobenzene	ND	580
1,2-Dichlorobenzene	ND	580
Dichlorodifluoromethane	ND	580
1,2,4-Trichlorobenzene	ND	580
1,2-Dibromo-3-chloropropane	ND	580
Isopropylbenzene	780	580
Methyl Acetate	ND	580
Methyl Cyclohexane	8800	580

Client ID: **050205-EAP-002**
Site: GM Wilmington-17338

Lab Sample No: **629457**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57770.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 13.1

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	C7H16 Alkane	7.70	5100	
2.	C8H18 Alkane	9.12	3400	
3.	C8H18 Alkane	9.76	9000	
4.	Ethylmethylbenzene isomer	12.59	5000	
5.	Unknown Aromatic	12.67	2900	
6.	Trimethylbenzene isomer	13.06	5900	
7.	Diethylbenzene isomer	13.77	4000	
8.	Methylmethylethylbenzene isomer	14.13	1700	
9.	Ethyldimethylbenzene isomer	14.78	1800	
10.	2,3-dihydro-methyl-1H-Indene isomer	15.42	1900	
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	40700

Client ID: **050205-EAP-009**
Site: GM Wilmington-17338

Lab Sample No: **629464**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57771.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 12

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	570
Bromomethane	ND	570
Vinyl Chloride	ND	570
Chloroethane	ND	570
Methylene Chloride	ND	340
Acetone	ND	570
Carbon Disulfide	ND	570
Trichlorofluoromethane	ND	570
1,1-Dichloroethene	ND	230
1,1-Dichloroethane	ND	570
trans-1,2-Dichloroethene	ND	570
cis-1,2-Dichloroethene	ND	570
Chloroform	ND	570
1,2-Dichloroethane	ND	230
2-Butanone	ND	570
1,1,1-Trichloroethane	ND	570
Carbon Tetrachloride	ND	230
Bromodichloromethane	ND	110
1,2-Dichloropropane	ND	110
cis-1,3-Dichloropropene	ND	570
Trichloroethene	ND	110
Dibromochloromethane	ND	570
1,1,2-Trichloroethane	ND	340
Benzene	ND	110
trans-1,3-Dichloropropene	ND	570
Bromoform	ND	450
4-Methyl-2-Pentanone	ND	570
2-Hexanone	ND	570
Tetrachloroethene	ND	110
1,1,2,2-Tetrachloroethane	ND	110
Toluene	ND	570
Chlorobenzene	ND	570
Ethylbenzene	14000	450
Styrene	ND	570

Client ID: **050205-EAP-009**
Site: GM Wilmington-17338

Lab Sample No: **629464**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57771.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 12

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	1100	570
Freon TF	ND	570
MTBE	ND	570
Cyclohexane	2900	570
1,2-Dibromoethane	ND	570
1,3-Dichlorobenzene	ND	570
1,4-Dichlorobenzene	ND	570
1,2-Dichlorobenzene	ND	570
Dichlorodifluoromethane	ND	570
1,2,4-Trichlorobenzene	ND	570
1,2-Dibromo-3-chloropropane	ND	570
Isopropylbenzene	5000	570
Methyl Acetate	ND	570
Methyl Cyclohexane	18000	570

Client ID: **050205-EAP-009**
Site: GM Wilmington-17338

Lab Sample No: **629464**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57771.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 11.8

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	C7H16 Alkane/ISTD	7.71	19000	
2.	C9H18 Cycloalkane	11.97	14000	
3.	Benzene, propyl-	12.51	17000	
4.	C10H22 Alkane	12.61	49000	
5.	Ethylmethylbenzene isomer	12.90	18000	
6.	C10H20 Cycloalkane	13.29	19000	
7.	C11H24 Alkane	13.83	18000	
8.	2,3-dihydro-methyl-1H-Indene isomer	15.40	17000	
9.	2,3-dihydro-dimethyl-1H-Indene isomer	16.09	16000	
10.	Methylnaphthalene isomer	18.68	20000	
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 207000

Client ID: **050205-EAP-010**
Site: GM Wilmington-17338

Lab Sample No: **629465**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57773.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 9

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	550
Bromomethane	ND	550
Vinyl Chloride	ND	550
Chloroethane	ND	550
Methylene Chloride	ND	330
Acetone	ND	550
Carbon Disulfide	ND	550
Trichlorofluoromethane	ND	550
1,1-Dichloroethene	ND	220
1,1-Dichloroethane	ND	550
trans-1,2-Dichloroethene	ND	550
cis-1,2-Dichloroethene	ND	550
Chloroform	ND	550
1,2-Dichloroethane	ND	220
2-Butanone	ND	550
1,1,1-Trichloroethane	ND	550
Carbon Tetrachloride	ND	220
Bromodichloromethane	ND	110
1,2-Dichloropropane	ND	110
cis-1,3-Dichloropropene	ND	550
Trichloroethene	ND	110
Dibromochloromethane	ND	550
1,1,2-Trichloroethane	ND	330
Benzene	ND	110
trans-1,3-Dichloropropene	ND	550
Bromoform	ND	440
4-Methyl-2-Pentanone	ND	550
2-Hexanone	ND	550
Tetrachloroethene	ND	110
1,1,2,2-Tetrachloroethane	ND	110
Toluene	ND	550
Chlorobenzene	ND	550
Ethylbenzene	ND	440
Styrene	ND	550

Client ID: **050205-EAP-010**
Site: GM Wilmington-17338

Lab Sample No: **629465**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57773.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 9

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	ND	550
Freon TF	ND	550
MTBE	ND	550
Cyclohexane	ND	550
1,2-Dibromoethane	ND	550
1,3-Dichlorobenzene	ND	550
1,4-Dichlorobenzene	ND	550
1,2-Dichlorobenzene	ND	550
Dichlorodifluoromethane	ND	550
1,2,4-Trichlorobenzene	ND	550
1,2-Dibromo-3-chloropropane	ND	550
Isopropylbenzene	ND	550
Methyl Acetate	ND	550
Methyl Cyclohexane	ND	550

Client ID: **050205-EAP-010**
Site: GM Wilmington-17338

Lab Sample No: **629465**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57773.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 9.3

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **TB-17338-EAP-011**
Site: GM Wilmington-17338

Lab Sample No: **629466**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Analyzed: 05/16/05
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b38105.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **TB-17338-EAP-011**
Site: GM Wilmington-17338

Lab Sample No: **629466**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Analyzed: 05/16/05
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b38105.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **TB-17338-EAP-011**
Site: GM Wilmington-17338

Lab Sample No: **629466**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Analyzed: 05/16/05
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b38105.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **050305-EAP-006**
Site: GM Wilmington-17338

Lab Sample No: **630158**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57774.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 14

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	580
Bromomethane	ND	580
Vinyl Chloride	ND	580
Chloroethane	ND	580
Methylene Chloride	ND	350
Acetone	ND	580
Carbon Disulfide	ND	580
Trichlorofluoromethane	ND	580
1,1-Dichloroethene	ND	230
1,1-Dichloroethane	ND	580
trans-1,2-Dichloroethene	ND	580
cis-1,2-Dichloroethene	ND	580
Chloroform	ND	580
1,2-Dichloroethane	ND	230
2-Butanone	ND	580
1,1,1-Trichloroethane	ND	580
Carbon Tetrachloride	ND	230
Bromodichloromethane	ND	120
1,2-Dichloropropane	ND	120
cis-1,3-Dichloropropene	ND	580
Trichloroethene	ND	120
Dibromochloromethane	ND	580
1,1,2-Trichloroethane	ND	350
Benzene	ND	120
trans-1,3-Dichloropropene	ND	580
Bromoform	ND	470
4-Methyl-2-Pentanone	ND	580
2-Hexanone	ND	580
Tetrachloroethene	ND	120
1,1,2,2-Tetrachloroethane	ND	120
Toluene	ND	580
Chlorobenzene	ND	580
Ethylbenzene	ND	470
Styrene	ND	580

Client ID: **050305-EAP-006**
Site: GM Wilmington-17338

Lab Sample No: **630158**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57774.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 14

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	ND	580
Freon TF	ND	580
MTBE	ND	580
Cyclohexane	ND	580
1,2-Dibromoethane	ND	580
1,3-Dichlorobenzene	ND	580
1,4-Dichlorobenzene	ND	580
1,2-Dichlorobenzene	ND	580
Dichlorodifluoromethane	ND	580
1,2,4-Trichlorobenzene	ND	580
1,2-Dibromo-3-chloropropane	ND	580
Isopropylbenzene	ND	580
Methyl Acetate	ND	580
Methyl Cyclohexane	ND	580

Client ID: **050305-EAP-006**
Site: GM Wilmington-17338

Lab Sample No: **630158**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57774.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 14.5

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Unknown Siloxane	14.19	850	
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION	850

Client ID: **TB-17338-EAP-009**
Site: GM Wilmington-17338

Lab Sample No: **630162**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57767.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg	Quantitation Limit Units: ug/kg
Chloromethane	ND	500
Bromomethane	ND	500
Vinyl Chloride	ND	500
Chloroethane	ND	500
Methylene Chloride	ND	300
Acetone	ND	500
Carbon Disulfide	ND	500
Trichlorofluoromethane	ND	500
1,1-Dichloroethene	ND	200
1,1-Dichloroethane	ND	500
trans-1,2-Dichloroethene	ND	500
cis-1,2-Dichloroethene	ND	500
Chloroform	ND	500
1,2-Dichloroethane	ND	200
2-Butanone	ND	500
1,1,1-Trichloroethane	ND	500
Carbon Tetrachloride	ND	200
Bromodichloromethane	ND	100
1,2-Dichloropropane	ND	100
cis-1,3-Dichloropropene	ND	500
Trichloroethene	ND	100
Dibromochloromethane	ND	500
1,1,2-Trichloroethane	ND	300
Benzene	ND	100
trans-1,3-Dichloropropene	ND	500
Bromoform	ND	400
4-Methyl-2-Pentanone	ND	500
2-Hexanone	ND	500
Tetrachloroethene	ND	100
1,1,2,2-Tetrachloroethane	ND	100
Toluene	ND	500
Chlorobenzene	ND	500
Ethylbenzene	ND	400
Styrene	ND	500

Client ID: **TB-17338-EAP-009**
Site: GM Wilmington-17338

Lab Sample No: **630162**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57767.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg	Quantitation Limit Units: ug/kg
Xylene (Total)	ND	500
Freon TF	ND	500
MTBE	ND	500
Cyclohexane	ND	500
1,2-Dibromoethane	ND	500
1,3-Dichlorobenzene	ND	500
1,4-Dichlorobenzene	ND	500
1,2-Dichlorobenzene	ND	500
Dichlorodifluoromethane	ND	500
1,2,4-Trichlorobenzene	ND	500
1,2-Dibromo-3-chloropropane	ND	500
Isopropylbenzene	ND	500
Methyl Acetate	ND	500
Methyl Cyclohexane	ND	500

Client ID: **TB-17338-EAP-009**
Site: GM Wilmington-17338

Lab Sample No: **630162**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57767.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
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24.				
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26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **FB-17338-EAP-010**
Site: GM Wilmington-17338

Lab Sample No: **630163**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57768.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	500
Bromomethane	ND	500
Vinyl Chloride	ND	500
Chloroethane	ND	500
Methylene Chloride	ND	300
Acetone	ND	500
Carbon Disulfide	ND	500
Trichlorofluoromethane	ND	500
1,1-Dichloroethene	ND	200
1,1-Dichloroethane	ND	500
trans-1,2-Dichloroethene	ND	500
cis-1,2-Dichloroethene	ND	500
Chloroform	ND	500
1,2-Dichloroethane	ND	200
2-Butanone	ND	500
1,1,1-Trichloroethane	ND	500
Carbon Tetrachloride	ND	200
Bromodichloromethane	ND	100
1,2-Dichloropropane	ND	100
cis-1,3-Dichloropropene	ND	500
Trichloroethene	ND	100
Dibromochloromethane	ND	500
1,1,2-Trichloroethane	ND	300
Benzene	ND	100
trans-1,3-Dichloropropene	ND	500
Bromoform	ND	400
4-Methyl-2-Pentanone	ND	500
2-Hexanone	ND	500
Tetrachloroethene	ND	100
1,1,2,2-Tetrachloroethane	ND	100
Toluene	ND	500
Chlorobenzene	ND	500
Ethylbenzene	ND	400
Styrene	ND	500

Client ID: **FB-17338-EAP-010**
Site: GM Wilmington-17338

Lab Sample No: **630163**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57768.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	ND	500
Freon TF	ND	500
MTBE	ND	500
Cyclohexane	ND	500
1,2-Dibromoethane	ND	500
1,3-Dichlorobenzene	ND	500
1,4-Dichlorobenzene	ND	500
1,2-Dichlorobenzene	ND	500
Dichlorodifluoromethane	ND	500
1,2,4-Trichlorobenzene	ND	500
1,2-Dibromo-3-chloropropane	ND	500
Isopropylbenzene	ND	500
Methyl Acetate	ND	500
Methyl Cyclohexane	ND	500

Client ID: **FB-17338-EAP-010**
Site: GM Wilmington-17338

Lab Sample No: **630163**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57768.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **050205-EAP-009**
Site: GM Wilmington-17338

Lab Sample No: **629464**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Extracted: 05/10/05
Date Analyzed: 05/15/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6968.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 12

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	380
2-Chlorophenol	ND	380
2-Methylphenol	ND	380
3+4-Methylphenol (total)	ND	380
2-Nitrophenol	ND	380
2,4-Dimethylphenol	ND	380
2,4-Dichlorophenol	ND	380
4-Chloro-3-methylphenol	ND	380
2,4,6-Trichlorophenol	ND	380
2,4,5-Trichlorophenol	ND	380
2,4-Dinitrophenol	ND	1500
4-Nitrophenol	ND	1500
4,6-Dinitro-2-methylphenol	ND	1500
Pentachlorophenol	ND	1500
bis(2-Chloroethyl)ether	ND	38
bis(2-chloroisopropyl)ether	ND	380
N-Nitroso-di-n-propylamine	ND	38
Hexachloroethane	ND	38
Nitrobenzene	ND	38
Isophorone	ND	380
bis(2-Chloroethoxy)methane	ND	380
Naphthalene	840	380
4-Chloroaniline	ND	380
Hexachlorobutadiene	ND	76
2-Methylnaphthalene	3000	380
Hexachlorocyclopentadiene	ND	380
2-Chloronaphthalene	ND	380
2-Nitroaniline	ND	760
Dimethylphthalate	ND	380
Acenaphthylene	ND	380
2,6-Dinitrotoluene	ND	76
3-Nitroaniline	ND	760
Acenaphthene	270 J	380
Dibenzofuran	180 J	380

Client ID: **050205-EAP-009**
Site: GM Wilmington-17338

Lab Sample No: **629464**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Extracted: 05/10/05
Date Analyzed: 05/15/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6968.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 12

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	76
Diethylphthalate	ND	380
4-Chlorophenyl-phenylether	ND	380
Fluorene	320 J	380
4-Nitroaniline	ND	760
N-Nitrosodiphenylamine	ND	380
4-Bromophenyl-phenylether	ND	380
Hexachlorobenzene	ND	38
Phenanthrene	1400	380
Anthracene	330 J	380
Carbazole	51 J	380
Di-n-butylphthalate	ND	380
Fluoranthene	2500	380
Pyrene	2600	380
Butylbenzylphthalate	ND	380
3,3'-Dichlorobenzidine	ND	760
Benzo(a)anthracene	1300	38
Chrysene	1300	380
bis(2-Ethylhexyl)phthalate	ND	380
Di-n-octylphthalate	ND	380
Benzo(b)fluoranthene	1100	38
Benzo(k)fluoranthene	1300	38
Benzo(a)pyrene	1400	38
Indeno(1,2,3-cd)pyrene	560	38
Dibenz(a,h)anthracene	200	38
Benzo(g,h,i)perylene	550	380
Diphenyl	210 J	380
Acetophenone	ND	380
Benzaldehyde	ND	380
Caprolactam	ND	380
Atrazine	ND	380

Client ID: **050205-EAP-009**
Site: GM Wilmington-17338

Lab Sample No: **629464**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Extracted: 05/10/05
Date Analyzed: 05/15/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6968.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11.8

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. C12H26 Alkane	8.80	1900	
2. Unknown Alkane	8.92	1300	
3. Unknown	9.44	1800	
4. Unknown Alkane	9.68	1300	
5. 2,3-dihydro-trimethyl-1H-Indene isomer	9.81	1200	
6. Naphthalene, 1-methyl-	10.04	2500	
7. 2,3-dihydro-trimethyl-1H-Indene isomer	10.12	1200	
8. C15H32 Alkane	10.31	1200	
9. Dimethylnaphthalene isomer	10.80	2400	
10. Dimethylnaphthalene isomer	10.92	3100	
11. Unknown Cycloalkane	10.96	4500	
12. Ethylmethylnaphthalene isomer	11.64	1400	
13. Trimethylnaphthalene isomer	11.72	2400	
14. Trimethylnaphthalene isomer	11.76	1800	
15. Trimethylnaphthalene isomer	11.88	1100	
16. Unknown Alkane	11.91	1100	
17. Unknown	12.04	1200	
18. C18H38 Alkane	12.31	2900	
19. C19H40 Alkane	12.70	3700	
20. C20H42 Alkane	13.37	2000	
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			
TOTAL ESTIMATED CONCENTRATION		40000	

Client ID: **050205-EAP-010**
Site: GM Wilmington-17338

Lab Sample No: **629465**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6961.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 9

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	370
2-Chlorophenol	ND	370
2-Methylphenol	ND	370
3+4-Methylphenol (total)	ND	370
2-Nitrophenol	ND	370
2,4-Dimethylphenol	ND	370
2,4-Dichlorophenol	ND	370
4-Chloro-3-methylphenol	ND	370
2,4,6-Trichlorophenol	ND	370
2,4,5-Trichlorophenol	ND	370
2,4-Dinitrophenol	ND	1500
4-Nitrophenol	ND	1500
4,6-Dinitro-2-methylphenol	ND	1500
Pentachlorophenol	ND	1500
bis(2-Chloroethyl)ether	ND	37
bis(2-chloroisopropyl)ether	ND	370
N-Nitroso-di-n-propylamine	ND	37
Hexachloroethane	ND	37
Nitrobenzene	ND	37
Isophorone	ND	370
bis(2-Chloroethoxy)methane	ND	370
Naphthalene	ND	370
4-Chloroaniline	ND	370
Hexachlorobutadiene	ND	74
2-Methylnaphthalene	11 J	370
Hexachlorocyclopentadiene	ND	370
2-Chloronaphthalene	ND	370
2-Nitroaniline	ND	740
Dimethylphthalate	ND	370
Acenaphthylene	ND	370
2,6-Dinitrotoluene	ND	74
3-Nitroaniline	ND	740
Acenaphthene	30 J	370
Dibenzofuran	17 J	370

Client ID: **050205-EAP-010**
Site: GM Wilmington-17338

Lab Sample No: **629465**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6961.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 9

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	74
Diethylphthalate	ND	370
4-Chlorophenyl-phenylether	ND	370
Fluorene	29 J	370
4-Nitroaniline	ND	740
N-Nitrosodiphenylamine	ND	370
4-Bromophenyl-phenylether	ND	370
Hexachlorobenzene	ND	37
Phenanthrene	120 J	370
Anthracene	43 J	370
Carbazole	17 J	370
Di-n-butylphthalate	ND	370
Fluoranthene	180 J	370
Pyrene	200 J	370
Butylbenzylphthalate	ND	370
3,3'-Dichlorobenzidine	ND	740
Benzo(a)anthracene	91	37
Chrysene	100 J	370
bis(2-Ethylhexyl)phthalate	ND	370
Di-n-octylphthalate	ND	370
Benzo(b)fluoranthene	70	37
Benzo(k)fluoranthene	74	37
Benzo(a)pyrene	89	37
Indeno(1,2,3-cd)pyrene	54	37
Dibenz(a,h)anthracene	19 J	37
Benzo(g,h,i)perylene	65 J	370
Diphenyl	ND	370
Acetophenone	ND	370
Benzaldehyde	ND	370
Caprolactam	ND	370
Atrazine	ND	370

Client ID: **050205-EAP-010**
Site: GM Wilmington-17338

Lab Sample No: **629465**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6961.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 9.3

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Unknown	24.66	470	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 470

Client ID: **050305-EAP-004**
Site: GM Wilmington-17338

Lab Sample No: **630155**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/15/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6969.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 10

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	370
2-Chlorophenol	ND	370
2-Methylphenol	12 J	370
3+4-Methylphenol (total)	30 J	370
2-Nitrophenol	ND	370
2,4-Dimethylphenol	27 J	370
2,4-Dichlorophenol	ND	370
4-Chloro-3-methylphenol	ND	370
2,4,6-Trichlorophenol	ND	370
2,4,5-Trichlorophenol	ND	370
2,4-Dinitrophenol	ND	1500
4-Nitrophenol	ND	1500
4,6-Dinitro-2-methylphenol	ND	1500
Pentachlorophenol	ND	1500
bis(2-Chloroethyl)ether	ND	37
bis(2-chloroisopropyl)ether	ND	370
N-Nitroso-di-n-propylamine	ND	37
Hexachloroethane	ND	37
Nitrobenzene	ND	37
Isophorone	ND	370
bis(2-Chloroethoxy)methane	ND	370
Naphthalene	390	370
4-Chloroaniline	ND	370
Hexachlorobutadiene	ND	74
2-Methylnaphthalene	270 J	370
Hexachlorocyclopentadiene	ND	370
2-Chloronaphthalene	ND	370
2-Nitroaniline	ND	740
Dimethylphthalate	ND	370
Acenaphthylene	ND	370
2,6-Dinitrotoluene	ND	74
3-Nitroaniline	ND	740
Acenaphthene	1100	370
Dibenzofuran	400	370

Client ID: **050305-EAP-004**
Site: GM Wilmington-17338

Lab Sample No: **630155**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/15/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6969.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 10

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	74
Diethylphthalate	ND	370
4-Chlorophenyl-phenylether	ND	370
Fluorene	770	370
4-Nitroaniline	ND	740
N-Nitrosodiphenylamine	ND	370
4-Bromophenyl-phenylether	ND	370
Hexachlorobenzene	ND	37
Phenanthrene	4800	370
Anthracene	1500	370
Carbazole	610	370
Di-n-butylphthalate	ND	370
Fluoranthene	5200	370
Pyrene	4700	370
Butylbenzylphthalate	3700	370
3,3'-Dichlorobenzidine	ND	740
Benzo(a)anthracene	2400	37
Chrysene	2700	370
bis(2-Ethylhexyl)phthalate	85 J	370
Di-n-octylphthalate	ND	370
Benzo(b)fluoranthene	2000	37
Benzo(k)fluoranthene	2300	37
Benzo(a)pyrene	2000	37
Indeno(1,2,3-cd)pyrene	560	37
Dibenz(a,h)anthracene	230	37
Benzo(g,h,i)perylene	500	370
Diphenyl	70 J	370
Acetophenone	8.0J	370
Benzaldehyde	25 J	370
Caprolactam	ND	370
Atrazine	ND	370

Client ID: **050305-EAP-004**
Site: GM Wilmington-17338

Lab Sample No: **630155**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/15/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6969.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 9.8

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Unknown	10.96	620	
2.	Unknown	12.69	520	
3.	C15H12 PAH	14.30	540	
4.	C15H12 PAH	14.35	710	
5.	C15H12 PAH	14.40	510	
6.	C15H10 PAH	14.49	1400	
7.	C17H12 PAH	16.00	440	
8.	C17H12 PAH	16.18	1000	
9.	C17H12 PAH	16.26	840	
10.	C17H12 PAH	16.33	550	
11.	Unknown	16.50	360	
12.	Benzo(b)naphthothiophene isomer	17.12	450	
13.	C18H12 PAH	17.18	370	
14.	C18H10 PAH	17.22	380	
15.	C18H12 PAH	17.78	410	
16.	Benzocarbazole isomer	17.91	340	
17.	Benzocarbazole isomer	18.01	350	
18.	C19H14 PAH	18.34	570	
19.	C20H12 PAH	20.65	1700	
20.	C20H12 PAH	21.02	630	
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 12690

Client ID: **050305-EAP-005**
Site: GM Wilmington-17338

Lab Sample No: **630156**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6962.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 12

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	380
2-Chlorophenol	ND	380
2-Methylphenol	ND	380
3+4-Methylphenol (total)	ND	380
2-Nitrophenol	ND	380
2,4-Dimethylphenol	ND	380
2,4-Dichlorophenol	ND	380
4-Chloro-3-methylphenol	ND	380
2,4,6-Trichlorophenol	ND	380
2,4,5-Trichlorophenol	ND	380
2,4-Dinitrophenol	ND	1500
4-Nitrophenol	ND	1500
4,6-Dinitro-2-methylphenol	ND	1500
Pentachlorophenol	ND	1500
bis(2-Chloroethyl)ether	ND	38
bis(2-chloroisopropyl)ether	ND	380
N-Nitroso-di-n-propylamine	ND	38
Hexachloroethane	ND	38
Nitrobenzene	ND	38
Isophorone	ND	380
bis(2-Chloroethoxy)methane	ND	380
Naphthalene	ND	380
4-Chloroaniline	ND	380
Hexachlorobutadiene	ND	76
2-Methylnaphthalene	ND	380
Hexachlorocyclopentadiene	ND	380
2-Chloronaphthalene	ND	380
2-Nitroaniline	ND	760
Dimethylphthalate	ND	380
Acenaphthylene	ND	380
2,6-Dinitrotoluene	ND	76
3-Nitroaniline	ND	760
Acenaphthene	8.0J	380
Dibenzofuran	ND	380

Client ID: **050305-EAP-005**
Site: GM Wilmington-17338

Lab Sample No: **630156**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6962.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 12

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	76
Diethylphthalate	ND	380
4-Chlorophenyl-phenylether	ND	380
Fluorene	ND	380
4-Nitroaniline	ND	760
N-Nitrosodiphenylamine	ND	380
4-Bromophenyl-phenylether	ND	380
Hexachlorobenzene	ND	38
Phenanthrene	47 J	380
Anthracene	13 J	380
Carbazole	ND	380
Di-n-butylphthalate	ND	380
Fluoranthene	69 J	380
Pyrene	83 J	380
Butylbenzylphthalate	ND	380
3,3'-Dichlorobenzidine	ND	760
Benzo(a)anthracene	36 J	38
Chrysene	45 J	380
bis(2-Ethylhexyl)phthalate	270 J	380
Di-n-octylphthalate	ND	380
Benzo(b)fluoranthene	28 J	38
Benzo(k)fluoranthene	38	38
Benzo(a)pyrene	35 J	38
Indeno(1,2,3-cd)pyrene	22 J	38
Dibenz(a,h)anthracene	ND	38
Benzo(g,h,i)perylene	22 J	380
Diphenyl	ND	380
Acetophenone	ND	380
Benzaldehyde	ND	380
Caprolactam	ND	380
Atrazine	ND	380

Client ID: **050305-EAP-005**
Site: GM Wilmington-17338

Lab Sample No: **630156**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6962.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11.7

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Unknown	24.67	310	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 310

Client ID: **050305-EAP-0055**
Site: GM Wilmington-17338

Lab Sample No: **630157**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6963.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	370
2-Chlorophenol	ND	370
2-Methylphenol	ND	370
3+4-Methylphenol (total)	ND	370
2-Nitrophenol	ND	370
2,4-Dimethylphenol	ND	370
2,4-Dichlorophenol	ND	370
4-Chloro-3-methylphenol	ND	370
2,4,6-Trichlorophenol	ND	370
2,4,5-Trichlorophenol	ND	370
2,4-Dinitrophenol	ND	1500
4-Nitrophenol	ND	1500
4,6-Dinitro-2-methylphenol	ND	1500
Pentachlorophenol	ND	1500
bis(2-Chloroethyl)ether	ND	37
bis(2-chloroisopropyl)ether	ND	370
N-Nitroso-di-n-propylamine	ND	37
Hexachloroethane	ND	37
Nitrobenzene	ND	37
Isophorone	ND	370
bis(2-Chloroethoxy)methane	ND	370
Naphthalene	ND	370
4-Chloroaniline	ND	370
Hexachlorobutadiene	ND	75
2-Methylnaphthalene	ND	370
Hexachlorocyclopentadiene	ND	370
2-Chloronaphthalene	ND	370
2-Nitroaniline	ND	750
Dimethylphthalate	ND	370
Acenaphthylene	ND	370
2,6-Dinitrotoluene	ND	75
3-Nitroaniline	ND	750
Acenaphthene	ND	370
Dibenzofuran	ND	370

Client ID: **050305-EAP-0055**
Site: GM Wilmington-17338

Lab Sample No: **630157**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6963.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	75
Diethylphthalate	ND	370
4-Chlorophenyl-phenylether	ND	370
Fluorene	ND	370
4-Nitroaniline	ND	750
N-Nitrosodiphenylamine	ND	370
4-Bromophenyl-phenylether	ND	370
Hexachlorobenzene	ND	37
Phenanthrene	30 J	370
Anthracene	ND	370
Carbazole	ND	370
Di-n-butylphthalate	ND	370
Fluoranthene	43 J	370
Pyrene	50 J	370
Butylbenzylphthalate	140 J	370
3,3'-Dichlorobenzidine	ND	750
Benzo(a)anthracene	21 J	37
Chrysene	30 J	370
bis(2-Ethylhexyl)phthalate	100 J	370
Di-n-octylphthalate	ND	370
Benzo(b)fluoranthene	26 J	37
Benzo(k)fluoranthene	21 J	37
Benzo(a)pyrene	21 J	37
Indeno(1,2,3-cd)pyrene	16 J	37
Dibenz(a,h)anthracene	ND	37
Benzo(g,h,i)perylene	18 J	370
Diphenyl	ND	370
Acetophenone	ND	370
Benzaldehyde	ND	370
Caprolactam	ND	370
Atrazine	ND	370

Client ID: **050305-EAP-0055**
Site: GM Wilmington-17338

Lab Sample No: **630157**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6963.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 10.8

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Unknown	17.14	400	
2.	Unknown	18.40	540	
3.	Unknown	24.68	770	
4.	Unknown	28.95	380	
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				
	TOTAL ESTIMATED CONCENTRATION		2090	

Client ID: **050305-EAP-006**
Site: GM Wilmington-17338

Lab Sample No: **630158**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6964.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 14

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	390
2-Chlorophenol	ND	390
2-Methylphenol	ND	390
3+4-Methylphenol (total)	ND	390
2-Nitrophenol	ND	390
2,4-Dimethylphenol	ND	390
2,4-Dichlorophenol	ND	390
4-Chloro-3-methylphenol	ND	390
2,4,6-Trichlorophenol	ND	390
2,4,5-Trichlorophenol	ND	390
2,4-Dinitrophenol	ND	1600
4-Nitrophenol	ND	1600
4,6-Dinitro-2-methylphenol	ND	1600
Pentachlorophenol	ND	1600
bis(2-Chloroethyl)ether	ND	39
bis(2-chloroisopropyl)ether	ND	390
N-Nitroso-di-n-propylamine	ND	39
Hexachloroethane	ND	39
Nitrobenzene	ND	39
Isophorone	ND	390
bis(2-Chloroethoxy)methane	ND	390
Naphthalene	ND	390
4-Chloroaniline	ND	390
Hexachlorobutadiene	ND	78
2-Methylnaphthalene	ND	390
Hexachlorocyclopentadiene	ND	390
2-Chloronaphthalene	ND	390
2-Nitroaniline	ND	780
Dimethylphthalate	ND	390
Acenaphthylene	ND	390
2,6-Dinitrotoluene	ND	78
3-Nitroaniline	ND	780
Acenaphthene	ND	390
Dibenzofuran	ND	390

Client ID: **050305-EAP-006**
Site: GM Wilmington-17338

Lab Sample No: **630158**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6964.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 14

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	78
Diethylphthalate	ND	390
4-Chlorophenyl-phenylether	ND	390
Fluorene	ND	390
4-Nitroaniline	ND	780
N-Nitrosodiphenylamine	ND	390
4-Bromophenyl-phenylether	ND	390
Hexachlorobenzene	ND	39
Phenanthrene	68 J	390
Anthracene	16 J	390
Carbazole	ND	390
Di-n-butylphthalate	ND	390
Fluoranthene	120 J	390
Pyrene	190 J	390
Butylbenzylphthalate	530	390
3,3'-Dichlorobenzidine	ND	780
Benzo(a)anthracene	76	39
Chrysene	98 J	390
bis(2-Ethylhexyl)phthalate	340 J	390
Di-n-octylphthalate	ND	390
Benzo(b)fluoranthene	67	39
Benzo(k)fluoranthene	68	39
Benzo(a)pyrene	78	39
Indeno(1,2,3-cd)pyrene	43	39
Dibenz(a,h)anthracene	21 J	39
Benzo(g,h,i)perylene	52 J	390
Diphenyl	ND	390
Acetophenone	ND	390
Benzaldehyde	ND	390
Caprolactam	ND	390
Atrazine	ND	390

Client ID: **050305-EAP-006**
Site: GM Wilmington-17338

Lab Sample No: **630158**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6964.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 14.5

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Unknown	17.14	320	
2.	Unknown	18.38	430	
3.	Unknown	19.45	380	
4.	Unknown Alkane	19.89	420	
5.	Unknown	21.38	350	
6.	Unknown Alkane	21.91	360	
7.	Unknown	28.93	500	
8.				
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25.				
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29.				
30.				

TOTAL ESTIMATED CONCENTRATION 2760

Client ID: **050305-EAP-008**
Site: GM Wilmington-17338

Lab Sample No: **630161**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6967.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 12

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	380
2-Chlorophenol	ND	380
2-Methylphenol	ND	380
3+4-Methylphenol (total)	ND	380
2-Nitrophenol	ND	380
2,4-Dimethylphenol	ND	380
2,4-Dichlorophenol	ND	380
4-Chloro-3-methylphenol	ND	380
2,4,6-Trichlorophenol	ND	380
2,4,5-Trichlorophenol	ND	380
2,4-Dinitrophenol	ND	1500
4-Nitrophenol	ND	1500
4,6-Dinitro-2-methylphenol	ND	1500
Pentachlorophenol	ND	1500
bis(2-Chloroethyl)ether	ND	38
bis(2-chloroisopropyl)ether	ND	380
N-Nitroso-di-n-propylamine	ND	38
Hexachloroethane	ND	38
Nitrobenzene	ND	38
Isophorone	ND	380
bis(2-Chloroethoxy)methane	ND	380
Naphthalene	15 J	380
4-Chloroaniline	ND	380
Hexachlorobutadiene	ND	76
2-Methylnaphthalene	16 J	380
Hexachlorocyclopentadiene	ND	380
2-Chloronaphthalene	ND	380
2-Nitroaniline	ND	760
Dimethylphthalate	ND	380
Acenaphthylene	8.8J	380
2,6-Dinitrotoluene	ND	76
3-Nitroaniline	ND	760
Acenaphthene	110 J	380
Dibenzofuran	26 J	380

Client ID: **050305-EAP-008**
Site: GM Wilmington-17338

Lab Sample No: **630161**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6967.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 12

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	76
Diethylphthalate	ND	380
4-Chlorophenyl-phenylether	ND	380
Fluorene	62 J	380
4-Nitroaniline	ND	760
N-Nitrosodiphenylamine	ND	380
4-Bromophenyl-phenylether	ND	380
Hexachlorobenzene	ND	38
Phenanthrene	600	380
Anthracene	150 J	380
Carbazole	69 J	380
Di-n-butylphthalate	ND	380
Fluoranthene	840	380
Pyrene	1000	380
Butylbenzylphthalate	1200	380
3,3'-Dichlorobenzidine	ND	760
Benzo(a)anthracene	410	38
Chrysene	490	380
bis(2-Ethylhexyl)phthalate	430	380
Di-n-octylphthalate	ND	380
Benzo(b)fluoranthene	330	38
Benzo(k)fluoranthene	380	38
Benzo(a)pyrene	390	38
Indeno(1,2,3-cd)pyrene	160	38
Dibenz(a,h)anthracene	58	38
Benzo(g,h,i)perylene	160 J	380
Diphenyl	ND	380
Acetophenone	ND	380
Benzaldehyde	19 J	380
Caprolactam	ND	380
Atrazine	ND	380

Client ID: **050305-EAP-008**
Site: GM Wilmington-17338

Lab Sample No: **630161**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6967.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11.9

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Degradation product of 2,4,6-Tribromop	13.86	310	B
2.	C20H12 PAH	20.62	450	
3.	Unknown Alkane	21.91	370	
4.	Unknown	24.67	550	
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 1370

Client ID: **FB-17338-EAP-010**
Site: GM Wilmington-17338

Lab Sample No: **630163**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6959.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	330
2-Chlorophenol	ND	330
2-Methylphenol	ND	330
3+4-Methylphenol (total)	ND	330
2-Nitrophenol	ND	330
2,4-Dimethylphenol	ND	330
2,4-Dichlorophenol	ND	330
4-Chloro-3-methylphenol	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2,4-Dinitrophenol	ND	1300
4-Nitrophenol	ND	1300
4,6-Dinitro-2-methylphenol	ND	1300
Pentachlorophenol	ND	1300
bis(2-Chloroethyl)ether	ND	33
bis(2-chloroisopropyl)ether	ND	330
N-Nitroso-di-n-propylamine	ND	33
Hexachloroethane	ND	33
Nitrobenzene	ND	33
Isophorone	ND	330
bis(2-Chloroethoxy)methane	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	67
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	670
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	67
3-Nitroaniline	ND	670
Acenaphthene	ND	330
Dibenzofuran	ND	330

Client ID: **FB-17338-EAP-010**
Site: GM Wilmington-17338

Lab Sample No: **630163**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6959.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	67
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	ND	330
4-Nitroaniline	ND	670
N-Nitrosodiphenylamine	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	33
Phenanthrene	ND	330
Anthracene	ND	330
Carbazole	ND	330
Di-n-butylphthalate	120 J	330
Fluoranthene	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	670
Benzo(a)anthracene	ND	33
Chrysene	ND	330
bis(2-Ethylhexyl)phthalate	180 J	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	33
Benzo(k)fluoranthene	ND	33
Benzo(a)pyrene	ND	33
Indeno(1,2,3-cd)pyrene	ND	33
Dibenz(a,h)anthracene	ND	33
Benzo(g,h,i)perylene	ND	330
Diphenyl	ND	330
Acetophenone	ND	330
Benzaldehyde	ND	330
Caprolactam	ND	330
Atrazine	ND	330

Client ID: **FB-17338-EAP-010**
Site: GM Wilmington-17338

Lab Sample No: **630163**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6959.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 0.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **050305-EAP-025**
Site: GM Wilmington-17338

Lab Sample No: **630178**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6960.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 17

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	400
2-Chlorophenol	ND	400
2-Methylphenol	ND	400
3+4-Methylphenol (total)	ND	400
2-Nitrophenol	ND	400
2,4-Dimethylphenol	ND	400
2,4-Dichlorophenol	ND	400
4-Chloro-3-methylphenol	ND	400
2,4,6-Trichlorophenol	ND	400
2,4,5-Trichlorophenol	ND	400
2,4-Dinitrophenol	ND	400
4-Nitrophenol	ND	1600
4,6-Dinitro-2-methylphenol	ND	1600
Pentachlorophenol	ND	1600
bis(2-Chloroethyl)ether	ND	1600
bis(2-chloroisopropyl)ether	ND	40
N-Nitroso-di-n-propylamine	ND	400
Hexachloroethane	ND	40
Nitrobenzene	ND	40
Isophorone	ND	40
bis(2-Chloroethoxy)methane	ND	400
Naphthalene	ND	400
4-Chloroaniline	ND	400
Hexachlorobutadiene	ND	400
2-Methylnaphthalene	ND	80
Hexachlorocyclopentadiene	ND	400
2-Chloronaphthalene	ND	400
2-Nitroaniline	ND	400
Dimethylphthalate	ND	800
Acenaphthylene	ND	400
2,6-Dinitrotoluene	ND	400
3-Nitroaniline	ND	80
Acenaphthene	ND	800
Dibenzofuran	ND	400
	ND	400

Client ID: **050305-EAP-025**
Site: GM Wilmington-17338

Lab Sample No: **630178**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6960.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 17

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	80
Diethylphthalate	ND	400
4-Chlorophenyl-phenylether	ND	400
Fluorene	ND	400
4-Nitroaniline	ND	800
N-Nitrosodiphenylamine	ND	400
4-Bromophenyl-phenylether	ND	400
Hexachlorobenzene	ND	40
Phenanthrene	ND	400
Anthracene	ND	400
Carbazole	ND	400
Di-n-butylphthalate	ND	400
Fluoranthene	9.7J	400
Pyrene	13 J	400
Butylbenzylphthalate	ND	400
3,3'-Dichlorobenzidine	ND	800
Benzo(a)anthracene	ND	40
Chrysene	ND	400
bis(2-Ethylhexyl)phthalate	330 J	400
Di-n-octylphthalate	ND	400
Benzo(b)fluoranthene	ND	40
Benzo(k)fluoranthene	ND	40
Benzo(a)pyrene	ND	40
Indeno(1,2,3-cd)pyrene	ND	40
Dibenz(a,h)anthracene	ND	40
Benzo(g,h,i)perylene	ND	400
Diphenyl	ND	400
Acetophenone	ND	400
Benzaldehyde	ND	400
Caprolactam	ND	400
Atrazine	ND	400

Client ID: **050305-EAP-025**
Site: GM Wilmington-17338

Lab Sample No: **630178**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/14/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6960.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 17.1

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Degradation product of 2,4,6-Tribromop	13.85	360	B
2.	Unknown	28.93	390	
3.				
4.				
5.				
6.				
7.				
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30.				

TOTAL ESTIMATED CONCENTRATION 390

Client ID: **050205-EAP-004**
Site: GM Wilmington-17338

Lab Sample ID: **629459**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Extracted: 05/10/05
Date Analyzed: 05/11/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC1.i
Front File ID: xf061384.d
Rear File ID: xr061384.d

Matrix: SOIL
Level: LOW
Sample Weight: 15 g
Extract Final Volume: 10.0 ml
Dilution Factor: 1.0
% Moisture: 14

ORGANOCHLORINE PESTICIDES - GC/ECD
METHOD 8081A

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg	Column
Aldrin	ND	7.8	R
alpha-BHC	ND	7.8	R
beta-BHC	ND	7.8	R
delta-BHC	ND	7.8	R
gamma-BHC (Lindane)	ND	7.8	R
Chlordane	ND	78	R
4,4'-DDD	ND	7.8	R
4,4'-DDE	ND	7.8	R
4,4'-DDT	18	7.8	F
Dieldrin	10	7.8	R
Endosulfan I	ND	7.8	R
Endosulfan II	ND	7.8	R
Endosulfan sulfate	ND	7.8	R
Endrin	ND	7.8	R
Endrin aldehyde	ND	7.8	R
Heptachlor	ND	7.8	R
Heptachlor epoxide	ND	7.8	R
Toxaphene	ND	78	R

Client ID: **050205-EAP-005**
Site: GM Wilmington-17338

Lab Sample ID: **629460**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Extracted: 05/10/05
Date Analyzed: 05/11/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC1.i
Front File ID: xf061385.d
Rear File ID: xr061385.d

Matrix: SOIL
Level: LOW
Sample Weight: 15 g
Extract Final Volume: 10.0 ml
Dilution Factor: 1.0
% Moisture: 14

ORGANOCHLORINE PESTICIDES - GC/ECD
METHOD 8081A

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg	Column
Aldrin	ND	7.8	R
alpha-BHC	ND	7.8	R
beta-BHC	ND	7.8	R
delta-BHC	ND	7.8	R
gamma-BHC (Lindane)	ND	7.8	R
Chlordane	ND	78	R
4,4'-DDD	ND	7.8	R
4,4'-DDE	ND	7.8	R
4,4'-DDT	ND	7.8	R
Dieldrin	ND	7.8	R
Endosulfan I	ND	7.8	R
Endosulfan II	ND	7.8	R
Endosulfan sulfate	ND	7.8	R
Endrin	ND	7.8	R
Endrin aldehyde	ND	7.8	R
Heptachlor	ND	7.8	R
Heptachlor epoxide	ND	7.8	R
Toxaphene	ND	78	R

Client ID: **050305-EAP-006**
Site: GM Wilmington-17338

Lab Sample ID: **630158**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/11/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC1.i
Front File ID: xf061381.d
Rear File ID: xr061381.d

Matrix: SOIL
Level: LOW
Sample Weight: 15 g
Extract Final Volume: 10.0 ml
Dilution Factor: 1.0
% Moisture: 11

ORGANOCHLORINE PESTICIDES - GC/ECD
METHOD 8081A

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg	Column
Aldrin	ND	7.5	R
alpha-BHC	ND	7.5	R
beta-BHC	ND	7.5	R
delta-BHC	ND	7.5	R
gamma-BHC (Lindane)	ND	7.5	R
Chlordane	ND	75	R
4,4'-DDD	ND	7.5	R
4,4'-DDE	ND	7.5	R
4,4'-DDT	ND	7.5	R
Dieldrin	ND	7.5	R
Endosulfan I	ND	7.5	R
Endosulfan II	ND	7.5	R
Endosulfan sulfate	ND	7.5	R
Endrin	ND	7.5	R
Endrin aldehyde	ND	7.5	R
Heptachlor	ND	7.5	R
Heptachlor epoxide	ND	7.5	R
Toxaphene	ND	75	R

Client ID: **050205-EAP-004**
Site: GM Wilmington-17338

Lab Sample ID: **629459**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Extracted: 05/10/05
Date Analyzed: 05/11/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC9.i
Front File ID: vf037045.d
Rear File ID: vr037045.d

Matrix: SOIL
Level: LOW
Sample Weight: 15 g
Extract Final Volume: 10.0 ml
Dilution Factor: 1.0
% Moisture: 14

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg	Column
Aroclor-1016	ND	78	R
Aroclor-1221	ND	78	R
Aroclor-1232	ND	78	R
Aroclor-1242	ND	78	R
Aroclor-1248	ND	78	R
Aroclor-1254	ND	78	R
Aroclor-1260	320	78	R

Client ID: **050205-EAP-005**
Site: GM Wilmington-17338

Lab Sample ID: **629460**
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05
Date Extracted: 05/10/05
Date Analyzed: 05/11/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC9.i
Front File ID: vf037046.d
Rear File ID: vr037046.d

Matrix: SOIL
Level: LOW
Sample Weight: 15 g
Extract Final Volume: 10.0 ml
Dilution Factor: 1.0
% Moisture: 14

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg	Column
Aroclor-1016	ND	78	R
Aroclor-1221	ND	78	R
Aroclor-1232	ND	78	R
Aroclor-1242	ND	78	R
Aroclor-1248	ND	78	R
Aroclor-1254	ND	78	R
Aroclor-1260	ND	78	R

Client ID: **050305-EAP-006**
Site: GM Wilmington-17338

Lab Sample ID: **630158**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/11/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC9.i
Front File ID: vf037047.d
Rear File ID: vr037047.d

Matrix: SOIL
Level: LOW
Sample Weight: 15 g
Extract Final Volume: 10.0 ml
Dilution Factor: 1.0
% Moisture: 14

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg	Column
Aroclor-1016	ND	78	R
Aroclor-1221	ND	78	R
Aroclor-1232	ND	78	R
Aroclor-1242	ND	78	R
Aroclor-1248	ND	78	R
Aroclor-1254	ND	78	R
Aroclor-1260	ND	78	R

Client ID: **FB-17338-EAP-010**
Site: GM Wilmington-17338

Lab Sample ID: **630163**
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/10/05
Date Analyzed: 05/11/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC9.i
Front File ID: vf037050.d
Rear File ID: vr037050.d

Matrix: SOIL
Level: LOW
Sample Weight: 15 g
Extract Final Volume: 10.0 ml
Dilution Factor: 1.0
% Moisture: 0

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg	Column
Aroclor-1016	ND	67	R
Aroclor-1221	ND	67	R
Aroclor-1232	ND	67	R
Aroclor-1242	ND	67	R
Aroclor-1248	ND	67	R
Aroclor-1254	ND	67	R
Aroclor-1260	ND	67	R

Client ID: **050205-EAP-002**
Site: **GM Wilmington-17338**

Lab Sample No: 629457
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05

Matrix: SOLID
Level: LOW
% Moisture: 13.1

METALS ANALYSIS

Analyte	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	Qual	M
Aluminum	10700	17.8		P
Antimony	ND	1.1	N	P
Arsenic	3.5	1.0		P
Barium	180	0.30		P
Beryllium	0.55	0.023		P
Cadmium	ND	0.12		P
Calcium	6920	17.1		P
Chromium	12.1	0.64	*	P
Cobalt	2.9	0.81	B	P
Copper	6.8	0.71	*	P
Iron	9920	9.1	*	P
Lead	13.8	0.51	N*	P
Magnesium	1120	16.1	B	P
Manganese	314	0.67	N*	P
Mercury	ND	0.019		CV
Nickel	6.1	0.90	B	P
Potassium	577	29.9	B	P
Selenium	ND	1.1		P
Silver	ND	0.28		P
Sodium	1050	83.1	B	P
Thallium	ND	1.1		P
Vanadium	21.5	0.35	*	P
Zinc	20.0	1.3	N*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **050205-EAP-006**
Site: **GM Wilmington-17338**

Lab Sample No: 629461
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05

Matrix: SOLID
Level: LOW
% Moisture: 16.0

METALS ANALYSIS

Analyte	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	Qual	M
Aluminum	12700	18.4		P
Antimony	ND	1.2	N	P
Arsenic	ND	1.1		P
Barium	123	0.31		P
Beryllium	0.42	0.024	B	P
Cadmium	ND	0.12		P
Calcium	1060	17.7	B	P
Chromium	22.7	0.67	*	P
Cobalt	2.7	0.83	B	P
Copper	8.0	0.74	*	P
Iron	11200	9.5	*	P
Lead	13.8	0.52	N*	P
Magnesium	1230	16.7		P
Manganese	56.5	0.69	N*	P
Mercury	0.02	0.020	B	CV
Nickel	8.0	0.93	B	P
Potassium	383	30.9	B	P
Selenium	ND	1.1		P
Silver	ND	0.29		P
Sodium	ND	86.0		P
Thallium	ND	1.1		P
Vanadium	20.4	0.36	*	P
Zinc	26.0	1.4	N*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **050205-EAP-009**
Site: **GM Wilmington-17338**

Lab Sample No: 629464
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05

Matrix: SOLID
Level: LOW
% Moisture: 11.8

METALS ANALYSIS

Analyte	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	Qual	M
Aluminum	10300	17.6		P
Antimony	ND	1.1	N	P
Arsenic	2.4	1.0		P
Barium	69.5	0.29		P
Beryllium	0.42	0.023	B	P
Cadmium	ND	0.11		P
Calcium	453	16.9	B	P
Chromium	15.2	0.63	*	P
Cobalt	5.0	0.79	B	P
Copper	5.4	0.70	B*	P
Iron	12600	9.0	*	P
Lead	10.9	0.50	N*	P
Magnesium	939	15.9	B	P
Manganese	132	0.66	N*	P
Mercury	ND	0.019		CV
Nickel	6.2	0.88	B	P
Potassium	367	29.4	B	P
Selenium	ND	1.1		P
Silver	ND	0.27		P
Sodium	113	81.9	B	P
Thallium	ND	1.1		P
Vanadium	21.9	0.34	*	P
Zinc	21.2	1.3	N*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **050205-EAP-010**
Site: **GM Wilmington-17338**

Lab Sample No: 629465
Lab Job No: X740

Date Sampled: 05/02/05
Date Received: 05/03/05

Matrix: SOLID
Level: LOW
% Moisture: 9.3

METALS ANALYSIS

Analyte	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	Qual	M
Aluminum	12000	17.1		P
Antimony	ND	1.1	N	P
Arsenic	2.6	0.99		P
Barium	84.1	0.29		P
Beryllium	0.47	0.022		P
Cadmium	ND	0.11		P
Calcium	831	16.4	B	P
Chromium	13.1	0.62	*	P
Cobalt	5.2	0.77	B	P
Copper	5.7	0.68	*	P
Iron	14700	8.8	*	P
Lead	6.8	0.49	N*	P
Magnesium	945	15.4	B	P
Manganese	188	0.64	N*	P
Mercury	ND	0.018		CV
Nickel	6.9	0.86	B	P
Potassium	371	28.6	B	P
Selenium	ND	1.1		P
Silver	ND	0.26		P
Sodium	ND	79.6		P
Thallium	ND	1.1		P
Vanadium	24.6	0.33	*	P
Zinc	17.6	1.3	N*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **050305-EAP-005**
Site: **GM Wilmington-17338**

Lab Sample No: 630156
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/03/05

Matrix: SOLID
Level: LOW
% Moisture: 11.7

METALS ANALYSIS

Analyte	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	Qual	M
Aluminum	11100	17.5		P
Antimony	ND	1.1	N	P
Arsenic	3.2	1.0		P
Barium	82.8	0.29		P
Beryllium	0.51	0.023		P
Cadmium	ND	0.11		P
Calcium	724	16.9	B	P
Chromium	24.5	0.63	*	P
Cobalt	11.0	0.79	B	P
Copper	13.0	0.70	*	P
Iron	21900	9.0	*	P
Lead	11.7	0.50	N*	P
Magnesium	1100	15.9	B	P
Manganese	318	0.66	N*	P
Mercury	0.03	0.019		CV
Nickel	10.0	0.88		P
Potassium	571	29.4	B	P
Selenium	ND	1.1		P
Silver	ND	0.27		P
Sodium	ND	81.8		P
Thallium	ND	1.1		P
Vanadium	40.9	0.34	*	P
Zinc	24.8	1.3	N*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **050305-EAP-0055**
Site: **GM Wilmington-17338**

Lab Sample No: 630157
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/03/05

Matrix: SOLID
Level: LOW
% Moisture: 10.8

METALS ANALYSIS

Analyte	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	Qual	M
Aluminum	11200	17.4		P
Antimony	ND	1.1	N	P
Arsenic	3.1	1.0		P
Barium	82.4	0.29		P
Beryllium	0.52	0.022		P
Cadmium	ND	0.11		P
Calcium	757	16.7	B	P
Chromium	21.0	0.63	*	P
Cobalt	12.8	0.78		P
Copper	15.9	0.70	*	P
Iron	25700	8.9	*	P
Lead	11.8	0.49	N*	P
Magnesium	1100	15.7		P
Manganese	337	0.65	N*	P
Mercury	0.02	0.019	B	CV
Nickel	12.1	0.87		P
Potassium	595	29.1	B	P
Selenium	ND	1.1		P
Silver	ND	0.27		P
Sodium	ND	80.9		P
Thallium	ND	1.1		P
Vanadium	34.2	0.34	*	P
Zinc	33.3	1.3	N*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **050305-EAP-006**
Site: **GM Wilmington-17338**

Lab Sample No: 630158
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/03/05

Matrix: SOLID
Level: LOW
% Moisture: 14.5

METALS ANALYSIS

Analyte	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	Qual	M
Aluminum	9610	18.1		P
Antimony	ND	1.1	N	P
Arsenic	1.8	1.1		P
Barium	117	0.30		P
Beryllium	0.55	0.023		P
Cadmium	ND	0.12		P
Calcium	846	17.4	B	P
Chromium	12.9	0.65	*	P
Cobalt	2.7	0.82	B	P
Copper	7.5	0.73	*	P
Iron	7990	9.3	*	P
Lead	14.7	0.51	N*	P
Magnesium	863	16.4	B	P
Manganese	61.6	0.68	N*	P
Mercury	0.04	0.019		CV
Nickel	5.5	0.91	B	P
Potassium	375	30.4	B	P
Selenium	ND	1.1		P
Silver	ND	0.28		P
Sodium	246	84.4	B	P
Thallium	ND	1.1		P
Vanadium	19.7	0.35	*	P
Zinc	39.9	1.4	N*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **FB-17338EAP-010M**
Site: **GM Wilmington-17338**

Lab Sample No: 630159
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/03/05

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	80.8	77.4	B	P
Antimony	ND	4.9	N	P
Arsenic	ND	4.5		P
Barium	ND	1.3		P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	134	74.5	B	P
Chromium	ND	2.8	*	P
Cobalt	ND	3.5		P
Copper	ND	3.1	*	P
Iron	ND	39.7	*	P
Lead	ND	2.2	N*	P
Magnesium	ND	70.0		P
Manganese	ND	2.9	N*	P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	ND	130		P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	ND	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5	*	P
Zinc	ND	5.8	N*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **050305-EAP-008**
Site: **GM Wilmington-17338**

Lab Sample No: 630161
Lab Job No: X740

Date Sampled: 05/03/05
Date Received: 05/03/05

Matrix: SOLID
Level: LOW
% Moisture: 11.9

METALS ANALYSIS

Analyte	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	Qual	M
Aluminum	9540	17.6		P
Antimony	ND	1.1	N	P
Arsenic	3.0	1.0		P
Barium	109	0.30		P
Beryllium	0.50	0.023		P
Cadmium	ND	0.11		P
Calcium	1600	16.9		P
Chromium	18.3	0.64	*	P
Cobalt	5.7	0.79	B	P
Copper	19.8	0.70	*	P
Iron	14400	9.0	*	P
Lead	51.8	0.50	N*	P
Magnesium	1740	15.9		P
Manganese	212	0.66	N*	P
Mercury	0.06	0.016		CV
Nickel	11.1	0.89		P
Potassium	591	29.5	B	P
Selenium	ND	1.1		P
Silver	ND	0.27		P
Sodium	ND	82.0		P
Thallium	ND	1.1		P
Vanadium	32.9	0.34	*	P
Zinc	109	1.3	N*	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

General Information

Chain of Custody

X740

GM REALM

ENCORE

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

X740

PAGE 1 OF

ID# TF 01364

SNOW Rel. Code: E091001

Required Client Information:

Company: CRA	Report To: G. Carli
Address: 261 Millcreek Rd Unit 3	Copy To: C. Barton
St. Catharines, ON L2W 1A2	Invoice To:
Phone: 905 682 0510	P.O.:
Fax: 905 682-8318	Project Name: GM Millcreek
e-mail: CBarton@Crworld.com	Project Number: 17332-36

Laboratory: STL	
Laboratory Location: EDISON, NJ	
Laboratory Contact: Joy Kelly	
Requested Due Date:	TAT: 2 weeks
QA/QC Requirements: See SCOG	

Analysis and Method: [HOLD ALL SAMPLES]

STL Proj # 923044

DESOI

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

Preservative

Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Unpreserved	HCl	H2SO4	HNO3	NaOH	Other: Mecl	8260 TCL VOA +10	8270 TCL BNA +20	PCBs	TCL Metals	% Solids	Ferrous Iron					Remarks Lab ID
SO-17332-050205-EMP-001	SO	5/2/05	1240	3	2					1	X	X	X	X	X						629456
SO-17332-050205-EMP-002	SO		1256	3	2					1	X	X	X	X	X						629457
SO-17332-050205-EMP-003	SO		1315	3	2					1	X	X	X	X	X						629458
SO-17332-050205-EMP-004	SO		1325	3	2					1	X	X	X	X	X						629459
SO-17332-050205-EMP-005	SO		1345	3	2					1	X	X	X	X	X						629460
SO-17332-050205-EMP-006	SO		1400	3	2					1	X	X	X	X	X						629461
SO-17332-050205-EMP-007	SO		1415	3	2					1	X	X	X	X	X						629462
SO-17332-050205-EMP-008	SO		1425	3	2					1	X	X	X	X	X						629463
SO-17332-050205-EMP-009	SO		1445	3	2					1	X	X	X	X	X						629464
SO-17332-050205-EMP-010	SO		1450	3	2					1	X	X	X	X	X						629465
TB-17332-EMP-011	W			2		2					X										629466

TOTAL NUMBER OF CONTAINERS

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
FedEx		ETL / CRA	5/2/05	17:35			
AIRBILL NO. 794645370460		EDISON					
		Ted EF	5/3/05	10:30	STL		

Sample Condition

Shipped Iced	Y N
Received on Ice	Y N
Sealed Cooler	Y N
Samples Intact	Y N

Additional Comments:

① Please call STL project Manager e-mail if...

Sampler Name:

Sampler Signature: Date:

Distribution: WHITE - Lab's Returned Copy; YELLOW - Receiving Laboratory's Copy; PINK - Sampler's Copy

STL Edison

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain of Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

TestAmerica / THE LEADER IN ENVIRONMENTAL TESTING / REALIA

ENCORE

PAGE 1 OF 3

ID # NP 01022

SSOW Rev Code: ISQ1001

Client Information:

CRA
261 Martindale Rd
1T3
Uxbridge ON L9P1A2
905 682 0510
905 682 8818
cbarton@craworld.com

Report To: G. Cacchi
Copy To: C. Barton
Invoice To:
P.O.
Project Name: GM Wilmington
Project Number:

Laboratory: STL
Laboratory Location: EDISON NJ
Laboratory Contact: Joy Kelly
TAT: 2 weeks
Requested Due Date:
QA/QC Requirements: See SSOW

HOLD 001 → 008
577 Mgt
923099
DESOP X935
X 170

Valid Matrix Codes:
WG Groundwater
WB Borehole Water
WS Surface Water
SO Soil
SE Sediment
See Back for Additional Codes

Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Unpreserved	Preservative: HCl	H2SO4	HNO3	NaOH	Other: H2O2	Analysis and Method: 8260 TCL VOA list	8270 TCL BNA + 25	8082 PCB	6010 TAL Metals	% Solids	Remarks/Lab ID
SO-17338-050305-EAP-001	SO	5/3/05	0730	3	2					1	X	X	X	X	X	HOLD 152
SO-17338-050305-EAP-002	SO		0740	3	2					1	X	X	X	X	X	HOLD 153
SO-17338-050305-EAP-003	SO		0750	3	2					1	X	X	X	X	X	HOLD 154
SO-17338-050305-EAP-004	SO		0810	3	2					1	X	X	X	X	X	HOLD 155
SO-17338-050305-EAP-005	SO		0820	3	2					1	X	X	X	X	X	HOLD 156
SO-17338-050305-EAP-006	SO			3	2					1	X	X	X	X	X	HOLD 157
SO-17338-050305-EAP-006MS/MSD	SO		0850	3	2					1	X	X	X	X	X	HOLD 158
SO-17338-050305-EAP-007	SO		0850	6	4					2	X	X	X	X	X	HOLD ~~159~~
SO-17338-050305-EAP-008	SO		0910	3	2					1	X	X	X	X	X	HOLD 160
FB-17338-EAP-009			0930	3	2					1	X	X	X	X	X	HOLD 161
FB-17338-EAP-010 1010M EP											X					162
~~SO-17338-050305-EAP-011 EP~~	~~SO~~		1000	4	2			1		1	X	X	X	X	X	163/991
SO-17338-050305-EAP-011	SO			~~2~~	~~1~~											
SO-17338-050305-EAP-012	SO		1010	1	1							X				164
			1015	1	1							X				165

TOTAL NUMBER OF CONTAINERS

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
Ed Esther	3	CRA / CRA	5/4/05	1650	[illegible] / STL	5/6/05	0945
FED EX		CRA / CRA					

Sample Condition

Additional Comments: Rec'd 5/6/05 per C Barton email

Sampler Name:

Shipper Signature:

Date:

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

TDF

ENCORE

PAGE 2 OF 3

ID # IP 01024

SSOW Ref Code: E09100/

Client Information:

CRA

Report To: G. Carli
Copy To: C. Barton
Invoice To:
P.O.:
Project Name: GM WILMINGTON
Project Number:

Laboratory: SHEDISON
Laboratory Location: EDISON NJ
Laboratory Contact: JOY KELLY
Requested Due Date: TAT 2 weeks
QA/QC Requirements: SEE SSOW

Analysis and Method

SIZ Adj NL 1930-44

DESCR/

X935

Valid Matrix Codes:
WG Groundwater
WB Borehole Water
WS Surface Water
SO Soil
SE Sediment
See Back for Additional Codes

Preservative

Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Unpreserved	HCl	H2SO4	HNO3	NaOH	Other: MeOH	SVOC's 8270	8260 TCL VOA's	6010 PCBs	6010 TAL Metals	% Solids				Remarks/Lab ID
SO-17338-050305-EAP-013	SO	5/3/05	1100	1	1						X	X						630	166
SO-17338-050305-EAP-014	SO		1105	1	1						X	X							167
SO-17338-050305-EAP-015	SO		1110	1	1						X	X							168 HOLD 015
SO-17338-050305-EAP-016	SO		1120	1	1						X	X							169
SO-17338-050305-EAP-017	SO		1126	1	1						X	X							170
SO-17338-050305-EAP-018	SO		1130	1	1						X	X							171 HOLD 018
SO-17338-050305-EAP-019	SO		1135	1	1						X	X							172
SO-17338-050305-EAP-020	SO		1200	1	1						X	X							173
SO-17338-050305-EAP-021	SO		1206	1	1						X	X							174 HOLD 021
SO-17338-050305-EAP-022	SO		1210	1	1						X	X							175
SO-17338-050305-EAP-023	SO		1215	1	1						X	X							176
SO-17338-050305-EAP-024	SO		1220	1	1						X	X							177 HOLD 024
SO-17338-050305-EAP-025	SO		1230	3	2					1	X	X	X	X	X				178 HOLD 025
SO-17338-050305-EAP-026	SO	▽	1245	3	2					1	X	X	X	X	X				179 HOLD 026

TOTAL NUMBER OF CONTAINERS

PMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
ed/Ex Hand	3	EAP / CRA	5/4/05	1630			
BILL TO		Ed Finke					

Sample Condition

Additional Comments: ① Rec'd 5/4/05 per C. Barton e-mail ②

Sampler Name:

Sampler Signature: Date:

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

REALM

ONCORE

PAGE 3 OF 3

ID # FP 01026

SSOW Ref. Code: E09/001

X935

DESOD

STL Proj # 923044

Laboratory: STL EDISON

Laboratory Location: EDISON NJ

Laboratory Contact: JEN KELLY

Requested Due Date: TAT: 2WEEKS

QA/QC Requirements: See SSOW

ed Client Information:

by: CRA

s:

Report To: G. CARLI

Copy To: C. BARTON

Invoice To:

P.O.:

Project Name: EM WALLINGTON

Project Number:

Valid Matrix Codes:
WG Groundwater
WB Borehole Water
WS Surface Water
SO Soil
SE Sediment
See Back for Additional Codes

Analysis and Method

Preservative

| Identification: | Matrix Code | Date Collected | Time Collected | # Containers | Unpreserved | HCl | H2SO4 | HNO3 | NaOH | Other | 8270 BN + 20 | | |

SEVERN TRENT STL

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel: 732 549 3900 Fax: 732 549 3679
www.stl-inc.com

07/12/2005

Conestoga Rovers Associates, Inc.
651 Colby Drive
Waterloo
OntarioCanada, - N2V 1C2

Attention: Mr. Greg Carti

Laboratory Results
Job No. X935 - GM Wilmington-17338

Dear Mr. Carti:

Enclosed are the results you requested for the following sample(s) received at our laboratory on May 5, 2005.

Lab No.	Client ID	Analysis Required
630164	050305-EAP-011	TCL BNA+20
630165	050305-EAP-012	TCL BNA+20
630166	050305-EAP-013	TCL BNA+20
630167	050305-EAP-014	TCL BNA+20
630169	050305-EAP-016	TCL BNA+20
630170	050305-EAP-017	TCL BNA+20
630171	050305-EAP-018	TCL BNA+20
630172	050305-EAP-019	TCL BNA+20
630173	050305-EAP-020	TCL BNA+20
630175	050305-EAP-022	TCL BNA+20
630176	050305-EAP-023	TCL BNA+20
630180	050305-EAP-027	TCL BNA+20
630181	050305-EAP-028	TCL BNA+20
630183	050305-EAP-030	TCL BNA+20
630184	050305-EAP-031	TCL BNA+20
630186	050305-EAP-033	TCL BNA+20

SEVERN TRENT STL

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777 New Durham Road
Edison, NJ 08817

Tel: 732 549 3900 Fax: 732 549 3679
www.stl-inc.com

Laboratory Results
Job No. X935 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
630187	050305-EAP-034	TCL BNA+20
630188	050305-EAP-035	TCL BNA+20
630189	050305-EAP-036	TCL BNA+20
630190	050305-EAP-037	TCL BNA+20
630191	050305-EAP-038	TCL BNA+20
630192	050305-EAP-039	TCL BNA+20
630193	050305-EAP-040	TCL BNA+20
630194	050305-EAP-041	TCL BNA+20
630606	050505-EAP-001	PCBs
630607	050505-EAP-002	PCBs
630608	050505-EAP-005	PCBs
630609	050505-EAP-006	PCBs
630610	050505-EAP-007	PCBs
630611	050505-EAP-008	PCBs
630612	050505-EAP-009	PCBs
630613	050505-EAP-010	TCLVOA+10 Special

SEVERN TRENT STL

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel: 732 549 3900 Fax: 732 549 3679
www.stl-inc.com

Laboratory Results
Job No. X935 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
630614	050505-EAP-011	TCLVOA+10 Special
630615	050505-EAP-012	TCLVOA+10 Special
630616	050505-EAP-013	TCLVOA+10 Special
630617	050505-EAP-014	TCLVOA+10 Special
630618	050505-EAP-015	TCLVOA+10 Special
630619	050505-EAP-016	TCLVOA+10 Special
630620	050505-EAP-017	TCLVOA+10 Special
630621	050505-EAP-018	TCLVOA+10 Special
630622	050505-EAP-019	TCLVOA+10 Special
630623	FB-050505-EAP020	TCLVOA+10 Special
		PCBs
630624	TB-050505-EAP021	TCLVOA+10 Special
630625	WG050505-EAP-022	TCL BNA+20
631381	WG-050905-EAP001	TCLVOA+10 Special

SEVERN TRENT STL

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel: 732 549 3900 Fax: 732 549 3679
www.stl-inc.com

Laboratory Results
Job No. X935 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
631382	TB-17338-EAP-002	TCLVOA+10 Special

If you have any questions please contact your Project Manager, Joy Kelly, at (732) 549-3900.

Very Truly Yours,

Michael J. Urban

Michael J. Urban
Laboratory Manager

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Analytical Results Summary

Client ID: **050505-EAP-010**
Site: GM Wilmington-17338

Lab Sample No: **630613**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57755.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.9 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 16

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	500
Bromomethane	ND	500
Vinyl Chloride	ND	500
Chloroethane	ND	500
Methylene Chloride	ND	300
Acetone	ND	500
Carbon Disulfide	ND	500
Trichlorofluoromethane	ND	500
1,1-Dichloroethene	ND	200
1,1-Dichloroethane	ND	500
trans-1,2-Dichloroethene	ND	500
cis-1,2-Dichloroethene	ND	500
Chloroform	ND	500
1,2-Dichloroethane	ND	200
2-Butanone	ND	500
1,1,1-Trichloroethane	ND	500
Carbon Tetrachloride	ND	200
Bromodichloromethane	ND	100
1,2-Dichloropropane	ND	100
cis-1,3-Dichloropropene	ND	500
Trichloroethene	ND	100
Dibromochloromethane	ND	500
1,1,2-Trichloroethane	ND	300
Benzene	ND	100
trans-1,3-Dichloropropene	ND	500
Bromoform	ND	400
4-Methyl-2-Pentanone	ND	500
2-Hexanone	ND	500
Tetrachloroethene	ND	100
1,1,2,2-Tetrachloroethane	ND	100
Toluene	ND	500
Chlorobenzene	ND	500
Ethylbenzene	590	400
Styrene	ND	500

Client ID: **050505-EAP-010**
Site: GM Wilmington-17338

Lab Sample No: **630613**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57755.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.9 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 16

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	10000	500
Freon TF	ND	500
MTBE	ND	500
Cyclohexane	ND	500
1,2-Dibromoethane	ND	500
1,3-Dichlorobenzene	ND	500
1,4-Dichlorobenzene	ND	500
1,2-Dichlorobenzene	ND	500
Dichlorodifluoromethane	ND	500
1,2,4-Trichlorobenzene	ND	500
1,2-Dibromo-3-chloropropane	ND	500
Isopropylbenzene	130 J	500
Methyl Acetate	ND	500
Methyl Cyclohexane	260 J	500

Client ID: **050505-EAP-010**
Site: GM Wilmington-17338

Lab Sample No: **630613**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57755.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.9 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 15.9

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	C10H22 Alkane/C9H12 Aromatic	12.61	1800	
2.	C11H24 Alkane	12.91	2400	
3.	Trimethylbenzene isomer	13.06	840	
4.	Unknown Alkane	13.24	790	
5.	Unknown Alkane	14.20	2800	
6.	Unknown	14.62	1100	
7.	Unknown Alkane/C10H14 Aromatic	14.78	2600	
8.	C12H26 Alkane	15.12	1300	
9.	C13H28 Alkane/C10H14 Aromatic	15.33	1600	
10.	C11H14/C11H16 Aromatics	16.08	1200	
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
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24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION: 16430

Client ID: **050505-EAP-011**
Site: GM Wilmington-17338

Lab Sample No: **630614**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57749.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.7 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 16

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	520
Bromomethane	ND	520
Vinyl Chloride	ND	520
Chloroethane	ND	520
Methylene Chloride	ND	310
Acetone	ND	520
Carbon Disulfide	ND	520
Trichlorofluoromethane	ND	520
1,1-Dichloroethene	ND	210
1,1-Dichloroethane	ND	520
trans-1,2-Dichloroethene	ND	520
cis-1,2-Dichloroethene	ND	520
Chloroform	ND	520
1,2-Dichloroethane	ND	210
2-Butanone	ND	520
1,1,1-Trichloroethane	ND	520
Carbon Tetrachloride	ND	210
Bromodichloromethane	ND	100
1,2-Dichloropropane	ND	100
cis-1,3-Dichloropropene	ND	520
Trichloroethene	ND	100
Dibromochloromethane	ND	520
1,1,2-Trichloroethane	ND	310
Benzene	ND	100
trans-1,3-Dichloropropene	ND	520
Bromoform	ND	420
4-Methyl-2-Pentanone	ND	520
2-Hexanone	ND	520
Tetrachloroethene	ND	100
1,1,2,2-Tetrachloroethane	ND	100
Toluene	ND	520
Chlorobenzene	ND	520
Ethylbenzene	3600	420
Styrene	ND	520

Client ID: **050505-EAP-011**
Site: GM Wilmington-17338

Lab Sample No: **630614**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57749.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.7 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 16

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	8600	520
Freon TF	ND	520
MTBE	ND	520
Cyclohexane	ND	520
1,2-Dibromoethane	ND	520
1,3-Dichlorobenzene	ND	520
1,4-Dichlorobenzene	ND	520
1,2-Dichlorobenzene	ND	520
Dichlorodifluoromethane	ND	520
1,2,4-Trichlorobenzene	ND	520
1,2-Dibromo-3-chloropropane	ND	520
Isopropylbenzene	140 J	520
Methyl Acetate	ND	520
Methyl Cyclohexane	ND	520

Client ID: **050505-EAP-011**
Site: GM Wilmington-17338

Lab Sample No: **630614**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57749.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.7 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 15.5

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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25.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION: 0.0

Client ID: **050505-EAP-012**
Site: GM Wilmington-17338

Lab Sample No: **630615**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57756.d

Matrix: SOIL
Level: HIGH
Sample Weight: 6.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 5000.0
% Moisture: 16

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	50000
Bromomethane	ND	50000
Vinyl Chloride	ND	50000
Chloroethane	ND	50000
Methylene Chloride	ND	30000
Acetone	ND	50000
Carbon Disulfide	ND	50000
Trichlorofluoromethane	ND	50000
1,1-Dichloroethene	ND	20000
1,1-Dichloroethane	ND	50000
trans-1,2-Dichloroethene	ND	50000
cis-1,2-Dichloroethene	ND	50000
Chloroform	ND	50000
1,2-Dichloroethane	ND	20000
2-Butanone	ND	50000
1,1,1-Trichloroethane	ND	50000
Carbon Tetrachloride	ND	20000
Bromodichloromethane	ND	10000
1,2-Dichloropropane	ND	10000
cis-1,3-Dichloropropene	ND	50000
Trichloroethene	ND	10000
Dibromochloromethane	ND	50000
1,1,2-Trichloroethane	ND	30000
Benzene	ND	10000
trans-1,3-Dichloropropene	ND	50000
Bromoform	ND	40000
4-Methyl-2-Pentanone	ND	50000
2-Hexanone	ND	50000
Tetrachloroethene	ND	10000
1,1,2,2-Tetrachloroethane	ND	10000
Toluene	7500 J	50000
Chlorobenzene	ND	50000
Ethylbenzene	410000	40000
Styrene	ND	50000

Client ID: **050505-EAP-012**
Site: GM Wilmington-17338

Lab Sample No: **630615**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57756.d

Matrix: SOIL
Level: HIGH
Sample Weight: 6.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 5000.0
% Moisture: 16

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	2500000	50000
Freon TF	ND	50000
MTBE	ND	50000
Cyclohexane	ND	50000
1,2-Dibromoethane	ND	50000
1,3-Dichlorobenzene	ND	50000
1,4-Dichlorobenzene	ND	50000
1,2-Dichlorobenzene	ND	50000
Dichlorodifluoromethane	ND	50000
1,2,4-Trichlorobenzene	ND	50000
1,2-Dibromo-3-chloropropane	ND	50000
Isopropylbenzene	11000 J	50000
Methyl Acetate	ND	50000
Methyl Cyclohexane	11000 J	50000

Client ID: **050505-EAP-012**
Site: GM Wilmington-17338

Lab Sample No: **630615**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57756.d

Matrix: SOIL
Level: HIGH
Sample Weight: 6.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 5000.0
% Moisture: 16.3

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Trimethylbenzene isomer	12.62	50000	
2.	Unknown Siloxane	14.18	56000	
3.				
4.				
5.				
6.				
7.				
8.				
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30.				

TOTAL ESTIMATED CONCENTRATION 106000

Client ID: **050505-EAP-013**
Site: GM Wilmington-17338

Lab Sample No: **630616**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57750.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.9 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 16

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	1300
Bromomethane	ND	1300
Vinyl Chloride	ND	1300
Chloroethane	ND	1300
Methylene Chloride	ND	760
Acetone	ND	1300
Carbon Disulfide	ND	1300
Trichlorofluoromethane	ND	1300
1,1-Dichloroethene	ND	500
1,1-Dichloroethane	ND	1300
trans-1,2-Dichloroethene	ND	1300
cis-1,2-Dichloroethene	ND	1300
Chloroform	ND	1300
1,2-Dichloroethane	ND	500
2-Butanone	ND	1300
1,1,1-Trichloroethane	ND	1300
Carbon Tetrachloride	ND	500
Bromodichloromethane	ND	250
1,2-Dichloropropane	ND	250
cis-1,3-Dichloropropene	ND	1300
Trichloroethene	ND	250
Dibromochloromethane	ND	1300
1,1,2-Trichloroethane	ND	760
Benzene	ND	250
trans-1,3-Dichloropropene	ND	1300
Bromoform	ND	1000
4-Methyl-2-Pentanone	ND	1300
2-Hexanone	ND	1300
Tetrachloroethene	ND	250
1,1,2,2-Tetrachloroethane	ND	250
Toluene	280 J	1300
Chlorobenzene	ND	1300
Ethylbenzene	9500	1000
Styrene	ND	1300

Client ID: **050505-EAP-013**
Site: GM Wilmington-17338

Lab Sample No: **630616**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57750.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.9 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 16

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	76000	1300
Freon TF	ND	1300
MTBE	ND	1300
Cyclohexane	ND	1300
1,2-Dibromoethane	ND	1300
1,3-Dichlorobenzene	ND	1300
1,4-Dichlorobenzene	ND	1300
1,2-Dichlorobenzene	ND	1300
Dichlorodifluoromethane	ND	1300
1,2,4-Trichlorobenzene	ND	1300
1,2-Dibromo-3-chloropropane	ND	1300
Isopropylbenzene	720 J	1300
Methyl Acetate	ND	1300
Methyl Cyclohexane	520 J	1300

Client ID: **050505-EAP-013**
Site: GM Wilmington-17338

Lab Sample No: **630616**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57750.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.9 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 16.2

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Ethylmethylbenzene isomer	12.60	3300	
2.				
3.				
4.				
5.				
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7.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 3300

Client ID: **050505-EAP-014**
Site: GM Wilmington-17338

Lab Sample No: **630617**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57751.d

Matrix: SOIL
Level: HIGH
Sample Weight: 6.5 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 500.0
% Moisture: 17

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	4600
Bromomethane	ND	4600
Vinyl Chloride	ND	4600
Chloroethane	ND	4600
Methylene Chloride	ND	2800
Acetone	ND	4600
Carbon Disulfide	ND	4600
Trichlorofluoromethane	ND	4600
1,1-Dichloroethene	ND	1800
1,1-Dichloroethane	ND	4600
trans-1,2-Dichloroethene	ND	4600
cis-1,2-Dichloroethene	ND	4600
Chloroform	ND	4600
1,2-Dichloroethane	ND	1800
2-Butanone	ND	4600
1,1,1-Trichloroethane	ND	4600
Carbon Tetrachloride	ND	1800
Bromodichloromethane	ND	920
1,2-Dichloropropane	ND	920
cis-1,3-Dichloropropene	ND	4600
Trichloroethene	ND	920
Dibromochloromethane	ND	4600
1,1,2-Trichloroethane	ND	2800
Benzene	ND	920
trans-1,3-Dichloropropene	ND	4600
Bromoform	ND	3700
4-Methyl-2-Pentanone	ND	4600
2-Hexanone	ND	4600
Tetrachloroethene	ND	920
1,1,2,2-Tetrachloroethane	ND	920
Toluene	3700 J	4600
Chlorobenzene	ND	4600
Ethylbenzene	36000	3700
Styrene	ND	4600

Client ID: **050505-EAP-014**
Site: GM Wilmington-17338

Lab Sample No: **630617**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57751.d

Matrix: SOIL
Level: HIGH
Sample Weight: 6.5 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 500.0
% Moisture: 17

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	150000	4600
Freon TF	ND	4600
MTBE	ND	4600
Cyclohexane	ND	4600
1,2-Dibromoethane	ND	4600
1,3-Dichlorobenzene	ND	4600
1,4-Dichlorobenzene	ND	4600
1,2-Dichlorobenzene	ND	4600
Dichlorodifluoromethane	ND	4600
1,2,4-Trichlorobenzene	ND	4600
1,2-Dibromo-3-chloropropane	ND	4600
Isopropylbenzene	660 J	4600
Methyl Acetate	ND	4600
Methyl Cyclohexane	ND	4600

Client ID: **050505-EAP-014**
Site: GM Wilmington-17338

Lab Sample No: **630617**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57751.d

Matrix: SOIL
Level: HIGH
Sample Weight: 6.5 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 500.0
% Moisture: 16.6

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION: 0.0

Client ID: **050505-EAP-015**
Site: GM Wilmington-17338

Lab Sample No: **630618**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57752.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.8 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 200.0
% Moisture: 16

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	2100
Bromomethane	ND	2100
Vinyl Chloride	ND	2100
Chloroethane	ND	2100
Methylene Chloride	ND	1200
Acetone	ND	2100
Carbon Disulfide	ND	2100
Trichlorofluoromethane	ND	2100
1,1-Dichloroethene	ND	820
1,1-Dichloroethane	ND	2100
trans-1,2-Dichloroethene	ND	2100
cis-1,2-Dichloroethene	ND	2100
Chloroform	ND	2100
1,2-Dichloroethane	ND	820
2-Butanone	ND	2100
1,1,1-Trichloroethane	ND	2100
Carbon Tetrachloride	ND	820
Bromodichloromethane	ND	410
1,2-Dichloropropane	ND	410
cis-1,3-Dichloropropene	ND	2100
Trichloroethene	ND	410
Dibromochloromethane	ND	2100
1,1,2-Trichloroethane	ND	1200
Benzene	ND	410
trans-1,3-Dichloropropene	ND	2100
Bromoform	ND	1600
4-Methyl-2-Pentanone	ND	2100
2-Hexanone	ND	2100
Tetrachloroethene	ND	410
1,1,2,2-Tetrachloroethane	ND	410
Toluene	3500	2100
Chlorobenzene	ND	2100
Ethylbenzene	12000	1600
Styrene	ND	2100

Client ID: **050505-EAP-015**
Site: GM Wilmington-17338

Lab Sample No: **630618**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57752.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.8 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 200.0
% Moisture: 16

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	78000	2100
Freon TF	ND	2100
MTBE	ND	2100
Cyclohexane	ND	2100
1,2-Dibromoethane	ND	2100
1,3-Dichlorobenzene	ND	2100
1,4-Dichlorobenzene	ND	2100
1,2-Dichlorobenzene	ND	2100
Dichlorodifluoromethane	ND	2100
1,2,4-Trichlorobenzene	ND	2100
1,2-Dibromo-3-chloropropane	ND	2100
Isopropylbenzene	330 J	2100
Methyl Acetate	ND	2100
Methyl Cyclohexane	ND	2100

Client ID: **050505-EAP-015**
Site: GM Wilmington-17338

Lab Sample No: **630618**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57752.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.8 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 200.0
% Moisture: 16.5

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION: 0.0

Client ID: **050505-EAP-016**
Site: GM Wilmington-17338

Lab Sample No: **630619**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57753.d

Matrix: SOIL
Level: HIGH
Sample Weight: 6.1 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 15

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	480
Bromomethane	ND	480
Vinyl Chloride	ND	480
Chloroethane	ND	480
Methylene Chloride	ND	290
Acetone	ND	480
Carbon Disulfide	ND	480
Trichlorofluoromethane	ND	480
1,1-Dichloroethene	ND	190
1,1-Dichloroethane	ND	480
trans-1,2-Dichloroethene	ND	480
cis-1,2-Dichloroethene	ND	480
Chloroform	ND	480
1,2-Dichloroethane	ND	190
2-Butanone	ND	480
1,1,1-Trichloroethane	ND	480
Carbon Tetrachloride	ND	190
Bromodichloromethane	ND	96
1,2-Dichloropropane	ND	96
cis-1,3-Dichloropropene	ND	480
Trichloroethene	ND	96
Dibromochloromethane	ND	480
1,1,2-Trichloroethane	ND	290
Benzene	ND	96
trans-1,3-Dichloropropene	ND	480
Bromoform	ND	380
4-Methyl-2-Pentanone	ND	480
2-Hexanone	ND	480
Tetrachloroethene	ND	96
1,1,2,2-Tetrachloroethane	ND	96
Toluene	50 J	480
Chlorobenzene	ND	480
Ethylbenzene	3500	380
Styrene	ND	480

Client ID: **050505-EAP-016**
Site: GM Wilmington-17338

Lab Sample No: **630619**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57753.d

Matrix: SOIL
Level: HIGH
Sample Weight: 6.1 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 15

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	12000	480
Freon TF	ND	480
MTBE	ND	480
Cyclohexane	ND	480
1,2-Dibromoethane	ND	480
1,3-Dichlorobenzene	ND	480
1,4-Dichlorobenzene	ND	480
1,2-Dichlorobenzene	ND	480
Dichlorodifluoromethane	ND	480
1,2,4-Trichlorobenzene	ND	480
1,2-Dibromo-3-chloropropane	ND	480
Isopropylbenzene	66 J	480
Methyl Acetate	ND	480
Methyl Cyclohexane	ND	480

Client ID: **050505-EAP-016**
Site: GM Wilmington-17338

Lab Sample No: **630619**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57753.d

Matrix: SOIL
Level: HIGH
Sample Weight: 6.1 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 14.7

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Trimethylbenzene isomer	13.08	640	
2.	C10H20 Cycloalkane	13.30	670	
3.	C11H24 Alkane	13.82	2500	
4.	Coeluting Unknowns	14.21	630	
5.	Unknown Cycloalkane	14.63	820	
6.	C12H26 Alkane	15.11	1400	
7.	C13H28 Alkane/C10H14 Aromatic	15.34	590	
8.	C13H28 Alkane	16.66	890	
9.	2,3-dihydro-dimethyl-1H-Indene isomer	17.40	830	
10.	Unknown	18.08	680	
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TOTAL ESTIMATED CONCENTRATION 9650

Client ID: **050505-EAP-017**
Site: GM Wilmington-17338

Lab Sample No: **630620**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57769.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.8 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 16

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	510
Bromomethane	ND	510
Vinyl Chloride	ND	510
Chloroethane	ND	510
Methylene Chloride	ND	310
Acetone	ND	510
Carbon Disulfide	ND	510
Trichlorofluoromethane	ND	510
1,1-Dichloroethene	ND	200
1,1-Dichloroethane	ND	510
trans-1,2-Dichloroethene	ND	510
cis-1,2-Dichloroethene	ND	510
Chloroform	ND	510
1,2-Dichloroethane	ND	200
2-Butanone	ND	510
1,1,1-Trichloroethane	ND	510
Carbon Tetrachloride	ND	200
Bromodichloromethane	ND	100
1,2-Dichloropropane	ND	100
cis-1,3-Dichloropropene	ND	510
Trichloroethene	ND	100
Dibromochloromethane	ND	510
1,1,2-Trichloroethane	ND	310
Benzene	ND	100
trans-1,3-Dichloropropene	ND	510
Bromoform	ND	410
4-Methyl-2-Pentanone	ND	510
2-Hexanone	ND	510
Tetrachloroethene	ND	100
1,1,2,2-Tetrachloroethane	ND	100
Toluene	3900	510
Chlorobenzene	ND	510
Ethylbenzene	4900	410
Styrene	ND	510

Client ID: **050505-EAP-017**
Site: GM Wilmington-17338

Lab Sample No: **630620**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57769.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.8 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 16

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	33000	510
Freon TF	ND	510
MTBE	ND	510
Cyclohexane	ND	510
1,2-Dibromoethane	ND	510
1,3-Dichlorobenzene	ND	510
1,4-Dichlorobenzene	ND	510
1,2-Dichlorobenzene	ND	510
Dichlorodifluoromethane	ND	510
1,2,4-Trichlorobenzene	ND	510
1,2-Dibromo-3-chloropropane	ND	510
Isopropylbenzene	91 J	510
Methyl Acetate	ND	510
Methyl Cyclohexane	ND	510

Client ID: **050505-EAP-017**
Site: GM Wilmington-17338

Lab Sample No: **630620**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57769.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.8 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 16.3

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION: 0.0

Client ID: **050505-EAP-018**
Site: GM Wilmington-17338

Lab Sample No: **630621**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57757.d

Matrix: SOIL
Level: HIGH
Sample Weight: 6.2 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 14

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	470
Bromomethane	ND	470
Vinyl Chloride	ND	470
Chloroethane	ND	470
Methylene Chloride	ND	280
Acetone	ND	470
Carbon Disulfide	ND	470
Trichlorofluoromethane	ND	470
1,1-Dichloroethene	ND	190
1,1-Dichloroethane	ND	470
trans-1,2-Dichloroethene	ND	470
cis-1,2-Dichloroethene	ND	470
Chloroform	ND	470
1,2-Dichloroethane	ND	190
2-Butanone	ND	470
1,1,1-Trichloroethane	ND	470
Carbon Tetrachloride	ND	190
Bromodichloromethane	ND	94
1,2-Dichloropropane	ND	94
cis-1,3-Dichloropropene	ND	470
Trichloroethene	ND	94
Dibromochloromethane	ND	470
1,1,2-Trichloroethane	ND	280
Benzene	ND	94
trans-1,3-Dichloropropene	ND	470
Bromoform	ND	380
4-Methyl-2-Pentanone	ND	470
2-Hexanone	ND	470
Tetrachloroethene	ND	94
1,1,2,2-Tetrachloroethane	ND	94
Toluene	2500	470
Chlorobenzene	ND	470
Ethylbenzene	3800	380
Styrene	ND	470

Client ID: **050505-EAP-018**
Site: GM Wilmington-17338

Lab Sample No: **630621**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57757.d

Matrix: SOIL
Level: HIGH
Sample Weight: 6.2 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 14

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	25000	470
Freon TF	ND	470
MTBE	ND	470
Cyclohexane	ND	470
1,2-Dibromoethane	ND	470
1,3-Dichlorobenzene	ND	470
1,4-Dichlorobenzene	ND	470
1,2-Dichlorobenzene	ND	470
Dichlorodifluoromethane	ND	470
1,2,4-Trichlorobenzene	ND	470
1,2-Dibromo-3-chloropropane	ND	470
Isopropylbenzene	60 J	470
Methyl Acetate	ND	470
Methyl Cyclohexane	ND	470

Client ID: **050505-EAP-018**
Site: GM Wilmington-17338

Lab Sample No: **630621**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57757.d

Matrix: SOIL
Level: HIGH
Sample Weight: 6.2 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 14.3

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **050505-EAP-019**
Site: GM Wilmington-17338

Lab Sample No: **630622**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57780.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.6 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 9

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	490
Bromomethane	ND	490
Vinyl Chloride	ND	490
Chloroethane	ND	490
Methylene Chloride	ND	290
Acetone	ND	490
Carbon Disulfide	ND	490
Trichlorofluoromethane	ND	490
1,1-Dichloroethene	ND	200
1,1-Dichloroethane	ND	490
trans-1,2-Dichloroethene	ND	490
cis-1,2-Dichloroethene	ND	490
Chloroform	ND	490
1,2-Dichloroethane	ND	200
2-Butanone	ND	490
1,1,1-Trichloroethane	ND	490
Carbon Tetrachloride	ND	200
Bromodichloromethane	ND	98
1,2-Dichloropropane	ND	98
cis-1,3-Dichloropropene	ND	490
Trichloroethene	ND	98
Dibromochloromethane	ND	490
1,1,2-Trichloroethane	ND	290
Benzene	ND	98
trans-1,3-Dichloropropene	ND	490
Bromoform	ND	390
4-Methyl-2-Pentanone	ND	490
2-Hexanone	ND	490
Tetrachloroethene	ND	98
1,1,2,2-Tetrachloroethane	ND	98
Toluene	ND	490
Chlorobenzene	ND	490
Ethylbenzene	ND	390
Styrene	ND	490

Client ID: **050505-EAP-019**
Site: GM Wilmington-17338

Lab Sample No: **630622**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57780.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.6 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 9

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	ND	490
Freon TF	ND	490
MTBE	ND	490
Cyclohexane	ND	490
1,2-Dibromoethane	ND	490
1,3-Dichlorobenzene	ND	490
1,4-Dichlorobenzene	ND	490
1,2-Dichlorobenzene	ND	490
Dichlorodifluoromethane	ND	490
1,2,4-Trichlorobenzene	ND	490
1,2-Dibromo-3-chloropropane	ND	490
Isopropylbenzene	ND	490
Methyl Acetate	ND	490
Methyl Cyclohexane	ND	490

Client ID: **050505-EAP-019**
Site: GM Wilmington-17338

Lab Sample No: **630622**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57780.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.6 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 8.8

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
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TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **FB-050505-EAP020**
Site: GM Wilmington-17338

Lab Sample No: **630623**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57781.d

Matrix: SOIL
Level: HIGH
Sample Weight: 6.3 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Chloromethane	ND	400
Bromomethane	ND	400
Vinyl Chloride	ND	400
Chloroethane	ND	400
Methylene Chloride	ND	240
Acetone	ND	400
Carbon Disulfide	ND	400
Trichlorofluoromethane	ND	400
1,1-Dichloroethene	ND	160
1,1-Dichloroethane	ND	400
trans-1,2-Dichloroethene	ND	400
cis-1,2-Dichloroethene	ND	400
Chloroform	ND	400
1,2-Dichloroethane	ND	160
2-Butanone	ND	400
1,1,1-Trichloroethane	ND	400
Carbon Tetrachloride	ND	160
Bromodichloromethane	ND	80
1,2-Dichloropropane	ND	80
cis-1,3-Dichloropropene	ND	400
Trichloroethene	ND	80
Dibromochloromethane	ND	400
1,1,2-Trichloroethane	ND	240
Benzene	ND	80
trans-1,3-Dichloropropene	ND	400
Bromoform	ND	320
4-Methyl-2-Pentanone	ND	400
2-Hexanone	ND	400
Tetrachloroethene	ND	80
1,1,2,2-Tetrachloroethane	ND	80
Toluene	ND	400
Chlorobenzene	ND	400
Ethylbenzene	ND	320
Styrene	ND	400

Client ID: **FB-050505-EAP020**
Site: GM Wilmington-17338

Lab Sample No: **630623**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57781.d

Matrix: SOIL
Level: HIGH
Sample Weight: 6.3 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Xylene (Total)	ND	400
Freon TF	ND	400
MTBE	ND	400
Cyclohexane	ND	400
1,2-Dibromoethane	ND	400
1,3-Dichlorobenzene	ND	400
1,4-Dichlorobenzene	ND	400
1,2-Dichlorobenzene	ND	400
Dichlorodifluoromethane	ND	400
1,2,4-Trichlorobenzene	ND	400
1,2-Dibromo-3-chloropropane	ND	400
Isopropylbenzene	ND	400
Methyl Acetate	ND	400
Methyl Cyclohexane	ND	400

Client ID: **FB-050505-EAP020**
Site: GM Wilmington-17338

Lab Sample No: **630623**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57781.d

Matrix: SOIL
Level: HIGH
Sample Weight: 6.3 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0.2

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
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30.				

TOTAL ESTIMATED CONCENTRATION: 0.0

Client ID: **TB-050505-EAP021**
Site: GM Wilmington-17338

Lab Sample No: **630624**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57748.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Results Units: ug/kg	Quantitation Limit Units: ug/kg
Chloromethane	ND	500
Bromomethane	ND	500
Vinyl Chloride	ND	500
Chloroethane	ND	500
Methylene Chloride	ND	300
Acetone	ND	500
Carbon Disulfide	ND	500
Trichlorofluoromethane	ND	500
1,1-Dichloroethene	ND	200
1,1-Dichloroethane	ND	500
trans-1,2-Dichloroethene	ND	500
cis-1,2-Dichloroethene	ND	500
Chloroform	ND	500
1,2-Dichloroethane	ND	200
2-Butanone	ND	500
1,1,1-Trichloroethane	ND	500
Carbon Tetrachloride	ND	200
Bromodichloromethane	ND	100
1,2-Dichloropropane	ND	100
cis-1,3-Dichloropropene	ND	500
Trichloroethene	ND	100
Dibromochloromethane	ND	500
1,1,2-Trichloroethane	ND	300
Benzene	ND	100
trans-1,3-Dichloropropene	ND	500
Bromoform	ND	400
4-Methyl-2-Pentanone	ND	500
2-Hexanone	ND	500
Tetrachloroethene	ND	100
1,1,2,2-Tetrachloroethane	ND	100
Toluene	ND	500
Chlorobenzene	ND	500
Ethylbenzene	ND	400
Styrene	ND	500

Client ID: **TB-050505-EAP021**
Site: GM Wilmington-17338

Lab Sample No: **630624**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57748.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Results Units: ug/kg	Quantitation Limit Units: ug/kg
Xylene (Total)	ND	500
Freon TF	ND	500
MTBE	ND	500
Cyclohexane	ND	500
1,2-Dibromoethane	ND	500
1,3-Dichlorobenzene	ND	500
1,4-Dichlorobenzene	ND	500
1,2-Dichlorobenzene	ND	500
Dichlorodifluoromethane	ND	500
1,2,4-Trichlorobenzene	ND	500
1,2-Dibromo-3-chloropropane	ND	500
Isopropylbenzene	ND	500
Methyl Acetate	ND	500
Methyl Cyclohexane	ND	500

Client ID: **TB-050505-EAP021**
Site: GM Wilmington-17338

Lab Sample No: **630624**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Analyzed: 05/10/05
GC Column: DB624
Instrument ID: VOAMS8.i
Lab File ID: j57748.d

Matrix: SOIL
Level: HIGH
Sample Weight: 5.0 g
Methanol Ext. Volume: 10.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
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TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **WG-050905-EAP001**
Site: GM Wilmington-17338

Lab Sample No: **631381**
Lab Job No: X935

Date Sampled: 05/09/05
Date Received: 05/10/05
Date Analyzed: 05/16/05
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b38107.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	0.9J	5.0
Ethylbenzene	2.0J	4.0
Styrene	ND	5.0

Client ID: **WG-050905-EAP001**
Site: GM Wilmington-17338

Lab Sample No: **631381**
Lab Job No: X935

Date Sampled: 05/09/05
Date Received: 05/10/05
Date Analyzed: 05/16/05
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b38107.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	4.1J	5.0
Freon TF	ND	5.0
MTBE	1.0J	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	0.6J	5.0
Methyl Acetate	2.5J	5.0
Methyl Cyclohexane	1.2J	5.0

Client ID: **WG-050905-EAP001**
Site: GM Wilmington-17338

Lab Sample No: **631381**
Lab Job No: X935

Date Sampled: 05/09/05
Date Received: 05/10/05
Date Analyzed: 05/16/05
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b38107.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Methylmethylethylbenzene isomer	15.11	15	
2.	2,3-dihydro-methyl-1H-Indene isomer	15.58	31	
3.	C11H14/C11H16 Aromatics	15.88	28	
4.	C11H14 Aromatic	16.03	20	
5.	2,3-dihydro-dimethyl-1H-Indene isomer	16.43	20	
6.	Tetrahydromethylnaphthalene isomer	17.20	17	
7.	C12H16 Aromatic	17.37	21	
8.	Methylnaphthalene isomer	17.69	39	
9.	2,3-dihydro-trimethyl-1H-Indene isomer	18.23	16	
10.	Dimethylnaphthalene isomer	18.71	15	
11.				
12.				
13.				
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29.				
30.				

TOTAL ESTIMATED CONCENTRATION 222

Client ID: **TB-17338-EAP-002**
Site: GM Wilmington-17338

Lab Sample No: **631382**
Lab Job No: X935

Date Sampled: 05/09/05
Date Received: 05/10/05
Date Analyzed: 05/16/05
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b38106.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **TB-17338-EAP-002**
Site: GM Wilmington-17338

Lab Sample No: **631382**
Lab Job No: X935

Date Sampled: 05/09/05
Date Received: 05/10/05
Date Analyzed: 05/16/05
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b38106.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **TB-17338-EAP-002**
Site: GM Wilmington-17338

Lab Sample No: **631382**
Lab Job No: X935

Date Sampled: 05/09/05
Date Received: 05/10/05
Date Analyzed: 05/16/05
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b38106.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **050305-EAP-011**
Site: GM Wilmington-17338

Lab Sample No: **630164**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa7004.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 8

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	360
2-Chlorophenol	ND	360
2-Methylphenol	ND	360
3+4-Methylphenol (total)	ND	360
2-Nitrophenol	ND	360
2,4-Dimethylphenol	ND	360
2,4-Dichlorophenol	ND	360
4-Chloro-3-methylphenol	ND	360
2,4,6-Trichlorophenol	ND	360
2,4,5-Trichlorophenol	ND	360
2,4-Dinitrophenol	ND	1400
4-Nitrophenol	ND	1400
4,6-Dinitro-2-methylphenol	ND	1400
Pentachlorophenol	ND	1400
bis(2-Chloroethyl)ether	ND	36
bis(2-chloroisopropyl)ether	ND	360
N-Nitroso-di-n-propylamine	ND	36
Hexachloroethane	ND	36
Nitrobenzene	ND	36
Isophorone	ND	360
bis(2-Chloroethoxy)methane	ND	360
Naphthalene	17 J	360
4-Chloroaniline	ND	360
Hexachlorobutadiene	ND	73
2-Methylnaphthalene	9.4J	360
Hexachlorocyclopentadiene	ND	360
2-Chloronaphthalene	ND	360
2-Nitroaniline	ND	730
Dimethylphthalate	ND	360
Acenaphthylene	27 J	360
2,6-Dinitrotoluene	ND	73
3-Nitroaniline	ND	730
Acenaphthene	99 J	360
Dibenzofuran	42 J	360

Client ID: **050305-EAP-011**
Site: GM Wilmington-17338

Lab Sample No: **630164**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa7004.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 8

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	73
Diethylphthalate	ND	360
4-Chlorophenyl-phenylether	ND	360
Fluorene	96 J	360
4-Nitroaniline	ND	730
N-Nitrosodiphenylamine	ND	360
4-Bromophenyl-phenylether	ND	360
Hexachlorobenzene	ND	36
Phenanthrene	780	360
Anthracene	250 J	360
Carbazole	98 J	360
Di-n-butylphthalate	ND	360
Fluoranthene	1400	360
Pyrene	1400	360
Butylbenzylphthalate	ND	360
3,3'-Dichlorobenzidine	ND	730
Benzo(a)anthracene	730	36
Chrysene	800	360
bis(2-Ethylhexyl)phthalate	110 J	360
Di-n-octylphthalate	ND	360
Benzo(b)fluoranthene	660	36
Benzo(k)fluoranthene	550	36
Benzo(a)pyrene	720	36
Indeno(1,2,3-cd)pyrene	300	36
Dibenz(a,h)anthracene	100	36
Benzo(g,h,i)perylene	300 J	360
Benzaldehyde	ND	360
Caprolactam	ND	360
Atrazine	ND	360
Acetophenone	ND	360
Diphenyl	9.3J	360

Client ID: **050305-EAP-011**
Site: GM Wilmington-17338

Lab Sample No: **630164**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa7004.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 8.4

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	C20H12 PAH	20.50	580	
2.	Unknown	24.51	320	
3.				
4.				
5.				
6.				
7.				
8.				
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27.				
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29.				
30.				

TOTAL ESTIMATED CONCENTRATION 900

Client ID: **050305-EAP-012**
Site: GM Wilmington-17338

Lab Sample No: **630165**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6994.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 19

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	410
2-Chlorophenol	ND	410
2-Methylphenol	ND	410
3+4-Methylphenol (total)	ND	410
2-Nitrophenol	ND	410
2,4-Dimethylphenol	ND	410
2,4-Dichlorophenol	ND	410
4-Chloro-3-methylphenol	ND	410
2,4,6-Trichlorophenol	ND	410
2,4,5-Trichlorophenol	ND	410
2,4-Dinitrophenol	ND	1600
4-Nitrophenol	ND	1600
4,6-Dinitro-2-methylphenol	ND	1600
Pentachlorophenol	ND	1600
bis(2-Chloroethyl)ether	ND	41
bis(2-chloroisopropyl)ether	ND	410
N-Nitroso-di-n-propylamine	ND	41
Hexachloroethane	ND	41
Nitrobenzene	ND	41
Isophorone	ND	410
bis(2-Chloroethoxy)methane	ND	410
Naphthalene	ND	410
4-Chloroaniline	ND	410
Hexachlorobutadiene	ND	82
2-Methylnaphthalene	ND	410
Hexachlorocyclopentadiene	ND	410
2-Chloronaphthalene	ND	410
2-Nitroaniline	ND	820
Dimethylphthalate	ND	410
Acenaphthylene	ND	410
2,6-Dinitrotoluene	ND	82
3-Nitroaniline	ND	820
Acenaphthene	ND	410
Dibenzofuran	ND	410

Client ID: **050305-EAP-012**
Site: GM Wilmington-17338

Lab Sample No: **630165**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6994.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 19

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	82
Diethylphthalate	ND	410
4-Chlorophenyl-phenylether	ND	410
Fluorene	ND	410
4-Nitroaniline	ND	820
N-Nitrosodiphenylamine	ND	410
4-Bromophenyl-phenylether	ND	410
Hexachlorobenzene	ND	41
Phenanthrene	ND	410
Anthracene	ND	410
Carbazole	ND	410
Di-n-butylphthalate	ND	410
Fluoranthene	ND	410
Pyrene	ND	410
Butylbenzylphthalate	ND	410
3,3'-Dichlorobenzidine	ND	820
Benzo(a)anthracene	ND	41
Chrysene	ND	410
bis(2-Ethylhexyl)phthalate	ND	410
Di-n-octylphthalate	ND	410
Benzo(b)fluoranthene	ND	41
Benzo(k)fluoranthene	ND	41
Benzo(a)pyrene	ND	41
Indeno(1,2,3-cd)pyrene	ND	41
Dibenz(a,h)anthracene	ND	41
Benzo(g,h,i)perylene	ND	410
Benzaldehyde	ND	410
Caprolactam	ND	410
Atrazine	ND	410
Acetophenone	ND	410
Diphenyl	ND	410

Client ID: **050305-EAP-012**
Site: GM Wilmington-17338

Lab Sample No: **630165**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6994.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 18.8

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
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24.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **050305-EAP-013**
Site: GM Wilmington-17338

Lab Sample No: **630166**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa7003.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 10

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	370
2-Chlorophenol	ND	370
2-Methylphenol	ND	370
3+4-Methylphenol (total)	ND	370
2-Nitrophenol	ND	370
2,4-Dimethylphenol	ND	370
2,4-Dichlorophenol	ND	370
4-Chloro-3-methylphenol	ND	370
2,4,6-Trichlorophenol	ND	370
2,4,5-Trichlorophenol	ND	370
2,4-Dinitrophenol	ND	1500
4-Nitrophenol	ND	1500
4,6-Dinitro-2-methylphenol	ND	1500
Pentachlorophenol	ND	1500
bis(2-Chloroethyl)ether	ND	37
bis(2-chloroisopropyl)ether	ND	370
N-Nitroso-di-n-propylamine	ND	37
Hexachloroethane	ND	37
Nitrobenzene	ND	37
Isophorone	ND	370
bis(2-Chloroethoxy)methane	ND	370
Naphthalene	ND	370
4-Chloroaniline	ND	370
Hexachlorobutadiene	ND	74
2-Methylnaphthalene	ND	370
Hexachlorocyclopentadiene	ND	370
2-Chloronaphthalene	ND	370
2-Nitroaniline	ND	740
Dimethylphthalate	ND	370
Acenaphthylene	ND	370
2,6-Dinitrotoluene	ND	74
3-Nitroaniline	ND	740
Acenaphthene	18 J	370
Dibenzofuran	7.8J	370

Client ID: **050305-EAP-013**
Site: GM Wilmington-17338

Lab Sample No: **630166**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa7003.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 10

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	74
Diethylphthalate	ND	370
4-Chlorophenyl-phenylether	ND	370
Fluorene	13 J	370
4-Nitroaniline	ND	740
N-Nitrosodiphenylamine	ND	370
4-Bromophenyl-phenylether	ND	370
Hexachlorobenzene	ND	37
Phenanthrene	120 J	370
Anthracene	26 J	370
Carbazole	16 J	370
Di-n-butylphthalate	ND	370
Fluoranthene	220 J	370
Pyrene	240 J	370
Butylbenzylphthalate	1400	370
3,3'-Dichlorobenzidine	ND	740
Benzo(a)anthracene	120	37
Chrysene	130 J	370
bis(2-Ethylhexyl)phthalate	430	370
Di-n-octylphthalate	ND	370
Benzo(b)fluoranthene	96	37
Benzo(k)fluoranthene	98	37
Benzo(a)pyrene	120	37
Indeno(1,2,3-cd)pyrene	59	37
Dibenz(a,h)anthracene	13 J	37
Benzo(g,h,i)perylene	62 J	370
Benzaldehyde	ND	370
Caprolactam	ND	370
Atrazine	ND	370
Acetophenone	ND	370
Diphenyl	ND	370

Client ID: **050305-EAP-013**
Site: GM Wilmington-17338

Lab Sample No: **630166**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa7003.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 10.1

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Unknown	3.25	440	
2.				
3.				
4.				
5.				
6.				
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TOTAL ESTIMATED CONCENTRATION 440

Client ID: **050305-EAP-014**
Site: GM Wilmington-17338

Lab Sample No: **630167**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6995.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	380
2-Chlorophenol	ND	380
2-Methylphenol	ND	380
3+4-Methylphenol (total)	ND	380
2-Nitrophenol	ND	380
2,4-Dimethylphenol	ND	380
2,4-Dichlorophenol	ND	380
4-Chloro-3-methylphenol	ND	380
2,4,6-Trichlorophenol	ND	380
2,4,5-Trichlorophenol	ND	380
2,4-Dinitrophenol	ND	1500
4-Nitrophenol	ND	1500
4,6-Dinitro-2-methylphenol	ND	1500
Pentachlorophenol	ND	1500
bis(2-Chloroethyl)ether	ND	38
bis(2-chloroisopropyl)ether	ND	380
N-Nitroso-di-n-propylamine	ND	38
Hexachloroethane	ND	38
Nitrobenzene	ND	38
Isophorone	ND	380
bis(2-Chloroethoxy)methane	ND	380
Naphthalene	ND	380
4-Chloroaniline	ND	380
Hexachlorobutadiene	ND	75
2-Methylnaphthalene	ND	380
Hexachlorocyclopentadiene	ND	380
2-Chloronaphthalene	ND	380
2-Nitroaniline	ND	750
Dimethylphthalate	ND	380
Acenaphthylene	ND	380
2,6-Dinitrotoluene	ND	75
3-Nitroaniline	ND	750
Acenaphthene	ND	380
Dibenzofuran	ND	380

Client ID: **050305-EAP-014**
Site: GM Wilmington-17338

Lab Sample No: **630167**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6995.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	75
Diethylphthalate	ND	380
4-Chlorophenyl-phenylether	ND	380
Fluorene	ND	380
4-Nitroaniline	ND	750
N-Nitrosodiphenylamine	ND	380
4-Bromophenyl-phenylether	ND	380
Hexachlorobenzene	ND	38
Phenanthrene	9.6J	380
Anthracene	ND	380
Carbazole	ND	380
Di-n-butylphthalate	ND	380
Fluoranthene	32 J	380
Pyrene	33 J	380
Butylbenzylphthalate	ND	380
3,3'-Dichlorobenzidine	ND	750
Benzo(a)anthracene	13 J	38
Chrysene	18 J	380
bis(2-Ethylhexyl)phthalate	280 J	380
Di-n-octylphthalate	ND	380
Benzo(b)fluoranthene	12 J	38
Benzo(k)fluoranthene	13 J	38
Benzo(a)pyrene	15 J	38
Indeno(1,2,3-cd)pyrene	ND	38
Dibenz(a,h)anthracene	ND	38
Benzo(g,h,i)perylene	ND	380
Benzaldehyde	ND	380
Caprolactam	ND	380
Atrazine	ND	380
Acetophenone	ND	380
Diphenyl	ND	380

Client ID: **050305-EAP-014**
Site: GM Wilmington-17338

Lab Sample No: **630167**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6995.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11.2

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **050305-EAP-016**
Site: GM Wilmington-17338

Lab Sample No: **630169**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/18/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17315.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	370
2-Chlorophenol	ND	370
2-Methylphenol	ND	370
3+4-Methylphenol (total)	ND	370
2-Nitrophenol	ND	370
2,4-Dimethylphenol	ND	370
2,4-Dichlorophenol	ND	370
4-Chloro-3-methylphenol	ND	370
2,4,6-Trichlorophenol	ND	370
2,4,5-Trichlorophenol	ND	370
2,4-Dinitrophenol	ND	1500
4-Nitrophenol	ND	1500
4,6-Dinitro-2-methylphenol	ND	1500
Pentachlorophenol	ND	1500
bis(2-Chloroethyl)ether	ND	37
bis(2-chloroisopropyl)ether	ND	370
N-Nitroso-di-n-propylamine	ND	37
Hexachloroethane	ND	37
Nitrobenzene	ND	37
Isophorone	ND	370
bis(2-Chloroethoxy)methane	ND	370
Naphthalene	500	370
4-Chloroaniline	ND	370
Hexachlorobutadiene	ND	75
2-Methylnaphthalene	130 J	370
Hexachlorocyclopentadiene	ND	370
2-Chloronaphthalene	ND	370
2-Nitroaniline	ND	750
Dimethylphthalate	ND	370
Acenaphthylene	12 J	370
2,6-Dinitrotoluene	ND	75
3-Nitroaniline	ND	750
Acenaphthene	940	370
Dibenzofuran	390	370

Client ID: **050305-EAP-016**
Site: GM Wilmington-17338

Lab Sample No: **630169**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/18/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17315.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	75
Diethylphthalate	ND	370
4-Chlorophenyl-phenylether	ND	370
Fluorene	780	370
4-Nitroaniline	ND	750
N-Nitrosodiphenylamine	20 J	370
4-Bromophenyl-phenylether	ND	370
Hexachlorobenzene	ND	37
Phenanthrene	5700	370
Anthracene	1900	370
Carbazole	940	370
Di-n-butylphthalate	ND	370
Fluoranthene	8400	370
Pyrene	7600	370
Butylbenzylphthalate	ND	370
3,3'-Dichlorobenzidine	ND	750
Benzo(a)anthracene	3600	37
Chrysene	3300	370
bis(2-Ethylhexyl)phthalate	110 J	370
Di-n-octylphthalate	ND	370
Benzo(b)fluoranthene	2900	37
Benzo(k)fluoranthene	2900	37
Benzo(a)pyrene	3200	37
Indeno(1,2,3-cd)pyrene	1000	37
Dibenz(a,h)anthracene	410	37
Benzo(g,h,i)perylene	980	370
Benzaldehyde	ND	370
Caprolactam	ND	370
Atrazine	ND	370
Acetophenone	ND	370
Diphenyl	51 J	370

Client ID: **050305-EAP-016**
Site: GM Wilmington-17338

Lab Sample No: **630169**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/18/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17315.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 10.9

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Dibenzothiophene	14.06	380	
2.	C15H10/C15H12 PAHs	14.98	360	
3.	C15H10 PAH	15.14	1000	
4.	Unknown	16.57	350	
5.	C17H12 PAH	16.65	340	
6.	C17H12 PAH	16.83	920	
7.	C17H12 PAH	16.93	680	
8.	Benzo(b)naphthothiophene isomer	17.91	430	
9.	C18H10 PAH	18.03	460	
10.	Unknown	18.69	780	
11.	Unknown	18.81	440	
12.	Unknown	18.93	520	
13.	C19H14 PAH	19.32	450	
14.	Unknown	19.68	340	
15.	Unknown	19.74	300	
16.	C20H12 PAH	21.45	860	
17.	C20H12 PAH	22.01	2400	
18.	C20H12 PAH	22.43	1100	
19.	C22H14 PAH/Unknown	26.44	320	
20.	C22H12 PAH/Unknown	27.62	370	
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION: 12800

Client ID: **050305-EAP-017**
Site: GM Wilmington-17338

Lab Sample No: **630170**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa7000.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	370
2-Chlorophenol	ND	370
2-Methylphenol	ND	370
3+4-Methylphenol (total)	ND	370
2-Nitrophenol	ND	370
2,4-Dimethylphenol	ND	370
2,4-Dichlorophenol	ND	370
4-Chloro-3-methylphenol	ND	370
2,4,6-Trichlorophenol	ND	370
2,4,5-Trichlorophenol	ND	370
2,4-Dinitrophenol	ND	1500
4-Nitrophenol	ND	1500
4,6-Dinitro-2-methylphenol	ND	1500
Pentachlorophenol	ND	1500
bis(2-Chloroethyl)ether	ND	37
bis(2-chloroisopropyl)ether	ND	370
N-Nitroso-di-n-propylamine	ND	37
Hexachloroethane	ND	37
Nitrobenzene	ND	37
Isophorone	ND	370
bis(2-Chloroethoxy)methane	ND	370
Naphthalene	18 J	370
4-Chloroaniline	ND	370
Hexachlorobutadiene	ND	75
2-Methylnaphthalene	ND	370
Hexachlorocyclopentadiene	ND	370
2-Chloronaphthalene	ND	370
2-Nitroaniline	ND	750
Dimethylphthalate	ND	370
Acenaphthylene	ND	370
2,6-Dinitrotoluene	ND	75
3-Nitroaniline	ND	750
Acenaphthene	52 J	370
Dibenzofuran	37 J	370

Client ID: **050305-EAP-017**
Site: GM Wilmington-17338

Lab Sample No: **630170**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa7000.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	75
Diethylphthalate	ND	370
4-Chlorophenyl-phenylether	ND	370
Fluorene	52 J	370
4-Nitroaniline	ND	750
N-Nitrosodiphenylamine	ND	370
4-Bromophenyl-phenylether	ND	370
Hexachlorobenzene	ND	37
Phenanthrene	180 J	370
Anthracene	58 J	370
Carbazole	26 J	370
Di-n-butylphthalate	ND	370
Fluoranthene	260 J	370
Pyrene	240 J	370
Butylbenzylphthalate	ND	370
3,3'-Dichlorobenzidine	ND	750
Benzo(a)anthracene	110	37
Chrysene	110 J	370
bis(2-Ethylhexyl)phthalate	140 J	370
Di-n-octylphthalate	ND	370
Benzo(b)fluoranthene	73	37
Benzo(k)fluoranthene	69	37
Benzo(a)pyrene	91	37
Indeno(1,2,3-cd)pyrene	46	37
Dibenz(a,h)anthracene	ND	37
Benzo(g,h,i)perylene	50 J	370
Benzaldehyde	ND	370
Caprolactam	14 J	370
Atrazine	ND	370
Acetophenone	ND	370
Diphenyl	7.9J	370

Client ID: **050305-EAP-017**
Site: GM Wilmington-17338

Lab Sample No: **630170**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa7000.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Unknown	15.36	330	
2.	Unknown	24.52	430	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
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26.				
27.				
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29.				
30.				

TOTAL ESTIMATED CONCENTRATION: 760

Client ID: **050305-EAP-018**
Site: GM Wilmington-17338

Lab Sample No: **630171**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/13/05
Date Analyzed: 05/24/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17402.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	8.3J	370
2-Chlorophenol	ND	370
2-Methylphenol	ND	370
3+4-Methylphenol (total)	ND	370
2-Nitrophenol	ND	370
2,4-Dimethylphenol	ND	370
2,4-Dichlorophenol	ND	370
4-Chloro-3-methylphenol	ND	370
2,4,6-Trichlorophenol	ND	370
2,4,5-Trichlorophenol	ND	370
2,4-Dinitrophenol	ND	1500
4-Nitrophenol	ND	1500
4,6-Dinitro-2-methylphenol	ND	1500
Pentachlorophenol	ND	1500
bis(2-Chloroethyl)ether	ND	37
bis(2-chloroisopropyl)ether	ND	370
N-Nitroso-di-n-propylamine	ND	37
Hexachloroethane	ND	37
Nitrobenzene	ND	37
Isophorone	ND	370
bis(2-Chloroethoxy)methane	ND	370
Naphthalene	18 J	370
4-Chloroaniline	ND	370
Hexachlorobutadiene	ND	75
2-Methylnaphthalene	7.6J	370
Hexachlorocyclopentadiene	ND	370
2-Chloronaphthalene	ND	370
2-Nitroaniline	ND	750
Dimethylphthalate	ND	370
Acenaphthylene	ND	370
2,6-Dinitrotoluene	ND	75
3-Nitroaniline	ND	750
Acenaphthene	58 J	370
Dibenzofuran	41 J	370

Client ID: **050305-EAP-018**
Site: GM Wilmington-17338

Lab Sample No: **630171**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/13/05
Date Analyzed: 05/24/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17402.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	75
Diethylphthalate	ND	370
4-Chlorophenyl-phenylether	ND	370
Fluorene	54 J	370
4-Nitroaniline	ND	750
N-Nitrosodiphenylamine	ND	370
4-Bromophenyl-phenylether	ND	370
Hexachlorobenzene	ND	37
Phenanthrene	290 J	370
Anthracene	100 J	370
Carbazole	42 J	370
Di-n-butylphthalate	ND	370
Fluoranthene	410	370
Pyrene	410	370
Butylbenzylphthalate	ND	370
3,3'-Dichlorobenzidine	ND	750
Benzo(a)anthracene	210	37
Chrysene	230 J	370
bis(2-Ethylhexyl)phthalate	ND	370
Di-n-octylphthalate	ND	370
Benzo(b)fluoranthene	130	37
Benzo(k)fluoranthene	160	37
Benzo(a)pyrene	170	37
Indeno(1,2,3-cd)pyrene	94	37
Dibenz(a,h)anthracene	35 J	37
Benzo(g,h,i)perylene	98 J	370
Benzaldehyde	ND	370
Caprolactam	ND	370
Atrazine	ND	370
Acetophenone	ND	370
Diphenyl	ND	370

Client ID: **050305-EAP-018**
Site: GM Wilmington-17338

Lab Sample No: **630171**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/13/05
Date Analyzed: 05/24/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: ml7402.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 11.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Degradation product of 2,4,6-Tribromop	14.54	400	B
2.	Unknown	16.10	370	
3.	Unknown	26.68	400	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
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25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION: 770

Client ID: **050305-EAP-019**
Site: GM Wilmington-17338

Lab Sample No: **630172**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa7001.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 10

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	370
2-Chlorophenol	ND	370
2-Methylphenol	ND	370
3+4-Methylphenol (total)	ND	370
2-Nitrophenol	ND	370
2,4-Dimethylphenol	ND	370
2,4-Dichlorophenol	ND	370
4-Chloro-3-methylphenol	ND	370
2,4,6-Trichlorophenol	ND	370
2,4,5-Trichlorophenol	ND	370
2,4-Dinitrophenol	ND	1500
4-Nitrophenol	ND	1500
4,6-Dinitro-2-methylphenol	ND	1500
Pentachlorophenol	ND	1500
bis(2-Chloroethyl)ether	ND	37
bis(2-chloroisopropyl)ether	ND	370
N-Nitroso-di-n-propylamine	ND	37
Hexachloroethane	ND	37
Nitrobenzene	ND	37
Isophorone	ND	370
bis(2-Chloroethoxy)methane	ND	370
Naphthalene	16 J	370
4-Chloroaniline	ND	370
Hexachlorobutadiene	ND	74
2-Methylnaphthalene	ND	370
Hexachlorocyclopentadiene	ND	370
2-Chloronaphthalene	ND	370
2-Nitroaniline	ND	740
Dimethylphthalate	ND	370
Acenaphthylene	7.6J	370
2,6-Dinitrotoluene	ND	74
3-Nitroaniline	ND	740
Acenaphthene	97 J	370
Dibenzofuran	52 J	370

Client ID: **050305-EAP-019**
Site: GM Wilmington-17338

Lab Sample No: **630172**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa7001.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 10

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	74
Diethylphthalate	ND	370
4-Chlorophenyl-phenylether	ND	370
Fluorene	100 J	370
4-Nitroaniline	ND	740
N-Nitrosodiphenylamine	ND	370
4-Bromophenyl-phenylether	ND	370
Hexachlorobenzene	ND	37
Phenanthrene	460	370
Anthracene	180 J	370
Carbazole	56 J	370
Di-n-butylphthalate	ND	370
Fluoranthene	950	370
Pyrene	850	370
Butylbenzylphthalate	ND	370
3,3'-Dichlorobenzidine	ND	740
Benzo(a)anthracene	380	37
Chrysene	420	370
bis(2-Ethylhexyl)phthalate	110 J	370
Di-n-octylphthalate	ND	370
Benzo(b)fluoranthene	270	37
Benzo(k)fluoranthene	270	37
Benzo(a)pyrene	340	37
Indeno(1,2,3-cd)pyrene	160	37
Dibenz(a,h)anthracene	52	37
Benzo(g,h,i)perylene	180 J	370
Benzaldehyde	ND	370
Caprolactam	11 J	370
Atrazine	ND	370
Acetophenone	ND	370
Diphenyl	8.3J	370

Client ID: **050305-EAP-019**
Site: GM Wilmington-17338

Lab Sample No: **630172**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa7001.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 10.4

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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15.				
16.				
17.				
18.				
19.				
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21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **050305-EAP-020**
Site: GM Wilmington-17338

Lab Sample No: **630173**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6996.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 12

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	380
2-Chlorophenol	ND	380
2-Methylphenol	ND	380
3+4-Methylphenol (total)	8.2J	380
2-Nitrophenol	ND	380
2,4-Dimethylphenol	ND	380
2,4-Dichlorophenol	ND	380
4-Chloro-3-methylphenol	ND	380
2,4,6-Trichlorophenol	ND	380
2,4,5-Trichlorophenol	ND	380
2,4-Dinitrophenol	ND	1500
4-Nitrophenol	ND	1500
4,6-Dinitro-2-methylphenol	ND	1500
Pentachlorophenol	ND	1500
bis(2-Chloroethyl)ether	ND	38
bis(2-chloroisopropyl)ether	ND	380
N-Nitroso-di-n-propylamine	ND	38
Hexachloroethane	ND	38
Nitrobenzene	ND	38
Isophorone	ND	380
bis(2-Chloroethoxy)methane	ND	380
Naphthalene	ND	380
4-Chloroaniline	ND	380
Hexachlorobutadiene	ND	76
2-Methylnaphthalene	ND	380
Hexachlorocyclopentadiene	ND	380
2-Chloronaphthalene	ND	380
2-Nitroaniline	ND	760
Dimethylphthalate	ND	380
Acenaphthylene	ND	380
2,6-Dinitrotoluene	ND	76
3-Nitroaniline	ND	760
Acenaphthene	40 J	380
Dibenzofuran	16 J	380

Client ID: **050305-EAP-020**
Site: GM Wilmington-17338

Lab Sample No: **630173**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6996.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 12

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	76
Diethylphthalate	ND	380
4-Chlorophenyl-phenylether	ND	380
Fluorene	30 J	380
4-Nitroaniline	ND	760
N-Nitrosodiphenylamine	ND	380
4-Bromophenyl-phenylether	ND	380
Hexachlorobenzene	ND	38
Phenanthrene	34 J	380
Anthracene	18 J	380
Carbazole	ND	380
Di-n-butylphthalate	ND	380
Fluoranthene	62 J	380
Pyrene	63 J	380
Butylbenzylphthalate	ND	380
3,3'-Dichlorobenzidine	ND	760
Benzo(a)anthracene	22 J	38
Chrysene	25 J	380
bis(2-Ethylhexyl)phthalate	93 J	380
Di-n-octylphthalate	ND	380
Benzo(b)fluoranthene	14 J	38
Benzo(k)fluoranthene	14 J	38
Benzo(a)pyrene	19 J	38
Indeno(1,2,3-cd)pyrene	ND	38
Dibenz(a,h)anthracene	ND	38
Benzo(g,h,i)perylene	8.8J	380
Benzaldehyde	ND	380
Caprolactam	ND	380
Atrazine	ND	380
Acetophenone	ND	380
Diphenyl	ND	380

Client ID: **050305-EAP-020**
Site: GM Wilmington-17338

Lab Sample No: **630173**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6996.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 12.2

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Unknown	24.51	1400	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	1400

Client ID: **050305-EAP-022**
Site: GM Wilmington-17338

Lab Sample No: **630175**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa7002.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 18

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	400
2-Chlorophenol	ND	400
2-Methylphenol	ND	400
3+4-Methylphenol (total)	ND	400
2-Nitrophenol	ND	400
2,4-Dimethylphenol	ND	400
2,4-Dichlorophenol	ND	400
4-Chloro-3-methylphenol	ND	400
2,4,6-Trichlorophenol	ND	400
2,4,5-Trichlorophenol	ND	400
2,4-Dinitrophenol	ND	1600
4-Nitrophenol	ND	1600
4,6-Dinitro-2-methylphenol	ND	1600
Pentachlorophenol	ND	1600
bis(2-Chloroethyl)ether	ND	40
bis(2-chloroisopropyl)ether	ND	400
N-Nitroso-di-n-propylamine	ND	40
Hexachloroethane	ND	40
Nitrobenzene	ND	40
Isophorone	ND	400
bis(2-Chloroethoxy)methane	ND	400
Naphthalene	41 J	400
4-Chloroaniline	ND	400
Hexachlorobutadiene	ND	81
2-Methylnaphthalene	11 J	400
Hexachlorocyclopentadiene	ND	400
2-Chloronaphthalene	ND	400
2-Nitroaniline	ND	810
Dimethylphthalate	ND	400
Acenaphthylene	ND	400
2,6-Dinitrotoluene	ND	81
3-Nitroaniline	ND	810
Acenaphthene	160 J	400
Dibenzofuran	81 J	400

Client ID: **050305-EAP-022**
Site: GM Wilmington-17338

Lab Sample No: **630175**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa7002.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 18

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	81
Diethylphthalate	ND	400
4-Chlorophenyl-phenylether	ND	400
Fluorene	140 J	400
4-Nitroaniline	ND	810
N-Nitrosodiphenylamine	ND	400
4-Bromophenyl-phenylether	ND	400
Hexachlorobenzene	ND	40
Phenanthrene	780	400
Anthracene	260 J	400
Carbazole	100 J	400
Di-n-butylphthalate	ND	400
Fluoranthene	1200	400
Pyrene	1100	400
Butylbenzylphthalate	ND	400
3,3'-Dichlorobenzidine	ND	810
Benzo(a)anthracene	500	40
Chrysene	550	400
bis(2-Ethylhexyl)phthalate	340 J	400
Di-n-octylphthalate	ND	400
Benzo(b)fluoranthene	390	40
Benzo(k)fluoranthene	360	40
Benzo(a)pyrene	450	40
Indeno(1,2,3-cd)pyrene	230	40
Dibenz(a,h)anthracene	82	40
Benzo(g,h,i)perylene	260 J	400
Benzaldehyde	ND	400
Caprolactam	15 J	400
Atrazine	ND	400
Acetophenone	ND	400
Diphenyl	10 J	400

Client ID: **050305-EAP-022**
Site: GM Wilmington-17338

Lab Sample No: **630175**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa7002.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 17.7

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	C20H12 PAH	20.49	330	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
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12.				
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26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 330

Client ID: **050305-EAP-023**
Site: GM Wilmington-17338

Lab Sample No: **630176**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6997.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 19

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	410
2-Chlorophenol	ND	410
2-Methylphenol	ND	410
3+4-Methylphenol (total)	ND	410
2-Nitrophenol	ND	410
2,4-Dimethylphenol	ND	410
2,4-Dichlorophenol	ND	410
4-Chloro-3-methylphenol	ND	410
2,4,6-Trichlorophenol	ND	410
2,4,5-Trichlorophenol	ND	410
2,4-Dinitrophenol	ND	1600
4-Nitrophenol	ND	1600
4,6-Dinitro-2-methylphenol	ND	1600
Pentachlorophenol	ND	1600
bis(2-Chloroethyl)ether	ND	41
bis(2-chloroisopropyl)ether	ND	410
N-Nitroso-di-n-propylamine	ND	41
Hexachloroethane	ND	41
Nitrobenzene	ND	41
Isophorone	ND	410
bis(2-Chloroethoxy)methane	ND	410
Naphthalene	ND	410
4-Chloroaniline	ND	410
Hexachlorobutadiene	ND	83
2-Methylnaphthalene	ND	410
Hexachlorocyclopentadiene	ND	410
2-Chloronaphthalene	ND	410
2-Nitroaniline	ND	830
Dimethylphthalate	ND	410
Acenaphthylene	ND	410
2,6-Dinitrotoluene	ND	83
3-Nitroaniline	ND	830
Acenaphthene	ND	410
Dibenzofuran	ND	410

Client ID: **050305-EAP-023**
Site: GM Wilmington-17338

Lab Sample No: **630176**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6997.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 19

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	83
Diethylphthalate	ND	410
4-Chlorophenyl-phenylether	ND	410
Fluorene	ND	410
4-Nitroaniline	ND	830
N-Nitrosodiphenylamine	ND	410
4-Bromophenyl-phenylether	ND	410
Hexachlorobenzene	ND	41
Phenanthrene	9.2J	410
Anthracene	ND	410
Carbazole	ND	410
Di-n-butylphthalate	ND	410
Fluoranthene	12 J	410
Pyrene	11 J	410
Butylbenzylphthalate	ND	410
3,3'-Dichlorobenzidine	ND	830
Benzo(a)anthracene	ND	41
Chrysene	ND	410
bis(2-Ethylhexyl)phthalate	220 J	410
Di-n-octylphthalate	ND	410
Benzo(b)fluoranthene	ND	41
Benzo(k)fluoranthene	ND	41
Benzo(a)pyrene	ND	41
Indeno(1,2,3-cd)pyrene	ND	41
Dibenz(a,h)anthracene	ND	41
Benzo(g,h,i)perylene	ND	410
Benzaldehyde	ND	410
Caprolactam	ND	410
Atrazine	ND	410
Acetophenone	ND	410
Diphenyl	ND	410

Client ID: **050305-EAP-023**
Site: GM Wilmington-17338

Lab Sample No: **630176**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6997.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 19.3

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **050305-EAP-027**
Site: GM Wilmington-17338

Lab Sample No: **630180**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/23/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17364.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 2.0
% Moisture: 12

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	760
2-Chlorophenol	ND	760
2-Methylphenol	ND	760
3+4-Methylphenol (total)	ND	760
2-Nitrophenol	ND	760
2,4-Dimethylphenol	ND	760
2,4-Dichlorophenol	ND	760
4-Chloro-3-methylphenol	ND	760
2,4,6-Trichlorophenol	ND	760
2,4,5-Trichlorophenol	ND	760
2,4-Dinitrophenol	ND	3000
4-Nitrophenol	ND	3000
4,6-Dinitro-2-methylphenol	ND	3000
Pentachlorophenol	ND	3000
bis(2-Chloroethyl)ether	ND	76
bis(2-chloroisopropyl)ether	ND	760
N-Nitroso-di-n-propylamine	ND	76
Hexachloroethane	ND	76
Nitrobenzene	ND	76
Isophorone	ND	760
bis(2-Chloroethoxy)methane	ND	760
Naphthalene	48 J	760
4-Chloroaniline	ND	760
Hexachlorobutadiene	ND	150
2-Methylnaphthalene	32 J	760
Hexachlorocyclopentadiene	ND	760
2-Chloronaphthalene	ND	760
2-Nitroaniline	ND	1500
Dimethylphthalate	ND	760
Acenaphthylene	630 J	760
2,6-Dinitrotoluene	ND	150
3-Nitroaniline	ND	1500
Acenaphthene	46 J	760
Dibenzofuran	45 J	760

Client ID: **050305-EAP-027**
Site: GM Wilmington-17338

Lab Sample No: **630180**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/23/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17364.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 2.0
% Moisture: 12

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	150
Diethylphthalate	ND	760
4-Chlorophenyl-phenylether	ND	760
Fluorene	85 J	760
4-Nitroaniline	ND	1500
N-Nitrosodiphenylamine	ND	760
4-Bromophenyl-phenylether	ND	760
Hexachlorobenzene	ND	76
Phenanthrene	360 J	760
Anthracene	290 J	760
Carbazole	78 J	760
Di-n-butylphthalate	ND	760
Fluoranthene	1400	760
Pyrene	1400	760
Butylbenzylphthalate	ND	760
3,3'-Dichlorobenzidine	ND	1500
Benzo(a)anthracene	930	76
Chrysene	1200	760
bis(2-Ethylhexyl)phthalate	180 J	760
Di-n-octylphthalate	ND	760
Benzo(b)fluoranthene	1000	76
Benzo(k)fluoranthene	1300	76
Benzo(a)pyrene	1200	76
Indeno(1,2,3-cd)pyrene	590	76
Dibenz(a,h)anthracene	200	76
Benzo(g,h,i)perylene	570 J	760
Benzaldehyde	ND	760
Caprolactam	ND	760
Atrazine	ND	760
Acetophenone	ND	760
Diphenyl	22 J	760

Client ID: **050305-EAP-027**
Site: GM Wilmington-17338

Lab Sample No: **630180**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/23/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17364.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 2.0
% Moisture: 12.2

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Unknown Alkane	10.73	620	
2. Unknown	10.97	660	
3. Unknown	11.42	930	
4. Unknown	11.70	850	
5. C20H12 PAH	21.58	1500	
6. Unknown	23.31	700	
7. Unknown	23.71	1400	
8. Unknown	23.78	700	
9. Unknown	24.73	2700	
10. Unknown	26.06	950	
11. Unknown	27.54	700	
12.			
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TOTAL ESTIMATED CONCENTRATION		11710	

Client ID: **050305-EAP-028**
Site: GM Wilmington-17338

Lab Sample No: **630181**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6998.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 19

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	410
2-Chlorophenol	ND	410
2-Methylphenol	ND	410
3+4-Methylphenol (total)	ND	410
2-Nitrophenol	ND	410
2,4-Dimethylphenol	ND	410
2,4-Dichlorophenol	ND	410
4-Chloro-3-methylphenol	ND	410
2,4,6-Trichlorophenol	ND	410
2,4,5-Trichlorophenol	ND	410
2,4-Dinitrophenol	ND	1600
4-Nitrophenol	ND	1600
4,6-Dinitro-2-methylphenol	ND	1600
Pentachlorophenol	ND	1600
bis(2-Chloroethyl)ether	ND	41
bis(2-chloroisopropyl)ether	ND	410
N-Nitroso-di-n-propylamine	ND	41
Hexachloroethane	ND	41
Nitrobenzene	ND	41
Isophorone	ND	410
bis(2-Chloroethoxy)methane	ND	410
Naphthalene	ND	410
4-Chloroaniline	ND	410
Hexachlorobutadiene	ND	83
2-Methylnaphthalene	ND	410
Hexachlorocyclopentadiene	ND	410
2-Chloronaphthalene	ND	410
2-Nitroaniline	ND	830
Dimethylphthalate	ND	410
Acenaphthylene	ND	410
2,6-Dinitrotoluene	ND	83
3-Nitroaniline	ND	830
Acenaphthene	ND	410
Dibenzofuran	ND	410

Client ID: **050305-EAP-028**
Site: GM Wilmington-17338

Lab Sample No: **630181**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6998.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 19

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	83
Diethylphthalate	ND	410
4-Chlorophenyl-phenylether	ND	410
Fluorene	ND	410
4-Nitroaniline	ND	830
N-Nitrosodiphenylamine	ND	410
4-Bromophenyl-phenylether	ND	410
Hexachlorobenzene	ND	41
Phenanthrene	ND	410
Anthracene	ND	410
Carbazole	ND	410
Di-n-butylphthalate	ND	410
Fluoranthene	ND	410
Pyrene	ND	410
Butylbenzylphthalate	ND	410
3,3'-Dichlorobenzidine	ND	830
Benzo(a)anthracene	ND	41
Chrysene	ND	410
bis(2-Ethylhexyl)phthalate	200 J	410
Di-n-octylphthalate	ND	410
Benzo(b)fluoranthene	ND	41
Benzo(k)fluoranthene	ND	41
Benzo(a)pyrene	ND	41
Indeno(1,2,3-cd)pyrene	ND	41
Dibenz(a,h)anthracene	ND	41
Benzo(g,h,i)perylene	ND	410
Benzaldehyde	ND	410
Caprolactam	ND	410
Atrazine	ND	410
Acetophenone	ND	410
Diphenyl	ND	410

Client ID: **050305-EAP-028**
Site: GM Wilmington-17338

Lab Sample No: **630181**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6998.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 19.3

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **050305-EAP-030**
Site: GM Wilmington-17338

Lab Sample No: **630183**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6999.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 8

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	360
2-Chlorophenol	ND	360
2-Methylphenol	ND	360
3+4-Methylphenol (total)	ND	360
2-Nitrophenol	ND	360
2,4-Dimethylphenol	ND	360
2,4-Dichlorophenol	ND	360
4-Chloro-3-methylphenol	ND	360
2,4,6-Trichlorophenol	ND	360
2,4,5-Trichlorophenol	ND	360
2,4-Dinitrophenol	ND	1400
4-Nitrophenol	ND	1400
4,6-Dinitro-2-methylphenol	ND	1400
Pentachlorophenol	ND	1400
bis(2-Chloroethyl)ether	ND	36
bis(2-chloroisopropyl)ether	ND	360
N-Nitroso-di-n-propylamine	ND	36
Hexachloroethane	ND	36
Nitrobenzene	ND	36
Isophorone	ND	360
bis(2-Chloroethoxy)methane	ND	360
Naphthalene	ND	360
4-Chloroaniline	ND	360
Hexachlorobutadiene	ND	72
2-Methylnaphthalene	ND	360
Hexachlorocyclopentadiene	ND	360
2-Chloronaphthalene	ND	360
2-Nitroaniline	ND	720
Dimethylphthalate	ND	360
Acenaphthylene	ND	360
2,6-Dinitrotoluene	ND	72
3-Nitroaniline	ND	720
Acenaphthene	ND	360
Dibenzofuran	ND	360

Client ID: **050305-EAP-030**
Site: GM Wilmington-17338

Lab Sample No: **630183**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6999.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 8

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	72
Diethylphthalate	ND	360
4-Chlorophenyl-phenylether	ND	360
Fluorene	ND	360
4-Nitroaniline	ND	720
N-Nitrosodiphenylamine	ND	360
4-Bromophenyl-phenylether	ND	360
Hexachlorobenzene	ND	36
Phenanthrene	31 J	360
Anthracene	8.1J	360
Carbazole	ND	360
Di-n-butylphthalate	ND	360
Fluoranthene	55 J	360
Pyrene	55 J	360
Butylbenzylphthalate	420	360
3,3'-Dichlorobenzidine	ND	720
Benzo(a)anthracene	28 J	36
Chrysene	34 J	360
bis(2-Ethylhexyl)phthalate	500	360
Di-n-octylphthalate	ND	360
Benzo(b)fluoranthene	20 J	36
Benzo(k)fluoranthene	24 J	36
Benzo(a)pyrene	25 J	36
Indeno(1,2,3-cd)pyrene	16 J	36
Dibenz(a,h)anthracene	ND	36
Benzo(g,h,i)perylene	18 J	360
Benzaldehyde	ND	360
Caprolactam	55 J	360
Atrazine	ND	360
Acetophenone	ND	360
Diphenyl	7.7J	360

Client ID: **050305-EAP-030**
Site: GM Wilmington-17338

Lab Sample No: **630183**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/16/05
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa6999.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 7.5

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Unknown	3.25	440	
2.	Unknown Alkane	11.92	320	
3.	C17H36 Alkane	12.59	350	
4.				
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TOTAL ESTIMATED CONCENTRATION 1110

Client ID: **050305-EAP-031**
Site: GM Wilmington-17338

Lab Sample No: **630184**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/18/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17314.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 17

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	400
2-Chlorophenol	ND	400
2-Methylphenol	ND	400
3+4-Methylphenol (total)	18 J	400
2-Nitrophenol	ND	400
2,4-Dimethylphenol	ND	400
2,4-Dichlorophenol	ND	400
4-Chloro-3-methylphenol	ND	400
2,4,6-Trichlorophenol	ND	400
2,4,5-Trichlorophenol	ND	400
2,4-Dinitrophenol	ND	1600
4-Nitrophenol	ND	1600
4,6-Dinitro-2-methylphenol	ND	1600
Pentachlorophenol	ND	1600
bis(2-Chloroethyl)ether	ND	40
bis(2-chloroisopropyl)ether	ND	400
N-Nitroso-di-n-propylamine	ND	40
Hexachloroethane	ND	40
Nitrobenzene	ND	40
Isophorone	ND	400
bis(2-Chloroethoxy)methane	ND	400
Naphthalene	8.5J	400
4-Chloroaniline	ND	400
Hexachlorobutadiene	ND	81
2-Methylnaphthalene	ND	400
Hexachlorocyclopentadiene	ND	400
2-Chloronaphthalene	ND	400
2-Nitroaniline	ND	810
Dimethylphthalate	ND	400
Acenaphthylene	ND	400
2,6-Dinitrotoluene	ND	81
3-Nitroaniline	ND	810
Acenaphthene	ND	400
Dibenzofuran	ND	400

Client ID: **050305-EAP-031**
Site: GM Wilmington-17338

Lab Sample No: **630184**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/18/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17314.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 17

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	81
Diethylphthalate	ND	400
4-Chlorophenyl-phenylether	ND	400
Fluorene	ND	400
4-Nitroaniline	ND	810
N-Nitrosodiphenylamine	ND	400
4-Bromophenyl-phenylether	ND	400
Hexachlorobenzene	ND	40
Phenanthrene	12 J	400
Anthracene	ND	400
Carbazole	ND	400
Di-n-butylphthalate	ND	400
Fluoranthene	15 J	400
Pyrene	13 J	400
Butylbenzylphthalate	ND	400
3,3'-Dichlorobenzidine	ND	810
Benzo(a)anthracene	ND	40
Chrysene	9.5J	400
bis(2-Ethylhexyl)phthalate	91 J	400
Di-n-octylphthalate	ND	400
Benzo(b)fluoranthene	ND	40
Benzo(k)fluoranthene	ND	40
Benzo(a)pyrene	ND	40
Indeno(1,2,3-cd)pyrene	ND	40
Dibenz(a,h)anthracene	ND	40
Benzo(g,h,i)perylene	ND	400
Benzaldehyde	30 J	400
Caprolactam	ND	400
Atrazine	ND	400
Acetophenone	ND	400
Diphenyl	ND	400

Client ID: **050305-EAP-031**
Site: GM Wilmington-17338

Lab Sample No: **630184**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/18/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17314.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 17.3

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Unknown	17.84	440	
2. Unknown	19.30	440	
3. Unknown	20.53	490	
4. Unknown Alkane/Unknown	21.05	850	
5. Unknown	21.16	570	
6. Unknown	22.73	800	
7. Unknown Alkane	23.34	1100	
8. Unknown	23.50	540	
9. Unknown	25.29	430	
10. Unknown Alkane	25.93	460	
11. Unknown	26.16	330	
12. Unknown	26.54	2600	
13. Unknown	27.56	690	
14. Unknown	28.56	530	
15. Unknown	28.92	430	
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TOTAL ESTIMATED CONCENTRATION	10700

Client ID: **050305-EAP-033**
Site: GM Wilmington-17338

Lab Sample No: **630186**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/23/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17363.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 2.0
% Moisture: 10

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	740
2-Chlorophenol	ND	740
2-Methylphenol	ND	740
3+4-Methylphenol (total)	ND	740
2-Nitrophenol	ND	740
2,4-Dimethylphenol	ND	740
2,4-Dichlorophenol	ND	740
4-Chloro-3-methylphenol	ND	740
2,4,6-Trichlorophenol	ND	740
2,4,5-Trichlorophenol	ND	740
2,4-Dinitrophenol	ND	3000
4-Nitrophenol	ND	3000
4,6-Dinitro-2-methylphenol	ND	3000
Pentachlorophenol	ND	3000
bis(2-Chloroethyl)ether	ND	74
bis(2-chloroisopropyl)ether	ND	740
N-Nitroso-di-n-propylamine	ND	74
Hexachloroethane	ND	74
Nitrobenzene	ND	74
Isophorone	ND	740
bis(2-Chloroethoxy)methane	ND	740
Naphthalene	87 J	740
4-Chloroaniline	ND	740
Hexachlorobutadiene	ND	150
2-Methylnaphthalene	64 J	740
Hexachlorocyclopentadiene	ND	740
2-Chloronaphthalene	ND	740
2-Nitroaniline	ND	1500
Dimethylphthalate	ND	740
Acenaphthylene	150 J	740
2,6-Dinitrotoluene	ND	150
3-Nitroaniline	ND	1500
Acenaphthene	ND	740
Dibenzofuran	ND	740

Client ID: **050305-EAP-033**
Site: GM Wilmington-17338

Lab Sample No: **630186**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/23/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17363.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 2.0
% Moisture: 10

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	150
Diethylphthalate	ND	740
4-Chlorophenyl-phenylether	ND	740
Fluorene	ND	740
4-Nitroaniline	ND	1500
N-Nitrosodiphenylamine	ND	740
4-Bromophenyl-phenylether	ND	740
Hexachlorobenzene	ND	74
Phenanthrene	110 J	740
Anthracene	77 J	740
Carbazole	17 J	740
Di-n-butylphthalate	ND	740
Fluoranthene	640 J	740
Pyrene	960	740
Butylbenzylphthalate	300 J	740
3,3'-Dichlorobenzidine	ND	1500
Benzo(a)anthracene	620	74
Chrysene	840	740
bis(2-Ethylhexyl)phthalate	310 J	740
Di-n-octylphthalate	ND	740
Benzo(b)fluoranthene	490	74
Benzo(k)fluoranthene	620	74
Benzo(a)pyrene	650	74
Indeno(1,2,3-cd)pyrene	280	74
Dibenz(a,h)anthracene	120	74
Benzo(g,h,i)perylene	310 J	740
Benzaldehyde	ND	740
Caprolactam	ND	740
Atrazine	ND	740
Acetophenone	ND	740
Diphenyl	ND	740

Client ID: **050305-EAP-033**
Site: GM Wilmington-17338

Lab Sample No: **630186**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/23/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17363.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 2.0
% Moisture: 9.8

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	C20H12 PAH	21.57	600	
2.	Unknown	23.69	610	
3.	Unknown	24.72	1100	
4.	Unknown	26.05	740	
5.				
6.				
7.				
8.				
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TOTAL ESTIMATED CONCENTRATION 3050

Client ID: **050305-EAP-034**
Site: GM Wilmington-17338

Lab Sample No: **630187**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/23/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17365.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 2.0
% Moisture: 17

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	800
2-Chlorophenol	ND	800
2-Methylphenol	ND	800
3+4-Methylphenol (total)	ND	800
2-Nitrophenol	ND	800
2,4-Dimethylphenol	ND	800
2,4-Dichlorophenol	ND	800
4-Chloro-3-methylphenol	ND	800
2,4,6-Trichlorophenol	ND	800
2,4,5-Trichlorophenol	ND	800
2,4-Dinitrophenol	ND	3200
4-Nitrophenol	ND	3200
4,6-Dinitro-2-methylphenol	ND	3200
Pentachlorophenol	ND	3200
bis(2-Chloroethyl)ether	ND	80
bis(2-chloroisopropyl)ether	ND	800
N-Nitroso-di-n-propylamine	ND	80
Hexachloroethane	ND	80
Nitrobenzene	ND	80
Isophorone	ND	800
bis(2-Chloroethoxy)methane	ND	800
Naphthalene	35 J	800
4-Chloroaniline	ND	800
Hexachlorobutadiene	ND	160
2-Methylnaphthalene	30 J	800
Hexachlorocyclopentadiene	ND	800
2-Chloronaphthalene	ND	800
2-Nitroaniline	ND	1600
Dimethylphthalate	ND	800
Acenaphthylene	66 J	800
2,6-Dinitrotoluene	ND	160
3-Nitroaniline	ND	1600
Acenaphthene	ND	800
Dibenzofuran	ND	800

Client ID: **050305-EAP-034**
Site: GM Wilmington-17338

Lab Sample No: **630187**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/23/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17365.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 2.0
% Moisture: 17

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	160
Diethylphthalate	ND	800
4-Chlorophenyl-phenylether	ND	800
Fluorene	ND	800
4-Nitroaniline	ND	1600
N-Nitrosodiphenylamine	ND	800
4-Bromophenyl-phenylether	ND	800
Hexachlorobenzene	ND	80
Phenanthrene	160 J	800
Anthracene	40 J	800
Carbazole	ND	800
Di-n-butylphthalate	ND	800
Fluoranthene	230 J	800
Pyrene	280 J	800
Butylbenzylphthalate	ND	800
3,3'-Dichlorobenzidine	ND	1600
Benzo(a)anthracene	120	80
Chrysene	200 J	800
bis(2-Ethylhexyl)phthalate	510 J	800
Di-n-octylphthalate	ND	800
Benzo(b)fluoranthene	160	80
Benzo(k)fluoranthene	180	80
Benzo(a)pyrene	140	80
Indeno(1,2,3-cd)pyrene	46 J	80
Dibenz(a,h)anthracene	ND	80
Benzo(g,h,i)perylene	61 J	800
Benzaldehyde	ND	800
Caprolactam	ND	800
Atrazine	ND	800
Acetophenone	ND	800
Diphenyl	ND	800

Client ID: **050305-EAP-034**
Site: GM Wilmington-17338

Lab Sample No: **630187**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/23/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17365.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 2.0
% Moisture: 16.8

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Unknown	17.64	1200	
2. Unknown	17.92	1100	
3. Unknown	19.04	1500	
4. Unknown Alkane/C20H12 PAH	20.74	1400	
5. Unknown	20.83	1700	
6. Unknown	21.78	1600	
7. Unknown	22.22	1000	
8. Unknown	23.31	1700	
9. Unknown	23.47	1100	
10. Unknown	23.72	3800	
11. Unknown	23.80	2000	
12. Unknown	24.30	1400	
13. Unknown	24.59	1200	
14. Unknown	24.74	5800	
15. Unknown	25.25	1300	
16. Unknown	26.02	1300	
17. Unknown	26.09	2000	
18. Unknown	26.24	1300	
19. Unknown	27.24	980	
20. Unknown	27.56	1300	
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION	34680

Client ID: **050305-EAP-035**
Site: GM Wilmington-17338

Lab Sample No: **630188**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/13/05
Date Analyzed: 05/24/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17400.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 16

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	390
2-Chlorophenol	ND	390
2-Methylphenol	ND	390
3+4-Methylphenol (total)	ND	390
2-Nitrophenol	ND	390
2,4-Dimethylphenol	ND	390
2,4-Dichlorophenol	ND	390
4-Chloro-3-methylphenol	ND	390
2,4,6-Trichlorophenol	ND	390
2,4,5-Trichlorophenol	ND	390
2,4-Dinitrophenol	ND	1600
4-Nitrophenol	ND	1600
4,6-Dinitro-2-methylphenol	ND	1600
Pentachlorophenol	ND	1600
bis(2-Chloroethyl)ether	ND	39
bis(2-chloroisopropyl)ether	ND	390
N-Nitroso-di-n-propylamine	ND	39
Hexachloroethane	ND	39
Nitrobenzene	ND	39
Isophorone	ND	390
bis(2-Chloroethoxy)methane	ND	390
Naphthalene	ND	390
4-Chloroaniline	ND	390
Hexachlorobutadiene	ND	79
2-Methylnaphthalene	ND	390
Hexachlorocyclopentadiene	ND	390
2-Chloronaphthalene	ND	390
2-Nitroaniline	ND	790
Dimethylphthalate	ND	390
Acenaphthylene	ND	390
2,6-Dinitrotoluene	ND	79
3-Nitroaniline	ND	790
Acenaphthene	ND	390
Dibenzofuran	ND	390

Client ID: **050305-EAP-035**
Site: GM Wilmington-17338

Lab Sample No: **630188**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/13/05
Date Analyzed: 05/24/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17400.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 16

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	79
Diethylphthalate	ND	390
4-Chlorophenyl-phenylether	ND	390
Fluorene	ND	390
4-Nitroaniline	ND	790
N-Nitrosodiphenylamine	ND	390
4-Bromophenyl-phenylether	ND	390
Hexachlorobenzene	ND	39
Phenanthrene	ND	390
Anthracene	ND	390
Carbazole	ND	390
Di-n-butylphthalate	ND	390
Fluoranthene	ND	390
Pyrene	7.9J	390
Butylbenzylphthalate	ND	390
3,3'-Dichlorobenzidine	ND	790
Benzo(a)anthracene	ND	39
Chrysene	ND	390
bis(2-Ethylhexyl)phthalate	ND	390
Di-n-octylphthalate	ND	390
Benzo(b)fluoranthene	ND	39
Benzo(k)fluoranthene	ND	39
Benzo(a)pyrene	ND	39
Indeno(1,2,3-cd)pyrene	ND	39
Dibenz(a,h)anthracene	ND	39
Benzo(g,h,i)perylene	ND	390
Benzaldehyde	ND	390
Caprolactam	ND	390
Atrazine	ND	390
Acetophenone	ND	390
Diphenyl	ND	390

Client ID: **050305-EAP-035**
Site: GM Wilmington-17338

Lab Sample No: **630188**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/13/05
Date Analyzed: 05/24/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17400.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 15.5

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Unknown	16.17	460	
2.	Unknown	17.24	390	
3.				
4.				
5.				
6.				
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30.				

TOTAL ESTIMATED CONCENTRATION 850

Client ID: **050305-EAP-036**
Site: GM Wilmington-17338

Lab Sample No: **630189**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/23/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17362.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 2.0
% Moisture: 16

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	800
2-Chlorophenol	ND	800
2-Methylphenol	ND	800
3+4-Methylphenol (total)	ND	800
2-Nitrophenol	ND	800
2,4-Dimethylphenol	ND	800
2,4-Dichlorophenol	ND	800
4-Chloro-3-methylphenol	ND	800
2,4,6-Trichlorophenol	ND	800
2,4,5-Trichlorophenol	ND	800
2,4-Dinitrophenol	ND	3200
4-Nitrophenol	ND	3200
4,6-Dinitro-2-methylphenol	ND	3200
Pentachlorophenol	ND	3200
bis(2-Chloroethyl)ether	ND	80
bis(2-chloroisopropyl)ether	ND	800
N-Nitroso-di-n-propylamine	ND	80
Hexachloroethane	ND	80
Nitrobenzene	ND	80
Isophorone	ND	800
bis(2-Chloroethoxy)methane	ND	800
Naphthalene	29 J	800
4-Chloroaniline	ND	800
Hexachlorobutadiene	ND	160
2-Methylnaphthalene	29 J	800
Hexachlorocyclopentadiene	ND	800
2-Chloronaphthalene	ND	800
2-Nitroaniline	ND	1600
Dimethylphthalate	ND	800
Acenaphthylene	89 J	800
2,6-Dinitrotoluene	ND	160
3-Nitroaniline	ND	1600
Acenaphthene	ND	800
Dibenzofuran	20 J	800

Client ID: **050305-EAP-036**
Site: GM Wilmington-17338

Lab Sample No: **630189**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/23/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17362.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 2.0
% Moisture: 16

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	160
Diethylphthalate	ND	800
4-Chlorophenyl-phenylether	ND	800
Fluorene	37 J	800
4-Nitroaniline	ND	1600
N-Nitrosodiphenylamine	ND	800
4-Bromophenyl-phenylether	ND	800
Hexachlorobenzene	ND	80
Phenanthrene	230 J	800
Anthracene	57 J	800
Carbazole	22 J	800
Di-n-butylphthalate	ND	800
Fluoranthene	400 J	800
Pyrene	400 J	800
Butylbenzylphthalate	ND	800
3,3'-Dichlorobenzidine	ND	1600
Benzo(a)anthracene	200	80
Chrysene	300 J	800
bis(2-Ethylhexyl)phthalate	620 J	800
Di-n-octylphthalate	ND	800
Benzo(b)fluoranthene	220	80
Benzo(k)fluoranthene	260	80
Benzo(a)pyrene	230	80
Indeno(1,2,3-cd)pyrene	140	80
Dibenz(a,h)anthracene	47 J	80
Benzo(g,h,i)perylene	160 J	800
Benzaldehyde	74 J	800
Caprolactam	ND	800
Atrazine	ND	800
Acetophenone	ND	800
Diphenyl	ND	800

Client ID: **050305-EAP-036**
Site: GM Wilmington-17338

Lab Sample No: **630189**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/23/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17362.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 2.0
% Moisture: 16.2

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1. Unknown Alkane/C20H12 PAH	20.72	1000	
2. Unknown	20.81	1300	
3. Unknown Alkane	22.93	670	
4. Unknown	23.68	640	
5. Unknown	24.71	920	
6. Unknown	25.98	1300	
7. Unknown Sterol	26.93	1200	
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30.			
TOTAL ESTIMATED CONCENTRATION		7030	

Client ID: **050305-EAP-037**
Site: GM Wilmington-17338

Lab Sample No: **630190**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/20/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17349.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 13

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	380
2-Chlorophenol	ND	380
2-Methylphenol	ND	380
3+4-Methylphenol (total)	ND	380
2-Nitrophenol	ND	380
2,4-Dimethylphenol	ND	380
2,4-Dichlorophenol	ND	380
4-Chloro-3-methylphenol	ND	380
2,4,6-Trichlorophenol	ND	380
2,4,5-Trichlorophenol	ND	380
2,4-Dinitrophenol	ND	1500
4-Nitrophenol	ND	1500
4,6-Dinitro-2-methylphenol	ND	1500
Pentachlorophenol	ND	1500
bis(2-Chloroethyl)ether	ND	38
bis(2-chloroisopropyl)ether	ND	380
N-Nitroso-di-n-propylamine	ND	38
Hexachloroethane	ND	38
Nitrobenzene	ND	38
Isophorone	ND	380
bis(2-Chloroethoxy)methane	ND	380
Naphthalene	18 J	380
4-Chloroaniline	ND	380
Hexachlorobutadiene	ND	77
2-Methylnaphthalene	19 J	380
Hexachlorocyclopentadiene	ND	380
2-Chloronaphthalene	ND	380
2-Nitroaniline	ND	770
Dimethylphthalate	ND	380
Acenaphthylene	84 J	380
2,6-Dinitrotoluene	ND	77
3-Nitroaniline	ND	770
Acenaphthene	ND	380
Dibenzofuran	12 J	380

Client ID: **050305-EAP-037**
Site: GM Wilmington-17338

Lab Sample No: **630190**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/20/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17349.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 13

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	77
Diethylphthalate	ND	380
4-Chlorophenyl-phenylether	ND	380
Fluorene	ND	380
4-Nitroaniline	ND	770
N-Nitrosodiphenylamine	15 J	380
4-Bromophenyl-phenylether	ND	380
Hexachlorobenzene	ND	38
Phenanthrene	78 J	380
Anthracene	26 J	380
Carbazole	12 J	380
Di-n-butylphthalate	ND	380
Fluoranthene	250 J	380
Pyrene	280 J	380
Butylbenzylphthalate	180 J	380
3,3'-Dichlorobenzidine	ND	770
Benzo(a)anthracene	170	38
Chrysene	230 J	380
bis(2-Ethylhexyl)phthalate	1100	380
Di-n-octylphthalate	ND	380
Benzo(b)fluoranthene	230	38
Benzo(k)fluoranthene	270	38
Benzo(a)pyrene	230	38
Indeno(1,2,3-cd)pyrene	100	38
Dibenz(a,h)anthracene	31 J	38
Benzo(g,h,i)perylene	98 J	380
Benzaldehyde	ND	380
Caprolactam	ND	380
Atrazine	ND	380
Acetophenone	ND	380
Diphenyl	8.9J	380

Client ID: **050305-EAP-037**
Site: GM Wilmington-17338

Lab Sample No: **630190**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/20/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17349.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 13.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **050305-EAP-038**
Site: GM Wilmington-17338

Lab Sample No: **630191**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/18/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17316.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 16

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	400
2-Chlorophenol	ND	400
2-Methylphenol	ND	400
3+4-Methylphenol (total)	ND	400
2-Nitrophenol	ND	400
2,4-Dimethylphenol	ND	400
2,4-Dichlorophenol	ND	400
4-Chloro-3-methylphenol	ND	400
2,4,6-Trichlorophenol	ND	400
2,4,5-Trichlorophenol	ND	400
2,4-Dinitrophenol	ND	1600
4-Nitrophenol	ND	1600
4,6-Dinitro-2-methylphenol	ND	1600
Pentachlorophenol	ND	1600
bis(2-Chloroethyl)ether	ND	40
bis(2-chloroisopropyl)ether	ND	400
N-Nitroso-di-n-propylamine	ND	40
Hexachloroethane	ND	40
Nitrobenzene	ND	40
Isophorone	ND	400
bis(2-Chloroethoxy)methane	ND	400
Naphthalene	82 J	400
4-Chloroaniline	ND	400
Hexachlorobutadiene	ND	80
2-Methylnaphthalene	83 J	400
Hexachlorocyclopentadiene	ND	400
2-Chloronaphthalene	ND	400
2-Nitroaniline	ND	800
Dimethylphthalate	ND	400
Acenaphthylene	160 J	400
2,6-Dinitrotoluene	ND	80
3-Nitroaniline	ND	800
Acenaphthene	92 J	400
Dibenzofuran	160 J	400

Client ID: **050305-EAP-038**
Site: GM Wilmington-17338

Lab Sample No: **630191**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/18/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17316.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 16

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	80
Diethylphthalate	ND	400
4-Chlorophenyl-phenylether	ND	400
Fluorene	380 J	400
4-Nitroaniline	ND	800
N-Nitrosodiphenylamine	17 J	400
4-Bromophenyl-phenylether	ND	400
Hexachlorobenzene	ND	40
Phenanthrene	1200	400
Anthracene	250 J	400
Carbazole	34 J	400
Di-n-butylphthalate	ND	400
Fluoranthene	1100	400
Pyrene	1100	400
Butylbenzylphthalate	ND	400
3,3'-Dichlorobenzidine	ND	800
Benzo(a)anthracene	470	40
Chrysene	520	400
bis(2-Ethylhexyl)phthalate	1000	400
Di-n-octylphthalate	ND	400
Benzo(b)fluoranthene	420	40
Benzo(k)fluoranthene	450	40
Benzo(a)pyrene	440	40
Indeno(1,2,3-cd)pyrene	160	40
Dibenz(a,h)anthracene	59	40
Benzo(g,h,i)perylene	160 J	400
Benzaldehyde	14 J	400
Caprolactam	ND	400
Atrazine	ND	400
Acetophenone	ND	400
Diphenyl	29 J	400

Client ID: **050305-EAP-038**
Site: GM Wilmington-17338

Lab Sample No: **630191**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/18/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17316.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 16.5

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	C15H10/C15H12 PAHs	15.14	430	
2.	C17H12 PAH	16.82	340	
3.	C20H12 PAH/Unknown	21.97	410	
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TOTAL ESTIMATED CONCENTRATION 1180

Client ID: **050305-EAP-039**
Site: GM Wilmington-17338

Lab Sample No: **630192**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/19/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17326.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 13

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	380
2-Chlorophenol	ND	380
2-Methylphenol	ND	380
3+4-Methylphenol (total)	ND	380
2-Nitrophenol	ND	380
2,4-Dimethylphenol	ND	380
2,4-Dichlorophenol	ND	380
4-Chloro-3-methylphenol	ND	380
2,4,6-Trichlorophenol	ND	380
2,4,5-Trichlorophenol	ND	380
2,4-Dinitrophenol	ND	1500
4-Nitrophenol	ND	1500
4,6-Dinitro-2-methylphenol	ND	1500
Pentachlorophenol	ND	1500
bis(2-Chloroethyl)ether	ND	38
bis(2-chloroisopropyl)ether	ND	380
N-Nitroso-di-n-propylamine	ND	38
Hexachloroethane	ND	38
Nitrobenzene	ND	38
Isophorone	ND	380
bis(2-Chloroethoxy)methane	ND	380
Naphthalene	12 J	380
4-Chloroaniline	ND	380
Hexachlorobutadiene	ND	76
2-Methylnaphthalene	15 J	380
Hexachlorocyclopentadiene	ND	380
2-Chloronaphthalene	ND	380
2-Nitroaniline	ND	760
Dimethylphthalate	ND	380
Acenaphthylene	52 J	380
2,6-Dinitrotoluene	ND	76
3-Nitroaniline	ND	760
Acenaphthene	ND	380
Dibenzofuran	7.8J	380

Client ID: **050305-EAP-039**
Site: GM Wilmington-17338

Lab Sample No: **630192**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/19/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17326.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 13

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	76
Diethylphthalate	ND	380
4-Chlorophenyl-phenylether	ND	380
Fluorene	12 J	380
4-Nitroaniline	ND	760
N-Nitrosodiphenylamine	23 J	380
4-Bromophenyl-phenylether	ND	380
Hexachlorobenzene	ND	38
Phenanthrene	180 J	380
Anthracene	16 J	380
Carbazole	17 J	380
Di-n-butylphthalate	ND	380
Fluoranthene	280 J	380
Pyrene	280 J	380
Butylbenzylphthalate	340 J	380
3,3'-Dichlorobenzidine	ND	760
Benzo(a)anthracene	120	38
Chrysene	200 J	380
bis(2-Ethylhexyl)phthalate	1300	380
Di-n-octylphthalate	ND	380
Benzo(b)fluoranthene	160	38
Benzo(k)fluoranthene	140	38
Benzo(a)pyrene	150	38
Indeno(1,2,3-cd)pyrene	82	38
Dibenz(a,h)anthracene	33 J	38
Benzo(g,h,i)perylene	82 J	380
Benzaldehyde	10 J	380
Caprolactam	ND	380
Atrazine	ND	380
Acetophenone	ND	380
Diphenyl	ND	380

Client ID: **050305-EAP-039**
Site: GM Wilmington-17338

Lab Sample No: **630192**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/19/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17326.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 12.9

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Unknown	17.92	770	
2.				
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TOTAL ESTIMATED CONCENTRATION 770

Client ID: **050305-EAP-040**
Site: GM Wilmington-17338

Lab Sample No: **630193**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/19/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17327.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 16

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	400
2-Chlorophenol	ND	400
2-Methylphenol	ND	400
3+4-Methylphenol (total)	ND	400
2-Nitrophenol	ND	400
2,4-Dimethylphenol	ND	400
2,4-Dichlorophenol	ND	400
4-Chloro-3-methylphenol	ND	400
2,4,6-Trichlorophenol	ND	400
2,4,5-Trichlorophenol	ND	400
2,4-Dinitrophenol	ND	1600
4-Nitrophenol	ND	1600
4,6-Dinitro-2-methylphenol	ND	1600
Pentachlorophenol	ND	1600
bis(2-Chloroethyl)ether	ND	40
bis(2-chloroisopropyl)ether	ND	400
N-Nitroso-di-n-propylamine	ND	40
Hexachloroethane	ND	40
Nitrobenzene	ND	40
Isophorone	ND	400
bis(2-Chloroethoxy)methane	ND	400
Naphthalene	ND	400
4-Chloroaniline	ND	400
Hexachlorobutadiene	ND	79
2-Methylnaphthalene	ND	400
Hexachlorocyclopentadiene	ND	400
2-Chloronaphthalene	ND	400
2-Nitroaniline	ND	790
Dimethylphthalate	ND	400
Acenaphthylene	36 J	400
2,6-Dinitrotoluene	ND	79
3-Nitroaniline	ND	790
Acenaphthene	ND	400
Dibenzofuran	ND	400

Client ID: **050305-EAP-040**
Site: GM Wilmington-17338

Lab Sample No: **630193**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/19/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17327.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 16

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	79
Diethylphthalate	ND	400
4-Chlorophenyl-phenylether	ND	400
Fluorene	8.5J	400
4-Nitroaniline	ND	790
N-Nitrosodiphenylamine	19 J	400
4-Bromophenyl-phenylether	ND	400
Hexachlorobenzene	ND	40
Phenanthrene	55 J	400
Anthracene	14 J	400
Carbazole	ND	400
Di-n-butylphthalate	ND	400
Fluoranthene	170 J	400
Pyrene	170 J	400
Butylbenzylphthalate	110 J	400
3,3'-Dichlorobenzidine	ND	790
Benzo(a)anthracene	97	40
Chrysene	120 J	400
bis(2-Ethylhexyl)phthalate	1500	400
Di-n-octylphthalate	ND	400
Benzo(b)fluoranthene	91	40
Benzo(k)fluoranthene	110	40
Benzo(a)pyrene	100	40
Indeno(1,2,3-cd)pyrene	44	40
Dibenz(a,h)anthracene	16 J	40
Benzo(g,h,i)perylene	45 J	400
Benzaldehyde	ND	400
Caprolactam	ND	400
Atrazine	ND	400
Acetophenone	ND	400
Diphenyl	ND	400

Client ID: **050305-EAP-040**
Site: GM Wilmington-17338

Lab Sample No: **630193**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/06/05
Date Analyzed: 05/19/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17327.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 15.7

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Unknown	17.91	670	
2.				
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TOTAL ESTIMATED CONCENTRATION 670

Client ID: **050305-EAP-041**
Site: GM Wilmington-17338

Lab Sample No: **630194**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/13/05
Date Analyzed: 05/24/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17397.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 15

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Phenol	ND	390
2-Chlorophenol	ND	390
2-Methylphenol	ND	390
3+4-Methylphenol (total)	ND	390
2-Nitrophenol	ND	390
2,4-Dimethylphenol	ND	390
2,4-Dichlorophenol	ND	390
4-Chloro-3-methylphenol	ND	390
2,4,6-Trichlorophenol	ND	390
2,4,5-Trichlorophenol	ND	390
2,4-Dinitrophenol	ND	1600
4-Nitrophenol	ND	1600
4,6-Dinitro-2-methylphenol	ND	1600
Pentachlorophenol	ND	1600
bis(2-Chloroethyl)ether	ND	39
bis(2-chloroisopropyl)ether	ND	390
N-Nitroso-di-n-propylamine	ND	39
Hexachloroethane	ND	39
Nitrobenzene	ND	39
Isophorone	ND	390
bis(2-Chloroethoxy)methane	ND	390
Naphthalene	ND	390
4-Chloroaniline	ND	390
Hexachlorobutadiene	ND	78
2-Methylnaphthalene	ND	390
Hexachlorocyclopentadiene	ND	390
2-Chloronaphthalene	ND	390
2-Nitroaniline	ND	780
Dimethylphthalate	ND	390
Acenaphthylene	ND	390
2,6-Dinitrotoluene	ND	78
3-Nitroaniline	ND	780
Acenaphthene	ND	390
Dibenzofuran	ND	390

Client ID: **050305-EAP-041**
Site: GM Wilmington-17338

Lab Sample No: **630194**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/13/05
Date Analyzed: 05/24/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17397.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 15

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
2,4-Dinitrotoluene	ND	78
Diethylphthalate	ND	390
4-Chlorophenyl-phenylether	ND	390
Fluorene	ND	390
4-Nitroaniline	ND	780
N-Nitrosodiphenylamine	ND	390
4-Bromophenyl-phenylether	ND	390
Hexachlorobenzene	ND	39
Phenanthrene	ND	390
Anthracene	ND	390
Carbazole	ND	390
Di-n-butylphthalate	ND	390
Fluoranthene	ND	390
Pyrene	ND	390
Butylbenzylphthalate	ND	390
3,3'-Dichlorobenzidine	ND	780
Benzo(a)anthracene	ND	39
Chrysene	ND	390
bis(2-Ethylhexyl)phthalate	ND	390
Di-n-octylphthalate	ND	390
Benzo(b)fluoranthene	ND	39
Benzo(k)fluoranthene	ND	39
Benzo(a)pyrene	ND	39
Indeno(1,2,3-cd)pyrene	ND	39
Dibenz(a,h)anthracene	ND	39
Benzo(g,h,i)perylene	ND	390
Benzaldehyde	ND	390
Caprolactam	ND	390
Atrazine	ND	390
Acetophenone	ND	390
Diphenyl	ND	390

Client ID: **050305-EAP-041**
Site: GM Wilmington-17338

Lab Sample No: **630194**
Lab Job No: X935

Date Sampled: 05/03/05
Date Received: 05/05/05
Date Extracted: 05/13/05
Date Analyzed: 05/24/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17397.d

Matrix: SOIL
Level: LOW
Sample Weight: 15.0 g
Extract Final Volume: 1.0 ml
Dilution Factor: 1.0
% Moisture: 14.7

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/kg	Q
1.	Unknown	16.17	510	
2.	Unknown	17.25	410	
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TOTAL ESTIMATED CONCENTRATION	920

Client ID: **050505-EAP-022**
Site: GM Wilmington-17338

Lab Sample No: **630625**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Extracted: 05/08/05
Date Analyzed: 05/19/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17341.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	0.4J	10
3+4-Methylphenol (total)	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	3.8J	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	41
4-Nitrophenol	ND	41
4,6-Dinitro-2-methylphenol	ND	41
Pentachlorophenol	ND	41
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	4.8J	10
Dibenzofuran	2.9J	10

Client ID: **050505-EAP-022**
Site: GM Wilmington-17338

Lab Sample No: **630625**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Extracted: 05/08/05
Date Analyzed: 05/19/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17341.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	7.5J	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	2.7J	10
Anthracene	ND	10
Carbazole	0.2J	10
Di-n-butylphthalate	ND	10
Fluoranthene	0.4J	10
Pyrene	0.4J	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10
Acetophenone	ND	10
Diphenyl	3.8J	10

Client ID: **050505-EAP-022**
Site: GM Wilmington-17338

Lab Sample No: **630625**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Extracted: 05/08/05
Date Analyzed: 05/19/05
GC Column: DB-5
Instrument ID: BNAMS6.i
Lab File ID: m17341.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	7.04	22	
2.	Unknown	7.26	36	
3.	Unknown	7.29	19	
4.	Unknown	7.43	140	
5.	Unknown	7.55	98	
6.	Ethyldimethylbenzene isomer	8.25	18	
7.	Methylpropylbenzene isomer	8.95	31	
8.	Tetrahydromethylnaphthalene isomer	9.35	16	
9.	2,3-dihydro-dimethyl-1H-Indene isomer	9.39	12	
10.	Tetrahydromethylnaphthalene isomer	9.57	11	
11.	2,3-dihydro-dimethyl-1H-Indene isomer	9.85	12	
12.	2,3-dihydro-dimethyl-1H-Indene isomer	9.99	14	
13.	2,3-dihydro-dimethyl-1H-Indene isomer	10.16	11	
14.	Tetrahydromethylnaphthalene isomer	10.27	19	
15.	Naphthalene, 1-methyl-	10.47	43	
16.	Tetrahydrodimethylnaphthalene isomer	11.08	17	
17.	Dimethylnaphthalene isomer	11.21	16	
18.	Dimethylnaphthalene isomer	11.35	30	
19.	Dimethylnaphthalene isomer	11.51	15	
20.	Unknown	12.75	19	
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 599

Client ID: **050505-EAP-001**
Site: GM Wilmington-17338

Lab Sample ID: **630606**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Extracted: 05/09/05
Date Analyzed: 05/12/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC8.i
Front File ID: qf038090.d
Rear File ID: qr038090.d

Matrix: SOIL
Level: LOW
Sample Weight: 15 g
Extract Final Volume: 10.0 ml
Dilution Factor: 1.0
% Moisture: 12

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg	Column
Aroclor-1016	ND	76	R
Aroclor-1221	ND	76	R
Aroclor-1232	ND	76	R
Aroclor-1242	ND	76	R
Aroclor-1248	ND	76	R
Aroclor-1254	ND	76	R
Aroclor-1260	ND	76	R

Client ID: **050505-EAP-002**
Site: GM Wilmington-17338

Lab Sample ID: **630607**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Extracted: 05/09/05
Date Analyzed: 05/12/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC8.i
Front File ID: qf038091.d
Rear File ID: qr038091.d

Matrix: SOIL
Level: LOW
Sample Weight: 15 g
Extract Final Volume: 10.0 ml
Dilution Factor: 1.0
% Moisture: 12

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg	Column
Aroclor-1016	ND	76	R
Aroclor-1221	ND	76	R
Aroclor-1232	ND	76	R
Aroclor-1242	ND	76	R
Aroclor-1248	ND	76	R
Aroclor-1254	ND	76	R
Aroclor-1260	ND	76	R

Client ID: **050505-EAP-005**
Site: GM Wilmington-17338

Lab Sample ID: **630608**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Extracted: 05/09/05
Date Analyzed: 05/12/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC8.i
Front File ID: qf038092.d
Rear File ID: qr038092.d

Matrix: SOIL
Level: LOW
Sample Weight: 15 g
Extract Final Volume: 10.0 ml
Dilution Factor: 1.0
% Moisture: 16

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg	Column
Aroclor-1016	ND	79	R
Aroclor-1221	ND	79	R
Aroclor-1232	ND	79	R
Aroclor-1242	ND	79	R
Aroclor-1248	ND	79	R
Aroclor-1254	270	79	F
Aroclor-1260	ND	79	R

Client ID: **050505-EAP-006**
Site: GM Wilmington-17338

Lab Sample ID: **630609**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Extracted: 05/09/05
Date Analyzed: 05/12/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC8.i
Front File ID: qf038087.d
Rear File ID: qr038087.d

Matrix: SOIL
Level: LOW
Sample Weight: 15 g
Extract Final Volume: 10.0 ml
Dilution Factor: 1.0
% Moisture: 15

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg	Column
Aroclor-1016	ND	78	R
Aroclor-1221	ND	78	R
Aroclor-1232	ND	78	R
Aroclor-1242	ND	78	R
Aroclor-1248	ND	78	R
Aroclor-1254	250	78	R
Aroclor-1260	ND	78	R

Client ID: **050505-EAP-007**
Site: GM Wilmington-17338

Lab Sample ID: **630610**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Extracted: 05/09/05
Date Analyzed: 05/13/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC8.i

Matrix: WATER
Sample Volume: 950 ml
Extract Final Volume: 10.0 ml
Dilution Factor: 1.0
Front File ID: qf038178.d
Rear File ID: qr038178.d

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/l	Quantitation Limit Units: ug/l	Quant. Column
Aroclor-1016	ND	1.0	R
Aroclor-1221	ND	1.0	R
Aroclor-1232	ND	1.0	R
Aroclor-1242	ND	1.0	R
Aroclor-1248	ND	1.0	R
Aroclor-1254	ND	1.0	R
Aroclor-1260	4.7	1.0	R

Client ID: **050505-EAP-008**
Site: GM Wilmington-17338

Lab Sample ID: **630611**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Extracted: 05/09/05
Date Analyzed: 05/13/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC8.i

Matrix: WATER
Sample Volume: 650 ml
Extract Final Volume: 10.0 ml
Dilution Factor: 1.0
Front File ID: qf038179.d
Rear File ID: qr038179.d

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/l	Quantitation Limit Units: ug/l	Quant. Column
Aroclor-1016	ND	1.5	R
Aroclor-1221	ND	1.5	R
Aroclor-1232	ND	1.5	R
Aroclor-1242	ND	1.5	R
Aroclor-1248	ND	1.5	R
Aroclor-1254	ND	1.5	R
Aroclor-1260	12	1.5	R

Client ID: **050505-EAP-009**
Site: GM Wilmington-17338

Lab Sample ID: **630612**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Extracted: 05/09/05
Date Analyzed: 05/12/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC8.i
Front File ID: qf038093.d
Rear File ID: qr038093.d

Matrix: SOIL
Level: LOW
Sample Weight: 15 g
Extract Final Volume: 10.0 ml
Dilution Factor: 1.0
% Moisture: 21

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg	Column
Aroclor-1016	ND	85	R
Aroclor-1221	ND	85	R
Aroclor-1232	ND	85	R
Aroclor-1242	ND	85	R
Aroclor-1248	ND	85	R
Aroclor-1254	ND	85	R
Aroclor-1260	ND	85	R

Client ID: **FB-050505-EAP020**
Site: GM Wilmington-17338

Lab Sample ID: **630623**
Lab Job No: X935

Date Sampled: 05/05/05
Date Received: 05/06/05
Date Extracted: 05/09/05
Date Analyzed: 05/12/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC8.i
Front File ID: qf038094.d
Rear File ID: qr038094.d

Matrix: SOIL
Level: LOW
Sample Weight: 15 g
Extract Final Volume: 10.0 ml
Dilution Factor: 1.0
% Moisture: 0

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg	Column
Aroclor-1016	ND	67	R
Aroclor-1221	ND	67	R
Aroclor-1232	ND	67	R
Aroclor-1242	ND	67	R
Aroclor-1248	ND	67	R
Aroclor-1254	ND	67	R
Aroclor-1260	ND	67	R

General Information

Chain of Custody

X935

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CHAIN-OF-CUSTODY / Analytical Request Document

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PAGE 1 OF 3

ID # N° 01022

SSOW Ref. Code: B091001

Required Client Information:

Company: CRA	Report To: G. Carli
Address: 261 Martindale Rd UNIT 3 St. Catherine ON L2W1A2	Copy To: C. Barton
	Invoice To:
Phone: 905 682 0510	P.O.:
Fax: 905 682 8818	Project Name: GM Wilmington
E-mail: cbarton@craworld.com	Project Number:

Laboratory: STL	
Laboratory Location: EDISON NJ	
Laboratory Contact: Joy Kelly	
Requested Due Date:	TAT: 2 weeks
QA/QC Requirements: See SSOW	

HOLD 001 → 008

STL Proj # 923044

DESOP X935

Holds moved into V740 ge 070700

Valid Matrix Codes: WG Groundwater, WB Borehole Water, WS Surface Water, SO Soil, SE Sediment, See Back for Additional Codes

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other: HexCR	Analysis and Method: 8260 TCL VOA list	8270 TCL BNA + 20	8082 PCB	6010 TAL Metal	% Solids	Remarks/Lab ID
1.	SO-17338-050305-EAP-001	SO	5/3/05	0730	3	2					1	X	X	X	X	X	HOLD 630152
2.	SO-17338-050305-EAP-002	SO		0740	3	2					1	X	X	X	X	X	HOLD 153
3.	SO-17338-050305-EAP-003	SO		0750	3	2					1	X	X	X	X	X	HOLD 154
4.	SO-17338-050305-EAP-004	SO		0810	3	2					1	X	X	X	X	X	HOLD 155
5.	SO-17338-050305-EAP-005	SO		0820	3	2					1	X	X	X	X	X	HOLD 156
6.	SO-17338-050305-EAP-0055	SO			3	2					1	X	X	X	X	X	HOLD 157
7.	SO-17338-050305-EAP-006	SO		0850	3	2					1	X	X	X	X	X	HOLD 158
8.	SO-17338-050305-EAP-006 MS/MSD	SO		0850	6	4					2	X	X	X	X	X	HOLD ~~159~~
9.	SO-17338-050305-EAP-007	SO		0910	3	2					1	X	X	X	X	X	HOLD 160
10.	SO-17338-050305-EAP-008	SO		0930	3	2					1	X	X	X	X	X	HOLD 161
11.	TB-17338-EAP-009											X					162
12.	FB-17338-EAP-010 / 010MD			1000	4	2			1		1	X	X	X	X	X	163 / 15
13.	~~SO-17338-050305-EAP-011 EP~~	~~SO~~			~~3~~						~~1~~	X	X	X			
14.	SO-17338-050305-EAP-011	SO	Y	1010	1	1							X				164
15.	SO-17338-050305-EAP-012	SO		1015	1	1							X				↓165
	TOTAL NUMBER OF CONTAINERS																

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
FedEx Priority	3	CRA / EDP INTO	5/4/05	1650	STL	5/5/05	0945
AIRBILL NO.							

Sample Condition

Temp in C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name:

Sampler Signature: Date:

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Sampler Copy

REV 04/01

STL Edison

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X935

STL Edison

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GM REALM ONCORE

CHAIN-OF-CUSTODY / Analytical Request Document

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PAGE 2 OF 3

ID # N° 01024

SSOW Ref. Code: EDP1001

Required Client Information:

Company: CRA	Report To: G. Carli
Address:	Copy To: C. Barton
	Invoice To:
	P.O.:
Phone:	Project Name: GM WILMINGTON
Fax:	Project Number:
E-mail:	

Laboratory: STL EDISON	
Laboratory Location: EDISON NJ	
Laboratory Contact: JOY Kelly	
Requested Due Date:	TAT: 2 weeks
QA/QC Requirements: See SSOW	

~~HOLD SM~~

STL Proj No: 923044

DESOP!

X935

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other: MeOH	Analysis and Method: SVOC's 8270	8260 TCL VOA+10	8082 PCBs	6010 TAL Metals	%SOLIDS				Remarks/Lab ID
1.	SO-17338-050305-EAP-013	SO	5/3/05	1100	1	1						X						630166		
2.	SO-17338-050305-EAP-014	SO		1105	1	1						X							167	
3.	SO-17338-050305-EAP-015	SO		1110	1	1						X							168	HOLD 015
4.	SO-17338-050305-EAP-016	SO		1120	1	1						X							169	
5.	SO-17338-050305-EAP-017	SO		1126	1	1						X							170	
6.	SO-17338-050305-EAP-018	SO		1130	1	1						X							171	~~HOLD 018~~
7.	SO-17338-050305-EAP-019	SO		1155	1	1						X							172	
8.	SO-17338-050305-EAP-020	SO		1200	1	1						X							173	
9.	SO-17338-050305-EAP-021	SO		1205	1	1						X							174	HOLD 021
10.	SO-17338-050305-EAP-022	SO		1210	1	1						X							175	
11.	SO-17338-050305-EAP-023	SO		1215	1	1						X							176	
12.	SO-17338-050305-EAP-024	SO		1220	1	1						X							177	HOLD 024
13.	SO-17338-050305-EAP-025	SO		1230	3	2					1	X	X	X	X	X			178	HOLD 025
14.	SO-17338-050305-EAP-026	SO		1245	3	2					1	X	X	X	X	X		J	179	HOLD 026
15.																				
	TOTAL NUMBER OF CONTAINERS																			

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
Fed Ex Prior	3	EDP1001 / CRA Ed Pinto	5/4/05	1630			
AIRBILL NO.							

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name:

Sampler Signature: Date:

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Sampler Copy

REV. 07/6/04

X935

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CHAIN-OF-CUSTODY / Analytical Request Document

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PAGE 3 OF 3

ID # N° 01026

SSOW Ref. Code: EØ91ØØ1

X935

DESOP

STL PROJ # 923044

Required Client Information:

Company: CRA	Report To: G. CARLI	
Address:	Copy To: C. BARTON	
	Invoice To:	
	P.O.:	
Phone:	Project Name: GM WILMINGTON	
Fax:	Project Number:	
E-mail:		

Laboratory: STL EDISON	
Laboratory Location: EDISON NJ	
Laboratory Contact: JOY KELLY	
Requested Due Date:	TAT: 2 WEEKS
QA/QC Requirements: See SSOW	

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	Analysis and Method: 8270 BN+20	4 SVOA 2 x 5 Screen 1 Target							Remarks/Lab ID
1.	SO-17338-050305-EAP-027	SO	5/3/05	1300	1	1						X				630	180			
2.	SO-17338-050305-EAP-028	SO		1310	1	1						X					181			
3.	SO-17338-050305-EAP-029	SO		1315	1	1						X					182			HOLD Ø29
4.	SO-17338-050305-EAP-030	SO		1330	1	1						X					183			
5.	SO-17338-050305-EAP-031	SO		1335	1	1						X					184			
6.	SO-17338-050305-EAP-032	SO		1340	1	1						X					185			HOLD Ø32
7.	SO-17338-050305-EAP-033	SO		1345	1	1						X					186			
8.	SO-17338-050305-EAP-034	SO		1400	1	1						X					187			
9.	SO-17338-050305-EAP-035	SO		1405	1	1						X					188			HOLD Ø35
10.	SO-17338-050305-EAP-036	SO		1400	1	1						X					189			
11.	SO-17338-050305-EAP-037	SO		1415	1	1						X					190			
12.	SO-17338-050305-EAP-038	SO		1420	1	1						X	X				191			
13.	SO-17338-050305-EAP-039	SO		1425	1	1						X					192			
14.	SO-17338-050305-EAP-040	SO		1430	1	1						X					193			
15.	SO-17338-050305-EAP-041	SO		1435	1	1						X				V	194			HOLD Ø41
	TOTAL NUMBER OF CONTAINERS																			

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
Fed Ex Prior	3	EDD / CRA	5/4/05	1650			
AIRBILL NO.							

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name:

Sampler Signature: Date:

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Sampler Copy

REV. 0 (6/04)

STL Edison

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PAGE 2 OF

(2) 4046 Moved to X935 5/10/05

ID # N° 01050

SSOW Ref. Code: EO 91 001

Required Client Information:

Company: CRA.	Report To: G. CARLE
Address: 261 MARTINDALE RD UNIT 3 St Catherine ON L2W1A2	Copy To: C. Barton
	Invoice To:
	P.O.:
Phone: 905 682 0510	Project Name: GM WILLIAMSTON
Fax: 905 682 8818	Project Number: 017328
E-mail: cbarton@craworld.com	

Laboratory:	STL EDISON
Laboratory Location:	EDISON, NJ
Laboratory Contact:	JOY KELLY
Requested Due Date:	TAT: 2 weeks
QA/QC Requirements:	See SSOW

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

Analysis and Method

Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other: MeOH	BTEX MTBE +10	% Moisture	PCB 8082	SVOC 8270C	Remarks/Lab ID
1. SO-17338-050505-EAP-016	SO	5/5/05	1040	2	1					1	X	X			630 627A 619
2. SO-17338-050505-EAP-017	SO		1040	2	1					1	X	X			630 623 620
3. SO-17338-050505-EAP-018 MS/MSD	SO		1040	4	2					2	X	X			630 623 621
4. SO-17338-050505-EAP-019	SO		1110	2	1					1	X	X			630 624 622
5. SO-17338-050505-EAP-020 (Field Blk)	SO		1240	2	1					1	X		X		630 625 623
6. TB-17338-EAP-021										1	X				630 626 624
7. WG-17338-050505-EAP-022	WG		1330	4	1	3					X		X	X per CBarton email 5/6/05 JK	630 627 625
8. "FB"															
9.															
10.															
11.															
12.															
13.															
14.															
15.															
TOTAL NUMBER OF CONTAINERS															

DESOP

STL AR0T # 923044

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
FedEx Prior	1	[illegible] / CRA	5/5/05	1700			
AIRBILL NO.		ED PINTO					
		Fed Ex	5/6/05	10:00	PM STL		

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name:

Sampler Signature: Date:

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Sampler Copy

REV. 11/04/04

STL Edison

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CHAIN-OF-CUSTODY / Analytical Request Document

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PAGE 1 OF 1

ID # N° 01052

SSOW Ref. Code: EP91001

Required Client Information:

Company: CRA	Report To: G. CARLE
Address: 261 Martindale Rd UNIT 3 St Catherines, ONL2W1A2	Copy To: C. BURTON
	Invoice To:
	P.O.:
Phone: 905 682 0510	Project Name: GM WILMINGTON
Fax: 905 682 8818	Project Number: 017338
E-mail: cburton@craworld.com	

Laboratory: STL-EDISON	
Laboratory Location: EDISON, NJ	
Laboratory Contact: JOY KELLY	
Requested Due Date:	TAT: 2 weeks
QA/QC Requirements: see SSOW	

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

Analysis and Method

Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	VOLS + 10	Remarks/Lab ID
1. WG-17338-050905-EAP-001	WG	5/9/05		3		3					631381	
2. TB-17338-EAP-002			—	2		2					631382	TRIP BLANK
3.												
4.												
5.												
6.												
7.												
8.												
9.												
10.												
11.												
12.												
13.												
14.												
15.												
TOTAL NUMBER OF CONTAINERS												

~~4147~~ moved to X935

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
FedEx Prior	1	ED PINTO / CRA	5/9/05	1645		5-10-05	10:30
AIRBILL NO.							

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name:

Sampler Signature: Date:

Distribution: White - Fully Executed Copy; Yellow - Receiving Laboratory Copy; Pink - Shipper Copy

(04)

X935

STL Edison

132

X935

STL Edison

133

GM REALM
ENCORE

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

~~@ 4046~~ Moved to X935 5/9/05

PAGE 1 OF 2

ID # N° 01027

SSOW Ref. Code: EØ91ØØ1

Required Client Information:

Company: CRA	Report To: G. CARLI
Address: 2601 Market Place Rd UNIT 3 St Catherines ON L2W1A2	Copy To: C. BARTON
	Invoice To:
	P.O.:
Phone: 905 682 0510	Project Name: GM WILMINGTON
Fax: 905 682 8818	Project Number: 017338
E-mail: c.barton@craworld.com	

Laboratory: STL EDISON	
Laboratory Location: EDISON, NJ	
Laboratory Contact: JOY KELLY	
Requested Due Date:	TAT: 2 weeks
QA/QC Requirements: see SSOW	

Analysis and Method

PESOP STL PROJ# 923044

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other: MeOH	8082 PCBs	8260 TCLVOA + 10	% Moisture	Remarks/Lab ID
SO-17338-050505-EAP-001	SO	5/5/05	0800	1	X						X			630606
SO-17338-050505-EAP-002	SO	5/5/05	0800	1	X						X			630607
~~WG-17338-050505-EAP-003~~	~~WG~~	"		1	X						X			MS 630608 NOT COLLECTED
~~WG-17338-050505-EAP-004~~	~~WG~~	"		1	X						X			MS 630609 NOT COLLECTED
SO-17338-050505-EAP-005	SO	5/5/05	0855	1	X						X			630608
SO-17338-050505-EAP-006 MS/MSD	SO	5/5/05	0855	2	X						X			630609
WG-17338-050505-EAP-007	WG	"	1220	1	X						X			630610
WG-17338-050505-EAP-008 MS/MSD	WG	"	1230	2	X						X			630 ~~612~~ 611
SO-17338-050505-EAP-009	SO	"	0920	1	X						X			630 ~~613~~ 612
SO-17338-050505-EAP-010	SO	5/5/05	0940	2	1					1		X	X	630 613
SO-17338-050505-EAP-011	SO	"	0940	2	1					1		X	X	630 ~~614~~ 613
SO-17338-050505-EAP-012	SO	5/5/05	1000	2	1					1		X	X	630 ~~615~~ 614
SO-17338-050505-EAP-013	SO	5/5/05	1010	2	1					1		X	X	630 ~~616~~ 615
SO-17338-050505-EAP-014	SO	5/5/05	1010	2	1					1		X	X	630 ~~617~~ 616
SO-17338-050505-EAP-015	SO	5/5/05	1010	2	1					1		X	X	630 ~~620~~ 618
				TOTAL NUMBER OF CONTAINERS										

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
Fedex Prior	1	[illegible] CCA	5/5/05	1700			
AIRBILL NO.		ED PINTO					
		Fed Ex	5/6/05	10:00	PM STL		

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name:

Sampler Signature: Date:

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Sampler Copy

APPENDIX D

ECOLOGICAL SENSITIVE AREAS ANALYSIS DOCUMENTATION

17338

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENTAL CONTROL
DIVISION OF FISH & WILDLIFE
NATURAL HERITAGE & ENDANGERED SPECIES
4876 HAY POINT LANDING ROAD
SMYRNA, DELAWARE 19977
TELEPHONE: (302) 653-2880
FAX: (302) 653-3431

September 24, 2005

Gregory A. Carli
Conestoga-Rovers & Associates
261 Martindale Road, Unit #3
St. Catharines, Ontario L2W 1A2

RE: Rare, threatened and endangered species information for remedial action
Assembly Plant off Boxwood Rd in Wilmington, Delaware
Applicant: General Motors Corporation
Reference No. 17338

Dear Mr. Carli:

Thank you for contacting the Natural Heritage and Endangered Species program about information on rare, threatened and endangered species, unique natural communities, and other significant natural resources as they relate to the above referenced project.

A review of our database indicates that there are currently no records of state-rare or federally listed plants, animals or natural communities at or adjacent to this project site. As a result, at present this project does not lie within a State Natural Heritage Site, nor does it lie within a Delaware National Estuarine Research Reserve, which are two of the criteria used to determine the presence of Critical Resource Waters. The final decision regarding Critical Resource Waters – if this is an issue – will be made by the U.S. Army Corps of Engineers (ACOE). The information above will aid ACOE in their determination.

We are continually updating records on Delaware's rare, threatened and endangered species, unique natural communities and other significant natural resources. If the start of the project is delayed more than a year past the date of this letter, please contact us again for the latest information. If you have any questions, please contact me at (302) 653-2883 ext. 126.

Sincerely,
Edna J. Stetzar
Edna J. Stetzar
Biologist/Environmental Review Coordinator

CRA 2005-09-22

Worldwide Facilities Group
Environmental Services
Remediation Team

Facsimile
(248) 753-5829

Telephone
(248) 753-5800

July 19, 2006

Mr. Rick Galloway, Project Manager
Site Investigation and Restoration Branch
State of Delaware Department of Natural Resources and Environmental Control
391 Lukens Drive
New Castle, Delaware 19720-2774

Re: Workplan for OU-2 Bulk Product Tank Area
Supplemental Ground Water Investigation
General Motors Corporation
Wilmington Assembly Plant, Wilmington, Delaware (DE-1149)

Dear Mr. Galloway:

General Motors Corporation (GM) is pleased to provide to the Department of Natural Resources and Environmental Control (DNREC), Site Investigation Branch (SIRB), three copies of the enclosed Supplemental Ground Water Investigation Workplan for the OU-2 Bulk Product Tank Area at the GM Wilmington Assembly Plant. The Plant is located at 801 Boxwood Road, Wilmington, Delaware.

Please contact me at 248-753-5800 if you have any questions or require additional information.

Sincerely,

Kim D. Tucker-Billingslea, CHMM
Sr. Environmental Project Manager

c: Jeffrey Holmes (GM)
Greg Carli (CRA)
Chris Barton (CRA)

WORK PLAN FOR SUPPLEMENTAL GROUNDWATER INVESTIGATION OF OU-2 BULK PRODUCT TANK AREAS GM WILMINGTON ASSEMBLY PLANT

Prepared For:

GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

Prepared by:
Conestoga-Rovers & Associates

261 Martindale Rd., Unit #3
St. Catharines, Ontario
Canada L2W 1A2

Office: 905•682•0510
Fax: 905•682•8818

JULY 18, 2006
REF. NO. 17338 (8)
This report is printed on recycled paper.

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1.0 INTRODUCTION

This work plan has been prepared to outline the scope of work to be conducted as part of the supplemental groundwater investigation at the OU-2 Bulk Product Storage Tank Area at the General Motors Corporation (GM) Assembly Plant located in Wilmington Delaware. The site location is shown on Figure 1.1. A site plan showing the layout of the OU-2 area and the existing monitoring well network is provided as Figure 1.2.

1.1 BACKGROUND

Groundwater impacts were identified by previous investigations conducted at the OU-2 Area. In April 2005 GM prepared and submitted a Work Plan to investigate groundwater impacts identified during previous investigations. The Work Plan was reviewed and approved by the Delaware Department of Natural Resources and Environmental Conservation (DNREC) Site Investigation and Restoration Branch (SIRB). The purpose of the OU-2 groundwater investigation was to further characterize the nature and extent of regulated substances at the OU-2 Area. Investigation activities took place in June and November 2005.

The combined results of the June and November 2005 OU-2 groundwater investigation activities have identified groundwater impacts present within the OU-2 Area. The impacts consist primarily of benzene, toluene, ethybenzene, and xylene (BTEX) and other gasoline related compounds, however, other volatile organic compound (VOC) and semivolatile organic compound (SVOC) parameters as well as metals were detected at concentrations exceeding the DNREC Uniform Risk Based Standards (URS) screening levels. The highest concentrations of BTEX parameters were found in groundwater at the northeastern portion of OU-2. Elevated levels of acetone were also present in the groundwater in this area.

A comparison of analytical results from MW-3, which is screened across the water table from 10 feet to 15 feet below ground surface (bgs), and MW-3D, which is screened deeper within the aquifer from 20 feet to 25 feet bgs, shows a significant decrease in the concentrations of detected compounds, as well as the number of compounds detected, in the deeper well. These results indicate that impacts to groundwater in this area are primarily associated with the upper portion of the aquifer. Monitoring wells located near the downgradient edge of OU-2 Area boundary have no or substantially lower concentrations of VOCs and SVOCs indicating that the groundwater impacts do not extend beyond the OU-2 Area boundary downgradient of the higher groundwater concentrations. However, some uncertainty exists as to the source of BTEX and acetone

impacts observed near MW3/3D, and the source of these groundwater impacts may be further upgradient near the boundary of the OU-2 Area.

1.2 OBJECTIVES

The objectives of the supplemental groundwater investigation are to:

- Further characterize the extent of groundwater impacts, particularly near MW-3 and MW-6 and along the upgradient boundary;
- Conduct a complete round of groundwater sampling for VOCs, SVOCs, and metals; and
- Use this additional data along with the existing data set to complete a vapor intrusion and risk evaluation.

The investigation will be conducted in accordance with protocols established under Delaware's Hazardous Substance Cleanup Act (HSCA) and will be implemented with the intent of obtaining sufficient Site data to develop remedial alternatives, if necessary, and/or to obtain a Certificate of Completion of Remedy (COCR) for the OU-2 area.

2.0 SAMPLING AND ANALYSIS PLAN (SAP)

2.1 MONITORING NETWORK AND DESIGN RATIONALE

Currently the monitoring well network consists of 13 monitoring wells. These wells are located in areas that are in and down gradient of the area that exhibits the highest concentrations of VOCs in groundwater. Five additional wells will be installed around the outer limits of the OU-2 Area in order to:

1. Characterize up gradient conditions;
2. Further characterize down gradient conditions;
3. Provide a better understanding of the hydraulic gradient across the OU-2 Area.

Figure 2.1 shows the location of current monitoring wells, proposed monitoring wells, and historical features and their locations relative the monitoring well network.

2.2 GROUNDWATER MONITORING WELL INSTALLATION AND SAMPLING

Five groundwater monitoring wells (MW-15 to MW-19) will be installed. The locations of these five wells are shown on Figure 2.1. Wells will be constructed with 2-inch diameter flush-threaded PVC pipe. The depth of the new monitoring wells will be determined in the field. The well screens will be a maximum of 10-feet and will be installed to straddle the water table (i.e., approximately 3-feet above and 7 feet below the water table elevation as determined in the field).

During monitoring well installation, continuous soil samples will be collected for field screening using a photoionization detector (PID) for evidence of soil impacts. Stratigraphic logs will be developed for each monitoring well to document the soil types/classification and visual, olfactory, and PID observations. Monitoring well installation will be conducted in accordance with GM Field Methods Guidelines (FMGs). Specific FMGs that will be used are presented in Appendix A, and include:

- FMG 2.2 – Drilling Techniques (Rev. November 20, 2001);
- FMG 2.3 – Soil Borings (Rev. November 20, 2001);
- FMG 2.6 – Soil Classification (Rev. November 20, 2001);
- FMG 3.1 – Well Construction Materials (Rev. September 16, 2002); and
- FMG 3.7 – Well Development (Rev. April 14, 2003).

Upon completion of the new wells, all monitoring wells will be surveyed by a Delaware licensed surveyor. Horizontal coordinates and vertical elevation data will be provided on the well completion records that will be included in the Investigation Report.

All wells will be sampled for Target Compound List (TCL) VOCs and TCL SVOCs and TAL metals. Metals analysis will be performed on both filtered and unfiltered samples. Table 2.1 summarizes the groundwater sampling and analysis to be conducted.

All groundwater samples will be submitted to Severn Trent Laboratories' (STL's) Edison, New Jersey facility under chain of custody protocols for appropriate analyses.

During monitoring well installation and groundwater sampling, equipment decontamination procedures will be conducted in accordance with GM FMG 9.0 – Equipment Decontamination (Rev. November 20, 2001) provided in Appendix A.

2.3 QUALITY ASSURANCE

2.3.1 QA/QC SAMPLES

The QA/QC protocol for this project will be in accordance with HSCA.

- Duplicate Samples – Duplicate samples help to evaluate field and laboratory precision. Duplicate samples will be collected at a rate of 5 percent per matrix for this assignment or one duplicate for every 20 samples collected. Where fewer than 20 samples are collected per matrix, one duplicate sample will be collected and analyzed.
- Trip Blanks – Trip blanks are used to determine if any on-Site atmospheric contaminants are seeping into the sample vials or if any cross contamination of samples is occurring during shipment or storage of sample containers. Trip blanks are prepared prior to the sampling events in the actual sample containers and are kept with the investigation samples throughout the sampling event. They are handled and transported in the same manner as the samples collected that day and are then packaged for shipment with other samples sent for analysis. At no time after their preparation are the sample containers opened before they reach the laboratory.

Trip blanks consist of two 40-ml Telfon lined septum vials, which have been filled with distilled water. Trip blanks will accompany each sample shipment to be analyzed for

volatile organics. Trip blanks will be analyzed for volatile organics only. Trip blanks will not be used when non-aqueous samples are collected for volatile organics.

- Field Blanks – Field blanks are used to determine if the equipment decontamination procedures have been sufficient. A field blank consists of a group of laboratory-cleaned sample containers that are transported empty into the field. At the field location, distilled water is passed through the precleaned and/or decontaminated sampling equipment and placed into the empty group of containers for analysis. Field blanks are not collected when samples are collected directly into the sample container (i.e., the sample container is used as the collection device).
- Matrix Spike/Matrix Spike Duplicates – Matrix spike/matrix spike duplicates are used to assess laboratory accuracy and precision. For the laboratory to perform a matrix spike/matrix spike duplicate analysis, the laboratory must be supplied with triple the sample volume for aqueous extractibles (BNA/pesticides/PCBs) and one additional 40 ml VOA for aqueous volatile organic analysis. No additional sample volume is required for metal analysis for aqueous analysis or for all TCL/TAL parameters for non-aqueous samples. Matrix spike/matrix spike duplicates (MS/MSDs) are performed at the same frequency (1 to 20 samples) as duplicates.

The sample(s) to be utilized for matrix spike/matrix spike duplicate analysis will be collected from areas where contamination is suspected to be present. The sample label will note that the sample is to be used for matrix spike/matrix spike duplicate analysis by the laboratory.

2.3.2 DOCUMENTATION

Each sample submitted for analysis will be properly documented to ensure timely, correct, and complete analysis for all parameters requested, and to support use of analytical data in potential enforcement actions. Sample documentation will include sample labels, Contract Lab Sampling Information Sheets, and Chain-of-Custody Records.

Field data will be entered into a bound notebook. Each page shall be initialed, signed, and dated by the individual responsible for recordkeeping. All relevant data, which includes sample code, locations, names of sampling personnel, and date, will also be provided in a separate field sample key.

2.3.4 DATA VALIDATION

Organic analytical data from the analysis for the TCL volatile and TCL semi-volatile and will be reviewed by a data validator based upon analytical and quality assurance requirements specified in the EPA CLP Statement of Work (SOW) 2/88 and 9/88 revisions, using the EPA Region III Standard Operating Procedure (SOP) for data validation. The GC/MS mass spectra of Tentatively Identified Compounds (TICS) will be reviewed using EPA CLP guidelines and best professional judgement. Inorganic analytical data from the analysis of samples for the Target Analyte List (TAL) will be reviewed based upon analytical data and quality assurance requirements specified in the EPA CLP.

Analytical data will be reviewed to determine the usability of results. The Data Validation Reports will generally follow the Region III format to include a tabular summary of Data Qualifications; a Data Assessment Narrative; divided into general comments and specific findings for each analytical fraction; and the qualified Form I's for the data review which will be annotated with Region III Data Validation Footnotes or references to the numerical listing of specific findings from the narrative describing the conditions and causes for qualification or rejection of individual analyses.

The Data Validation Report will also include the completed checklist portion of the appropriate Region III SOP, the completed Regional Data Assessment Summary, and all records of conversation documenting questions and requests by the validation subcontractors to the analytical laboratory and finally, any resubmissions or additional information supplied by the laboratory in support of the data review and validation. In addition, a data usability report will be prepared summarizing the results of data validation and whether or not the samples were found to be in compliance with the ASP QA/QC requirements. The usability report will include the justification for the use of any non-compliant data and the identification of any data gaps as a result of rejected data.

Data processing QC will be assessed by the designated team members. This task will consist of checking data entry accuracy against the laboratory packages and the field notebooks.

3.0 SUPPORT PLANS

3.1 HEALTH AND SAFETY PLAN

A Health and Safety Plan (HASP) was prepared for the 2005 investigation activities. The HASP contains all of the elements to comply with the requirements of 29 CFR 1910.120 (Hazardous Operations and Emergency Response). The HASP will be updated as necessary to include any additional activities.

3.2 WASTE MANAGEMENT PLAN

All wastes that are generated during the investigation will be stored, transported, and disposed in accordance with all applicable state and federal regulations. Every effort will be made to minimize the amount and toxicity of wastes generated. It is anticipated that the following wastes will be generated during the investigation:

- Drill cuttings from soil borings and monitoring wells: Drill cuttings will be generated when drilling soils borings and monitoring wells. These cuttings will be placed into drums for storage. The soil cuttings will be characterized in accordance with the requirements of the disposal facility that will receive this waste. The waste will be disposed either as a hazardous or nonhazardous waste based on the characterization of the soil in the drums;
- Well development and purge water: Wastewater will be generated during well development and well purging. Well purging and sampling will be conducted using low flow techniques. These low flow techniques serve to minimize the quantity of purge water generated. This water will be collected in closed-top drums for storage and will be disposed through the Site's treatment system;
- Decontamination fluids: Decontamination fluids, primarily water, will be generated during drilling and sampling activities to assure equipment is properly cleaned between locations. All decontamination fluids consisting of water will be collected in closed-top drums for storage and will be disposed through the Site's treatment system; and
- Used personal protection equipment and other domestic trash: Used personal protection equipment and other domestic trash will be generated during the installation of the borings and the monitoring wells and during the sampling events. It will be treated as nonhazardous waste and discarded in the appropriate municipal waste dumpster or compactor located on the Site.

Following completion of the monitoring well installation and groundwater sampling activities, samples of wastes generated will be collected in accordance with GM FMG 10.0 – Waste Characterization (Rev. November 20, 2001). The data from the waste characterization activities will be used to profile the waste for appropriate off-Site disposal.

All waste manifests, bills of lading, and other related paperwork will be maintained in the project files. All waste will be stored, transported, and disposed in accordance with applicable federal and state rules and regulations.

3.3 COMMUNITY RELATIONS/PUBLIC PARTICIPATION PLAN

The area in which the investigation will be conducted is located near the center of the Site and there is no known or suspected off-Site impact. Consequently, there is no need for community relations/public participation program elements in this Work Plan.

4.0 INVESTIGATION REPORT

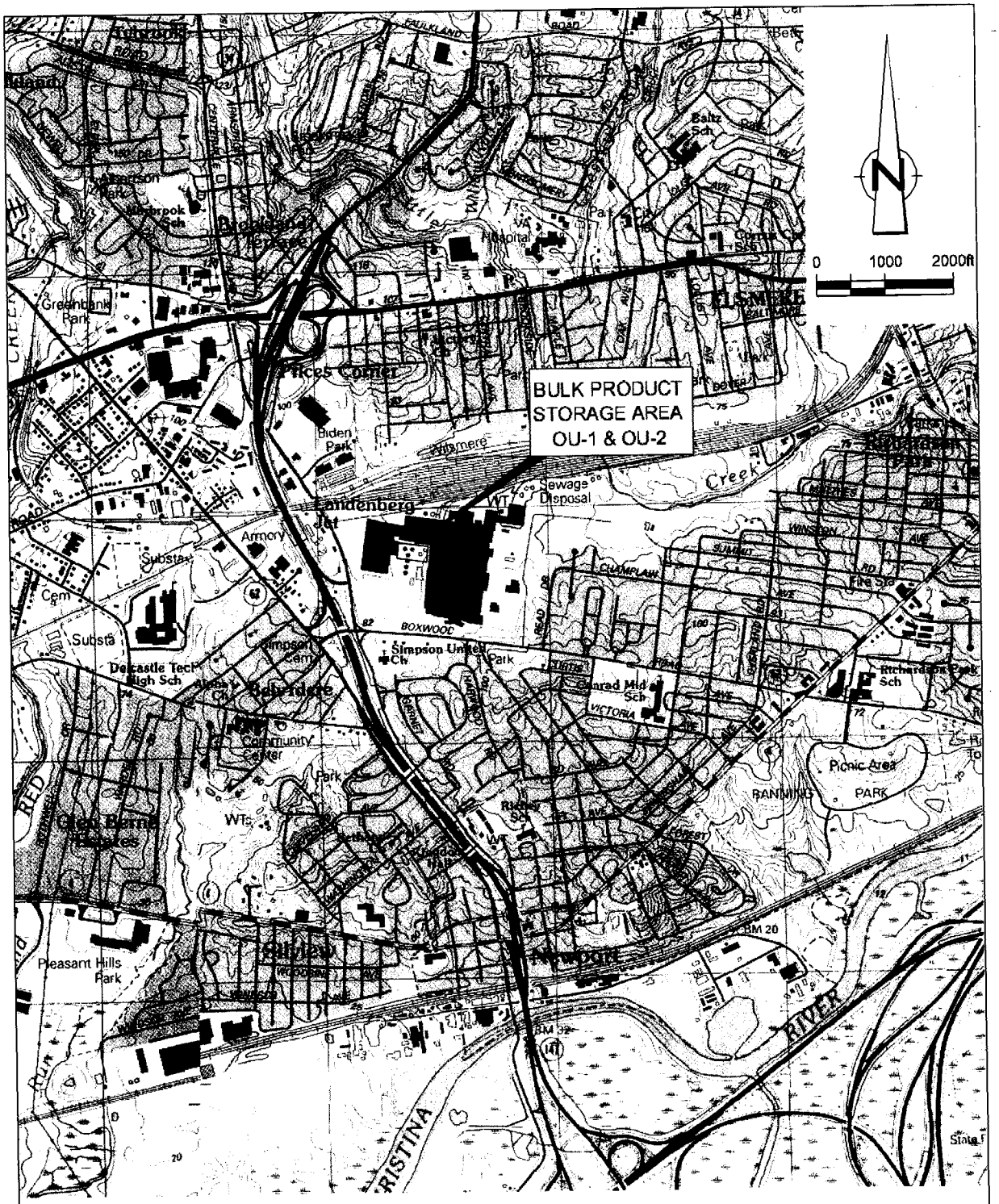
Following receipt of the supplemental groundwater investigation, a report will be prepared to summarize all available groundwater data and to present the results of the vapor intrusion and risk-based evaluation. The report will be prepared in general accordance with the suggested report format as presented in Appendix B of the Delaware HSCA Guidance dated October 1994. The report will include the following sections:

- Introduction;
- Site Physical Characteristics;
- Nature and Extent of Contamination;
- Contaminant Fate and Transport;
- Baseline Risk Assessment;
- Ecological Assessment; and
- Summary and Conclusions.

5.0 PROJECT SCHEDULE

The schedule below identifies the critical path and milestone activities associated with this project.

Activity	*Target Completion Date*
Work Plan Presentation to DNREC-SIRB	July 2006
Work Plan Approval by DNREC-SIRB	August 2006
New Well Installation	August 2006
Groundwater Sampling	August 2006
Laboratory Analyses	September 2006
Data Validation	October 2006
Vapor Intrusion and Risk Evaluation	November 2006
Report Preparation	November 2006
Report Submission to DNREC-SIRB	December 2006



REFERENCE:

UNITED STATES GEOLOGIC SURVEY
WILMINGTON SOUTH QUADRANGLE, DEL
TOPOGRAPHIC, 7.5 MINUTES SERIES 1997
SCALE: 1:24,000

figure 1.1

SITE LOCATION MAP
GENERAL MOTORS ASSEMBLY PLANT
Wilmington, Delaware

17338-25(008)GN-NF002 JUN 12/2006

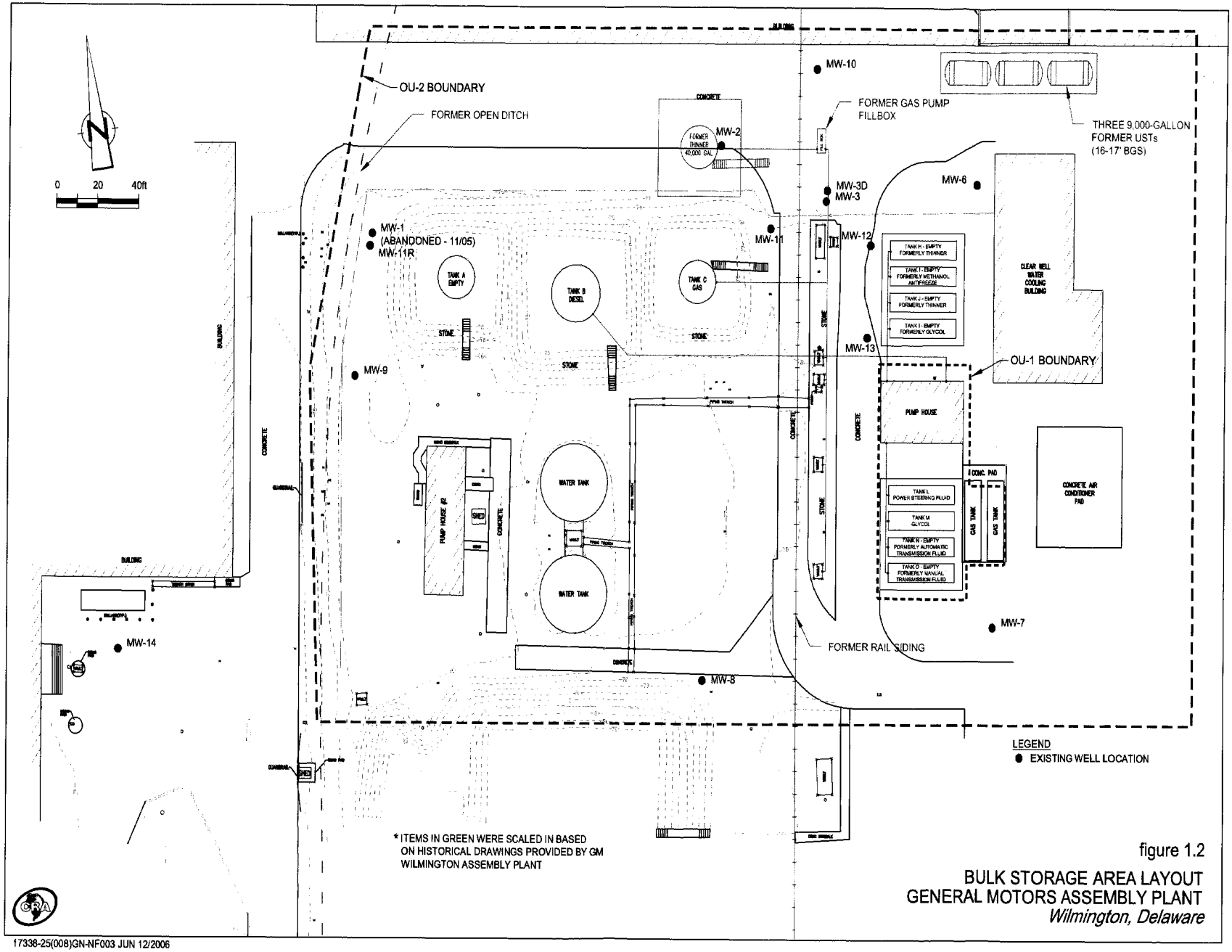


figure 1.2

BULK STORAGE AREA LAYOUT
GENERAL MOTORS ASSEMBLY PLANT
Wilmington, Delaware

17338-25(008)GN-NF003 JUN 12/2006

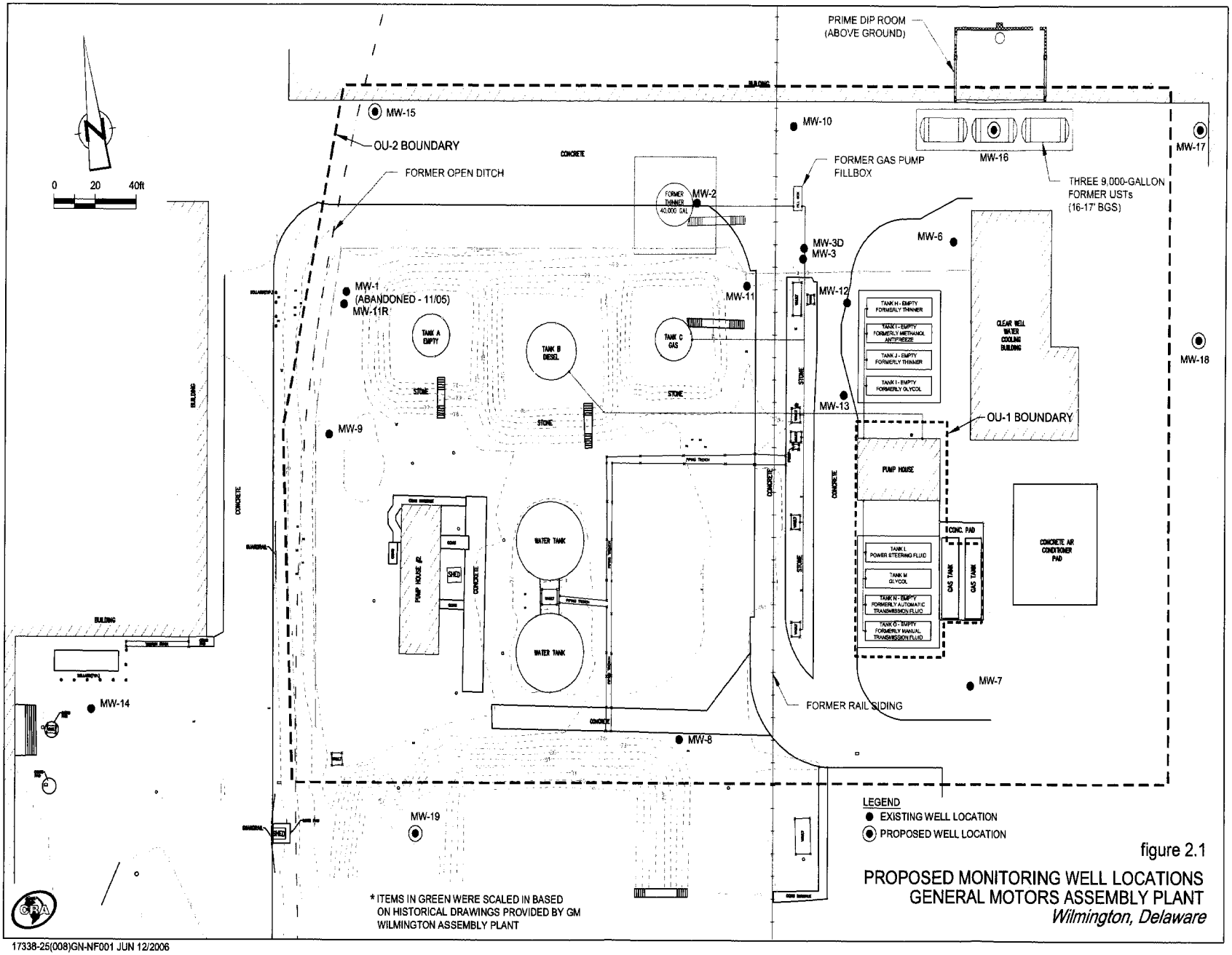


figure 2.1

PROPOSED MONITORING WELL LOCATIONS
GENERAL MOTORS ASSEMBLY PLANT
Wilmington, Delaware

17338-25(008)GN-NF001 JUN 12/2006

TABLE 2.1

PROPOSED ANALYSIS FOR GROUNDWATER
WORK PLAN FOR SUPPLEMENTAL GROUNDWATER INVESTIGATION OF
OU-2 BULK PRODUCT STORAGE TANK AREA
GM ASSEMBLYPLANT
WILMINGTON, DE

Monitoring Well	Status	Analysis			
		TCL VOCs	TCL SVOCs	TAL Metals UNFILTERED	TAL Metals FILTERED
MW-1	Abandoned	NA	NA	NA	NA
MW-2	Existing	✓	✓	✓	✓
MW-3	Existing	✓	✓	✓	✓
MW-3D	Existing	✓	✓	✓	✓
MW-4	Presumed Abandoned	NA	NA	NA	NA
MW-5	Abandoned	NA	NA	NA	NA
MW-6	Existing	✓	✓	✓	✓
MW-7	Existing	✓	✓	✓	✓
MW-8	Existing	✓	✓	✓	✓
MW-9	Existing	✓	✓	✓	✓
MW-10	Existing	✓	✓	✓	✓
MW-11	Existing	✓	✓	✓	✓
MW-11R	Existing	✓	✓	✓	✓
MW-12	Existing	✓	✓	✓	✓
MW-13	Existing	✓	✓	✓	✓
MW-14	Existing	✓	✓	✓	✓
MW-15	Proposed	✓	✓	✓	✓
MW-16	Proposed	✓	✓	✓	✓
MW-17	Proposed	✓	✓	✓	✓
MW-18	Proposed	✓	✓	✓	✓
MW-19	Proposed	✓	✓	✓	✓
QA/QC Samples	**Number**				
Field Duplicate	2	1/10	1/10	1/10	1/10
Trip Blank	5	1/shipping container	NA	NA	NA
Field Blank	2	1/10	1/10	1/10	1/10
MS/MSD	1	1/20	1/20	1/20	1/20

APPENDIX A

FIELD METHOD GUIDELINES

TABLE OF CONTENTS

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DRILLING TECHNIQUES

INTRODUCTION.....1
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PROCEDURAL GUIDELINES.....1
REFERENCES.....5

REMEDIATION SECTION	FIELD METHOD GUIDELINE NO.: FMG 2.2
WORLDWIDE FACILITIES GROUP	EFFECTIVE DATE: NOVEMBER 20, 2001
GENERAL MOTORS CORPORATION	
REVISION NO.: 0	REVISION DATE:

DRILLING TECHNIQUES

INTRODUCTION

This section will provide a brief description of common methods for conducting subsurface investigations. It should be noted that every drilling technology has its limitations.

PROCEDURES REFERENCED

- FMG 2.3 - Soil Borings.
- FMG 2.4 - Bedrock Coring.
- FMG 2.6 - Soil Classification.
- FMG 2.7 - Rock Classification.
- FMG 3.2 - Overburden Wells.
- FMG 3.3 - Top of Bedrock Wells.
- FMG 3.4 - Deep Bedrock Wells.
- FMG 3.6 - Piezometers.

PROCEDURAL GUIDELINES

It is important that the drilling method or methods used minimize disturbance of subsurface materials and not contaminate the subsurface and groundwater. The actual drilling method would be dependent upon site-specific geologic conditions. It is important to note that the drilling equipment selected be decontaminated before and between borehole locations to prevent cross contamination (see FMG 9.0 - Equipment Decontamination). Where possible drilling methods that minimize waste generation (soil cuttings), and wastewater generation (decontamination water), should be selected for GM investigation/remedial tasks.

In other settings it may be desirable to dictate drilling procedures that minimize turbidity/maximize the ability to achieve sediment-free groundwater. Generally, rotosonic techniques or rotary spun casing techniques achieve these objectives, or oversizing the borehole/sand pack may be considered, as well.

Rotosonic Drilling

This method consists of a combination of rotation with high frequency vibration to advance a core barrel to a desired depth. Once the vibration is stopped, the core barrel is retrieved, and the sample is vibrated or hydraulically extracted into plastic sleeves or sample trays. Monitoring wells shall be installed through the outer casing with minimal formation disturbance and mixing of formation materials. Rotosonic drilling generally requires less time than more traditional methods and minimizes soil mixing and soil disturbance (preferred for well locations where low turbidity is an important objective). Continuous, relatively undisturbed samples can be obtained through virtually any formation. Conventional sampling tools can be employed as attachments (i.e., hydropunch, split spoon, Shelby tube, etc.). No mud, air, water, or other circulating medium is required. The rotosonic method can drill easily through formations such as rock, sand, clay, or glacial till. The main limitation of this method is the availability of equipment, the large area required (i.e., drill units are quite large), and costs.

Direct-Push (Geoprobe™)

Direct-push refers to the sampler being "pushed" into the soil material without the use of drilling to remove the soil. This method relies on the amount of the drill weight combined with percussion for advancement of the tool string. Discrete soil samples are continuously obtained as well groundwater and vapor samples can also be collected utilizing this method. Subsurface investigations typically probe to depths of 30 feet or more, depths will vary based on site-specific geology.

Direct-push method is widely used for UST investigations and property investigations. This method is used extensively for initial site screening activities to delineate vertical and horizontal plume presence and can significantly reduce investigative costs.

This method is becoming more popular due to the limited cuttings that are produced during the sampling process and the sampling process speed.

The use of the Geoprobe™ 6600 also allows for the installation of 2-inch diameter monitoring wells in that the 4 1/4-inch hollow-stem auger method can be utilized.

Rotary Method

This method consists of a drill rod attached to a drill bit (soils: tricone, drag; rock: button studded, diamond studded) that rotates and cuts through the soils and rock. The cuttings produced are forced to the surface between the borehole wall and the drill rod by drilling fluids which generally consist of water, drilling mud, or air. The drilling fluids not only force the cuttings to the surface but also keep the drilling bit cool. Using rotary methods for well installations can be difficult as it usually requires several steps to complete the installation. First, the borehole is drilled; then temporarily cased; then the well is installed; and then the temporary

casing is removed. In some cases, the borehole may remain open without installing a casing but this will only occur in limited instances (i.e., cohesive soils).

i) Water Rotary

When using water rotary, the potable water supply shall be analyzed for contaminants of concern. Water rotary is the preferred rotary method since the potable water is the only fluid introduced into the borehole during drilling. However, the use of water as a fluid is generally only successful when drilling in cohesive soils. The use of potable water (only) also reduces well development time, when compared to mud rotary.

ii) Air Rotary (typically used in rock)

When using air rotary, the air compressor must have an in-line oil filter system assembly to filter the oil mixed with the air coming from the compressor. This will help eliminate contaminant introduction into the formation. The oil filter system shall be regularly inspected. Air compressors not having an in-line oil filter system are not acceptable for air rotary drilling. A cyclone velocity dissipater or similar air containment system shall also be used to funnel the cuttings to one location rather than letting the cuttings blow uncontrolled out of the borehole. Air rotary may not be an acceptable method for well installation where certain contaminants are present in the formation. Alternatively, it may be necessary to provide treatment for the air being exhausted from the borehole during the installation process.

iii) Mud Rotary

Mud rotary is the least preferred rotary method because contamination can be introduced into the borehole from the constituents in the drilling mud (i.e., Ohio, Michigan). The drilling muds are generally non-toxic and do not introduce contaminants into the borehole, however, it is possible for mud to commonly infiltrate and affect water quality by sorbing metals and polar organic compounds (Aller et al., 1991). Chemical composition and priority pollutants analysis may be obtained from the manufacturer. Mud rotary shall utilize only potable water and pure (no additives) bentonite drilling muds. The viscosity of the drilling mud shall be kept as low as possible in order to expedite well development. Proper well development is essential to ensure the removal of all the drilling mud and to return the formation to its previously undisturbed state.

Hollow-Stem Auger

The hollow-stem continuous-flight auger is among the most frequently used in the drilling of monitoring wells (overburden wells) or for placement of overburden casings for bedrock wells.

The primary advantages of hollow-stem augering are that:

- Generally, no additional drilling fluids are introduced into the formation.

- Representative geologic soil samples can be easily obtained using split-spoon samples in conjunction with the hollow-stem augers.
- Monitoring wells can be installed through the augers eliminating the need for temporary borehole casings.

Disadvantages of hollow-stem augering are:

- Creates problems for select parameters.
- Large volumes of cuttings are typically generated.
- Decontamination is fairly time consuming/labor intensive.
- Relatively slow when compared to direct-push methods (soil sampling tasks).

Installing monitoring wells through hollow-stem augers is a relatively simple process although precautions need to be taken to ensure that the well is properly backfilled. This can be particularly problematic in cases where flowing sand is present.

Hollow-stem augers are available with inside diameters of 2.5, 3.25, 4.0, 4.25, 6.25, 8.25, and 10.25 inches. The most commonly used are 4.25 inches for 2-inch (5 cm) monitoring wells and 6.25 inches for 4-inch (10 cm) monitoring wells. Boreholes can usually be drilled with hollow-stem augers to depths up to 100 feet (30 m) in unconsolidated clays, silts, and sands. Removing augers in flowing sand conditions while installing monitoring wells may be difficult since the augers have to be removed without being rotated. A bottom plug or pilot bit assembly should be utilized to keep out soils and/or water that have a tendency to plug the bottom of the augers during drilling. If flowing sands are encountered, potable water (analyzed once for contaminants of concern) may be poured into the augers to equalize the pressure to keep the formation materials and water from coming up into the auger once the bottom plug is removed.

Dual-Wall Reverse Circulation Air Method of Drilling

This method consists of two concentric strings of drill pipe (an outer casing and a slightly smaller inner casing). The outer drill pipe is advanced using rotary drilling with a donut-shaped bit attached to the dual casing string cuts an area only the width of the two casings and annulus between. Compressed air is continually forced down the annulus between the inner casing carrying the drill cuttings and groundwater. At the surface, the inner casing is connected to a cyclone hopper where the drill cuttings and groundwater fall out the bottom of the hopper, and air is disbursed out the top. The dual wall provides a fully cased borehole in which to install a monitoring well. The only soil or groundwater materials exposed at any time are those at the drill bit. Therefore, the potential for carrying contamination from one stratum to another is minimal. Depth-specific groundwater samples can be collected during drilling; however, since the groundwater is aerated, analysis for volatile compounds may not be valid.

Well Points

In some limited cases, well points (sand points) are driven into place without the use of augers. This method provides no information on the geologic condition (other than the difficulty of driving which may be related to formation density). Well points are most often used simply to provide dewatering of a geologic unit prior to excavation in the area. Well points are also used in monitoring shallow hydrogeologic conditions such as in stream beds.

REFERENCES

Numerous publications are available describing current monitoring well design and construction procedures.

Driscoll, F.G., 1986. Groundwater and Wells, 2nd Edition. Johnson Division.

EPA/625/6-90/0166 (July 1991), Handbook Ground Water Volume II: Methodology.

Freeze, R.A. and Cherry, J.A., 1979. Groundwater. Prentice Hall, Inc.

National Water Well Association, 1989. Handbook of Suggested Practices for the Design and Installation of Groundwater Monitoring Wells.

Environmental Protection Agency (1986), RCRA Groundwater Monitoring Technical Enforcement Guidance Document, OSWER-9950.1.

In addition, the following ASTM publications apply:

ASTM D5474	Guide for Selection of Data Elements for Ground-Water Investigations
ASTM D5787	Practice for Monitoring Well Protection
ASTM D5521	Guide for Development of Ground-Water Monitoring Wells in Granular Aquifers
ASTM D5978	Guide for Maintenance and Rehabilitation of Ground-Water Monitoring Wells
ASTM D5299	Guide for Decommissioning of Ground Water Wells, Vadose Zone Monitoring Devices, Boreholes and Other Devices for Environmental Activities
ASTM D5092	Standard Practice for Design and Installation of Ground Water Monitoring Wells in an Aquifer.

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SOIL BORINGS

INTRODUCTION

The following presents a description of the methods generally employed for the installation of boreholes and the collection of subsurface soil samples. Boreholes are typically installed to define geologic conditions for hydrogeologic and geotechnical evaluation; to allow the installation of monitoring wells and piezometers; and to allow the collection of subsurface soil samples (generally above the water table) for chemical analysis.

Several manual methods are available for the collection of shallow subsurface soil samples (e.g., hand augers, post-hole augers, vibratory hammers). However, the most common methods used by GM to advance boreholes are rotosonic drilling techniques, hollow-stem augers (HSA), or the use of a direct-push equipment. Rotosonic drilling and direct-push techniques are preferred boring approaches at GM Facilities. FMG 2.2 - Drilling Techniques, provides insight into the advantages/disadvantages of these drilling methods.

PROCEDURES REFERENCED

- FMG 1.3 - Utility Clearance.
- FMG 2.2 - Drilling Techniques.
- FMG 2.6 - Soil Classification.
- FMG 2.7 - Rock Classification.
- FMG 6.1 - Soil.

PROCEDURAL GUIDELINES

The following activities must be undertaken prior to undertaking a borehole installation and subsurface soil sampling program.

i) Assemble all equipment and supplies required per the Work Plan.

ii) Obtain a site plan and any previous stratigraphic logs. Determine the exact number and location of boreholes to be installed and the depths of samples for chemical analysis.

iii) Contact the analytical group to arrange/determine:

- Laboratory;
- Glassware/sample jars;
- Cooler;
- Shipping details;
- Start date; and
- Expected duration.

iv) Establish borehole locations in field using available landmark or by surveying methods if necessary.

v) Arrange for utility clearance of franchised utilities and site utilities.

vi) Determine notification needs with the Project Manager. Have the regulatory groups, landowner, GM Facility personnel, and laboratory been informed of the sampling event?

vii) Determine the methods for handling and disposal of drill cuttings, wash waters, and spent decontamination fluids.

Once the prior planning and preparation activities are completed, the borehole installation and subsurface soil sampling program can proceed. The typical series of events which takes place is:

- Locating and marking of borehole locations (if not already completed).
- Equipment decontamination.
- Final visual examination of proposed drilling area for utility conflicts/final hand auger or post-hole check to verify utility absence.
- Advancement of borehole and collection of the soil sample.
- Field screening of soil sample.
- Description of soil sample. (Form FMG 2.6-01 - Stratigraphy Log - Overburden (Page 1/Page 2) will be used to record data.)
- Sample preparation and packaging.
- Abandonment of boreholes.
- Surveying of borehole locations and elevations.
- Field note completion and review.

i) <u>Locating and Marking of Boreholes/Final Visual Check</u>

The proposed borehole locations marked on the site plan are located in the field and staked. On most sites, this will likely be done several days in advance of the drill rig arriving on site. Unless boreholes are to be installed on a fixed grid, the proposed locations are usually strategically placed to assess site conditions.

Once the final location for the proposed boring has been selected and utility clearances are complete, one last visual check of the immediate area should be performed before drilling proceeds. This last visual check should confirm the locations of any adjacent utilities (subsurface or overhead) and verification of adequate clearance. If gravity sewers or conduits exist in the area, any access manholes or chambers should be opened and the conduit/sewer alignments confirmed. Do not enter manholes unless confined space procedures are followed.

ii) Borehole Advancement

If possible, it is prudent to use a hand auger or post-hole digging equipment to a sufficient depth to verify the absence of buried utilities and pipelines. This procedure should clear the area to the full diameter of the drilling equipment which will follow.

If it is necessary to relocate any proposed borehole due to terrain, utilities, access, etc., the Project Manager must be notified and an alternate location will be selected.

Prior to use and between each borehole location at an environmental site, the drilling and sampling equipment must be decontaminated. All decontamination must be conducted in accordance with the project-specific plans or the methods presented in FMG 9.0 - Equipment Decontamination.

The clean augers/tooling are covered with clean plastic sheeting to prevent contact with foreign materials. For geotechnical, geologic, or hydrogeologic studies where contaminants will not be present, it is sufficient to clean the drilling equipment simply by removing the excess soils.

Collection of soil samples is one of the most important considerations in selecting drilling methods. Therefore, the need for reviewing drilling techniques (FMG 2.2 - Drilling Techniques) and the Site objectives must first be considered. Soil Classification will be completed in accordance with FMG 2.6 - Soil Classification. Sections iii) and iv) describe borehole soil sampling procedures using direct-push tooling and HSA/split-spoon sampling (Standard Penetration Testing - SPT), respectively.

iii) Direct-Push/Macro-Core™ Soil Sampler

The operation of the direct-push/Macro-Core™ Soil Sampler (or equivalent) consists of "pushing" the sampler into the subsurface and then retrieving it using a direct-push soil probing machine. The collected soil core is contained within an internal soil liner (acetate, polyethylene, or teflon) and removed from the sampler once returned to the ground surface. Sampler length is variable depending on equipment available (2 feet, 4 feet, 5 feet). Once the soil liner has been removed and the outer sampler decontaminated, a new liner is inserted and the sampler reassembled. The clean sampler is then driven back down the same hole to collect the next soil sample.

The Macro-Core™ sampler can be used in either the open-tube or closed-point sampling mode. The open-core sample mode is most commonly used in stable soil conditions. In unstable soils, the piston rod point system prevents collapsed soil from entering the sampler as it is advanced back down the hole. Once at the sample depth, the piston rod is unthreaded and released. The sampler is then driven into the subsurface to fill the sampler with soil, the piston point rides on top of the soil, as it enters the sampler.

Once recovered the soil liner with collected soils is opened (cut lengthwise) and examined to collect soil screening information, soil logging information, and soils for chemical analysis.

iv) Standard Penetration Testing (SPT) Sampling and Testing Procedure

This method is used to obtain representative samples of subsurface soil materials and to determine a measure of the in situ relative density of the subsurface soils. The test methods described below must be followed to obtain accurate SPT values. The split spoon is typically driven in advance of an HSA string which allows collection of the disturbed but representative sample.

SPT sampling is performed by using a split barrel sampler in accordance with ASTM D1586. The split barrel sampler, or split spoon, consists of an 18- or 24-inch long, 2-inch outside diameter tube, which comes apart length wise into two halves. The split spoon is typically driven in advance of an HSA string which allows collection of the disturbed but representative soil sample.

Once the borehole is advanced to the target depth and the borehole cleaned of cuttings, representative soil samples are collected in the following manner:

- The split-spoon sampler should be inspected to ensure it is properly cleaned and decontaminated. The driving shoe (tip) should be relatively sharp and free of severe dents and distortions.
- The cleaned split-spoon sampler is attached to the drill rods and lowered into the borehole. Do not allow the sampler to drop onto the soil.
- After the sampler has been lowered to the bottom of the hole, it is given a single blow to seat it and make sure that it is in undisturbed soil. If there still appear to be excessive cuttings in the bottom of the borehole, remove the sampler from the borehole and remove the cuttings.
- Mark the drill rods in three or four successive 6-inch (0.15 m) increments, depending on sampler length, so that the advance of the sampler under the impact of the hammer can be easily observed for each 6-inch (0.15 m) increment.

The sampler is then driven continuously for either 18 or 24 inches (0.45 or 0.60 m) by use of a 140-pound (63.5 kg) hammer. The hammer may be lifted and dropped by either the cathead and

rope method, or by using a trip, automatic, or semi-automatic drop system. The hammer should free-fall a distance of 30 inches (±1 inches) (760 mm, ±25 mm) per blow. Measure the drop at least daily to ensure that the drop is correct. To ensure a free-falling hammer, no more than 2 1/4 turns of the rope may be wound around the cathead (see ASTM D1586). The number of blows applied in each 6-inch (0.15 m) increment is counted until one of the following occurs:

- A total of 50 blows have been applied during any one of the 6-inch (0.15 m) increments described above;
- A total of 100 blows have been applied;
- There is no advancement of the sampler during the application of ten successive blows of the hammer (i.e., the spoon is "bouncing" on a stone or bedrock); or
- The sampler has advanced the complete 18 or 24 inches (0.45 or 0.60 m) without the limiting blow counts occurring as described above.

In some cases where the limiting number of blow counts has been exceeded, the Consultant may direct the driller to attempt to drive the sampler more if collection of a greater sample length is essential.

On the field form, record the number of blows required to drive each 6-inch (0.15 m) increment of penetration. The first 6 inches is considered to be a seating drive. The sum of the number of blows required for the second and third 6 inches (0.15 m) of penetration is termed the "standard penetration resistance" or the "N-value".

Note: If the borehole has sloughed and there is caved material in the bottom, the split spoon may push through this under its own weight, but now the spoon is partially "pre-filled". When the spoon is driven the 18 or 24 inches representing its supposedly empty length, the spoon fills completely before the end of the drive interval. Two problems arise:

1. *the top part of the sample is not representative of the in-place soil at that depth; and*
2. *the SPT value will be artificially higher toward the bottom of the drive interval since the spoon was packed full. These conditions should be noted on the field log.*

The sampler is then removed from the borehole and unthreaded from the drill rods. The open shoe (cutting end) and head of the sampler are partially unthreaded by the drill crew and the sampler is transferred to the geologist/engineer work surface.

Note: A table made out of two sawhorses and a piece of plywood is appropriate, or a drum, both covered with plastic sheeting.

The open shoe and head are removed by hand, and the sampler is tapped so that the tube separates.

Note: Handle each split spoon with clean disposable gloves if environmental issues are being investigated.

Measure and record the length of sample recovered making sure to discount any sloughed material that is present on top of the sample core.

Caution must be used when conducting SPT sampling below the groundwater table, particularly in sand or silt soils. These soils tend to heave or "blow back" up the borehole due to the difference in hydraulic pressures between the inside of the HSA and the undisturbed soil. To equalize the hydraulic pressure, the inside of the HSA must be filled with water or drilling mud. The drilling fluid level within the boring or HSAs needs to be maintained at or above the in situ groundwater level at all times during drilling, removal of drill rods, and sampling. Since heave or blow back is not always obvious to the driller, it is essential that the water level in the borehole always be maintained at or above the groundwater level.

Heaving conditions and the use of water or mud should be noted on the field logs.

SPT sampling below the water table in sands and silt occasionally results in low SPT values being obtained due to the heaving effect disturbing the soil especially if the water level in the hole has not been maintained at the in situ water level. Suspect low N values should be noted on the field logs. If it is critical to have accurate N values below the water table, other methods can be employed, such as conducting a dynamic cone penetration test. This quick and easy test involves attaching a cone shaped tip to the end of the drill rods, and driving the tip into the ground similar to the SPT method, except that the borehole is not pre-augered. Cones may be driven 20 to 40 feet through a formation without augering. Blow counts are recorded for each foot (0.3 m) of advancement.

A variation of split barrel sampling involves the use of a longer barrel in conjunction with HSAs. The sampling barrel is installed inside the auger with a swivel attachment to limit rotation of the barrel. After completion of a 5-foot auger penetration, the auger is left in place and the barrel retrieved from the borehole. The sampler should be handled and the sample retrieved in the same way as described above for SPT sampling.

Thin-Walled Samplers (Shelby Tubes)

Thin-walled samplers are used to collect relatively undisturbed samples (as compared to split-spoon samples) of soft to stiff clayey soils. Shelby tubes are commonly used. The Shelby Tube has an outside diameter of 2 or 3 inches and is 3 feet long. These undisturbed samples are used for certain laboratory tests of structural properties (consolidation, hydraulic conductivity, shear strength) or other tests that might be influenced by sample disturbance. Procedures for conducting thin-walled tube sampling are provided in ASTM D1587, and are briefly described below.

- The soil deposit being sampled must be cohesive in nature, and relatively free of sand, gravel, and cobble materials, as contact with these materials will damage the sampler.
- Clean out the borehole to the sampling elevation using whatever method is preferred that will ensure the material to be sampled is not disturbed. If groundwater is encountered, maintain the liquid level in the borehole at or above groundwater level during the sampling operation.
- Bottom discharge bits are not permitted. Side discharge bits may be used, with caution. Jetting through an open-tube sampler to clean out the borehole to sampling elevation is not permitted. Remove loose material from the center of a casing or HSA as carefully as possible to avoid disturbance of the material to be sampled.
- Place the sample tube so that its bottom rests on the bottom of the hole. Advance the sampler into the formation without rotation by a continuous and relatively rapid motion; usually hydraulic pressure is applied to the top of the drill rods.
- Determine the length of advance by the resistance and condition of the formation, but the length shall never exceed 5 to 10 diameters of the tube in sands and 10 to 15 diameters of the tube in clays.
- In no case should the length of advance be greater than the sample-tube length minus an allowance for the sampler head and a minimum of 3 inches for cuttings.
- The tube may be rotated to shear the bottom of the sample 2 to 3 minutes after pressing in, and prior to retrieval to ensure the sample does not slide out of the tube. Lift the weight of the rods off of the tube prior to rotating.
- Withdraw the sampler from the formation as carefully as possible in order to minimize disturbance of the sample.
- Package and transport the sample in accordance with FMG 6.10 - Sample Handling and Shipping.

On occasion it maybe required to extract the sample from the tube in the field.

- A sample extruder, which consists of a clamp arrangement to hold the tube and a hydraulic ram to push the sample through the tube, is usually mounted on the side of the rig. To prevent cross-contamination, be certain that the extruder is field cleaned between each sample.
- The sample is then extruded into a carrying tray; these are often made from a piece of 4-inch or 6-inch diameter PVC pipe cut lengthwise. Be certain that the carrying tray is field cleaned between each sample. The sample is carried to the work station to describe the sample, trim the potentially cross contaminated exterior, and place it in the appropriate container.
- The Shelby tube may then be thoroughly field cleaned and decontaminated for reuse. Since they are thin-walled, the tubes are easily damaged, crimped, or otherwise distorted during handling or pushing. The Shelby tube should be inspected before use and any which are significantly damaged should be rejected.

v) Borehole Completion

At the completion of the soil boring, once the soil/groundwater samples have been collected, the borehole annulus is then abandoned. Borehole abandonment options are identified in FMG 2.5 - Borehole Abandonment/Sealing. Each boring will be surveyed to establish vertical/horizontal information; field ties (i.e., swing ties) will also be collected to document the boring location. Once completed, a stratigraphic log will be prepared for reporting purposes.

EQUIPMENT/MATERIALS

- Drilling equipment.
- Form 2.6-01 - Stratigraphy Log - Overburden (Page 1/Page 2).
- Tape measure.

REFERENCES

ASTM D420-93 - Guide to Site Characterization for Engineering, Design, and Construction Purposes.

ASTM D1452-80 - Practice for Soil Investigation and Sampling by Auger Borings.

ASTM D1586-84 - Test Method for Penetration Test and Split-Barrel Sampling of Soils.

ASTM D1587-94 - Practice for Thin-Walled Tube Geotechnical Sampling of Soils.

ASTM D2488-93 - Practice for Description and Identification of Soils (Visual-Manual Procedure).

EPA OSWER-9950.1,1986. RCRA Ground-Water Monitoring Technical Enforcement Guidance Document.

National Water Well Association, Handbook of Suggested Practices for the Design and Installation of Ground-Water Monitoring Wells. 1989.

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LIST OF FORMS
(Following Text)

FMG 2.6-01 STRATIGRAPHIC LOG - OVERBURDEN (Page 1/Page 2)

SOIL CLASSIFICATION

INTRODUCTION

The stratigraphic log is a factual description of the soil at the borehole location and is relied upon to interpret the soil characteristics, and their influence and significance in the subsurface environment. The accuracy of the stratigraphic log is to be verified by the person responsible for interpreting subsurface conditions. An accurate description of the soil stratigraphy is essential for a reasonable understanding of the subsurface conditions. Confirmation of the field description by examination of representative soil samples by the project geologist, hydrogeologist, or geotechnical engineer (whenever practicable) is recommended.

The ability to describe and classify soil correctly is a skill that is learned from a person with experience and by systematic training and comparison of laboratory results to field descriptions.

It is GM's Policy to log soils according to the Unified Soil Classification System (USCS) described in the following.

PROCEDURES REFERENCED

- FMG 2.1 - Test Pits.
- FMG 2.3 - Soil Borings.

PROCEDURAL GUIDELINES

Several methods for classifying and describing soils or unconsolidated sediments are in relatively widespread use. The Unified Soil Classification System (USCS) is the most common. With the USCS, a soil is first classified according to whether it is predominantly coarse grained or fine grained.

The description of fill soil is similar to that of natural undisturbed soil except that it is identified as fill and not classified by USCS group, relative density, or consistency. Those logging soils must attempt to distinguish between soils that have been placed (i.e., fill) and not naturally present; or soils that have been naturally present but disturbed (i.e., disturbed native).

It is necessary to identify and group soil samples consistently to determine the subsurface pattern or changes and non-conformities in soil stratigraphy in the field at the time of drilling. The stratigraphy in each borehole during drilling is to be compared to the stratigraphy found at the previously completed boreholes to ensure that pattern or changes in soil stratigraphy are noted and that consistent terminology is used.

Visual examination, physical observations and manual tests (adapted from ASTM D2488, visual-manual procedures) are used to classify and group soil samples in the field and are summarized in this subsection. ASTM D2488 should be reviewed for detailed explanations of the procedures. Visual-manual procedures used for soil identification and classification include:

- Visual determination of grain size, soil gradation, and percentage fines.
- Dry strength, dilatancy, toughness, and plasticity (thread or ribbon test) tests for identification of inorganic fine grained soil (e.g., CL, CH, ML, or MH).
- Soil compressive strength and consistency estimates based on thumb indent and pocket penetrometer (preferred) methods.

The three main soil divisions are: coarse grained soil (e.g., sand and gravel), fine grained soil (e.g., silt and clay), and soil with high natural organic matter content (e.g., peat and marl).

Coarse Grained Soil

The USCS group symbols for coarse grained soil are primarily based on grain or particle size, grain size distribution (gradation), and percent fines (silt and clay content).

Coarse grained soils are then further subdivided according to the predominance of sand and gravel. Course grained soil is made up of more than 50 percent, by weight, sand size, or larger (75 μm diameter, No. 200 sieve size or larger). It is noted that there are other definitions for coarse grained or coarse textured soil and for sand size such as soil having greater than 70 percent particles equal to or greater than 50 μm diameter.

Descriptions for grain size distribution of soil include; poorly graded (i.e., soil having a uniform grain size, SP and GP) and well graded (i.e., poorly sorted; having wide range of particle sizes with substantial intermediate sizes, SW and GW).

Coarse grained soils are further classified based on the percentage of silt and clay it contains (fines content). Coarse grained soils containing greater than 12 percent fines is commonly described as dirty. This description arises from the soil particles that adhere when the soil is rubbed between the hands or adhere to the sides of the jar after shaking or rolling the soil in the jar. The jar shake test which results in segregation of the sand and gravel particles is also used as a visual aid in determining gravel and sand percentages.

Examples of the group symbol, name, and adjectives used to describe the primary, secondary, and minor components of soil are; GW - Sandy Gravel (e.g., 70 percent gravel and 30 percent sand) or Sandy Gravel trace silt (less than 10 percent silt), and SP - Sand, uniform.

Relative density is an important parameter in establishing the engineering properties and behavior of coarse grained soil. Relative density of non-cohesive (granular) soil is determined from standard penetration test (SPT) blow counts (N values) (after ASTM Method D1586).

The SPT gives a reliable indication of relative density in sand and fine gravel. N values in coarse grained soil are influenced by a number of factors that can result in overestimates of relative density (e.g., in coarse gravel and dilatent silty fine sand) and can be conservative and underestimate the relative density (e.g., sand below the groundwater table and uniform coarse sand). These effects will be assessed by the project geotechnical engineer, if required, and need not be taken into account by field personnel.

Other dynamic methods, such as modified SPT and cone penetration tests, are used on occasion to supplement or replace the SPT method for certain site-specific conditions. The details of all modifications to the SPT or substitute methods should be recorded as they are required to interpret test results and correlate to relative density.

Fine Grained Soil

A soil is fine grained if it is made up of half or more of clay and silt (i.e., fines greater than 50 percent by weight passing the 75 μm (No. 200) sieve size). A description of visual-manual field methods and criteria (after ASTM D2488) that are used to further characterize and group fine grained soil (e.g., CL, CH, ML, or MH) including dry strength, dilatancy, toughness, and plasticity (thread or ribbon test) follows. Fine grained soils are subdivided on a basis of the liquid limit and the degree of plasticity.

The accurate identification of silts and clays can be aided by the use of some single field tests. Clay is sticky, will smear readily, and can be rolled into a thin thread even when the moisture content is low. When it is dry clay forms hard lumps. Silt on the other hand, has a low dry strength, can be rolled into threads only at high moisture content, and a wet silt sample will puddle when it is tapped.

Criteria for Describing Dry Strength

Description	***Criteria***
None	The dry specimen crumbles into powder with mere pressure of handling.
Low	The dry specimen crumbles into powder with some finger pressure.
Medium	The dry specimen breaks into pieces or crumbles with considerable finger pressure.

High	The dry specimen crumbles into powder with finger pressure. Specimen will break into pieces between thumb and a hard surface.
Very High	The dry specimen cannot be broken between the thumb and a hard surface.

Criteria for Describing Dilatency

Description	*Criteria*
None	No visible change in small wetted specimen when rapidly shaken in palm of hand.
Slow	Water appears slowly on the surface of the specimen during shaking and does not disappear or disappears slowly upon squeezing.
Rapid	Water appears quickly on the surface of the specimen during shaking and disappears quickly upon squeezing or stretching.

Criteria for Describing Toughness

Description	*Criteria*
Low	Only slight pressure is required to roll the thread near the plastic limit. The thread and the lump are weak and soft.
Medium	Medium pressure is required to roll the thread to near the plastic limit. The thread and the lump have medium stiffness.
High	Considerable pressure is required to roll the thread to near the plastic limit. The thread and the lump have very high stiffness.

Criteria for Describing Plasticity

Description	*Criteria*
Nonplastic	A 1/8-inch (3 mm) thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be re-rolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be re-rolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.

Examples of group symbol identification based on visual-manual procedures and criteria for describing fine grained soil are:

Group Symbol	*Dry Strength Plasticity*	*Dilatency*	*Toughness*
ML	None to low Slight	Slow to rapid	Low or thread cannot be formed
CL	Medium to high Low	None to slow	Medium
MH	Low to medium Low	None to slow	Low to medium
CH	High to very high High	None	High

A requirement for positive classification by USCS group symbols (as described in Test Method ASTM D2487) is laboratory determination of particle size characteristics, liquid limit and plasticity index. The need for this type of testing will be determined by the project geologist, hydrogeologist, or geotechnical engineer.

Examples of name terminology that accompanies the group symbols are ML - Sandy Silt (e.g., 30 percent sand) and CL - Lean Clay with sand (e.g., 15 to 29 percent sand).

The correlation between N value and consistency for clays is rather unreliable. It is preferable to determine consistency using more appropriate static test methods, particularly for very soft to stiff clay soil. N value estimates of consistency are more reasonable for hard clay.

Unconfined compressive strength (Su) may be estimated in the field from the pocket penetrometer test method. To obtain a pocket penetrometer estimate of consistency and compressive strength, the soil core is cut perpendicular to the core length, the length of core (minimum 4 inches) is held in the hand and a moderate confining pressure is applied to the core (not sufficient to deform the core); the penetrometer piston tip is slowly inserted into the perpendicular face of the core until the penetrometer indents into the soil core to the mark indicated on the tip of the penetrometer piston; the penetrometer estimate of soil compressive strength (Su) is the direct reading of the value mark on the graduated shaft (in tons per square foot or other unit of pressure as indicated) indicated by the shaft ring marker, or in some models, by the graduated piston reading at the shaft body. To obtain an average estimate, this procedure is completed several times on both ends and mid cross-section of the core. For Shelby tube (or thin wall sampler) samples the pocket penetrometer tip is applied to the exposed bottom of the sample at several locations.

Estimates of compressive strength for clay soil of very soft to stiff consistency are better established by in situ shear vane tests or other static test methods.

The description of consistency (or strength) is an important element in determining the engineering properties and strength characteristics of fine grained cohesive soil. Consistency terms (e.g., soft, hard) are based on the unconfined compressive strength (Su) and shear strength or cohesion (cu) of the soil.

The ease and pattern of soil vapor and groundwater movement in the subsurface is influenced by the natural structure of the soil. Soil structure, for the most part, depends on the deposition method and, to a lesser extent, climate.

Visual Appearance/Other Features

Those logging soils should also note the presence, depth and components of fill soils (if evident), and note the distinction between disturbed native soils (i.e., excavation likely performed) vs. undisturbed native soils.

Other features such as root presence/structure, and soil fractures should also be recorded. Soil fractures should be described noting fracture orientation (i.e., horizontal/vertical), length/aperture and appearance of soil infilling, oxidation and/or weathering (if present).

Field Sample Screening

Upon the collection of soil samples, the soil is screened with a photoionization detector (PID) for the presence of organic vapor. This is accomplished by running the PID across the soil sample. Record the highest reading and sustained readings.

Note: The PID measurement must be done upwind of the excavating equipment or any running engines so that exhaust fumes will not affect the measurements.

Another method of field screening is head space measurements. This consists of placing a portion of the soil sample in a sealable glass jar, placing aluminum foil over the jar top, and tightening the lid. Alternatively, plastic sealable bags maybe utilized for field screen in lieu of glass containers. The jar should only be partially filled. Shake the jar and set aside for at least 30 minutes. After the sample has equilibrated, the lid of the jar can be opened; the foil is punctured with the PID probe and the air (headspace) above the soil sample is monitored. Record this headspace reading on the field form or in the field book.

Note: Perform all headspace readings in an area that is not subject to wind. Also, in the winter, it is necessary to allow the samples to equilibrate in a warm area (e.g., site trailer, van, etc.). This requirement is dictated by the Work Plan.

All head space measurements must be completed under similar conditions to allow comparability of results.

NAPL Detection

During soil examination and logging, the sampler shall carefully check for the presence of light or dense non-aqueous phase liquid (NAPL). NAPL may be present in gross amounts or present in small/minute quantities. The adjectives and corresponding quantities used when describing NAPL within a soil matrix are as follows:

Visual Description	*Fraction of Soil Pore Volume Containing NAPL*
Saturated	>0.5
Some	0.5 to 0.25
Trace	<0.25

A complete description of NAPL, must describe the following:

- Color.
- Quantity.
- Density (compared to water i.e., light/floats or heavy/sinks).
- Odor (if observed).
- Viscosity (i.e., mobile/flowable, non-mobile/highly viscous-tar like).

The presence of an "iridescent sheen" by itself does not constitute "NAPL presence", but may be an indicator that NAPL is close to the area.

NAPL presence within a soil matrix may be confirmed by placing a small soil sample within water, shaking, and observing for NAPL separation (i.e., light or dense), from the soil matrix.

Trace amounts of NAPL are identified/confirmed by a close visual examination of the soil matrix, [i.e., separate soil by hand (wearing disposable gloves)] and perform a careful inspection of the soil separation planes/soil grains for NAPL presence.

Often during the sample examination with a knife, an iridescent sheen will be noted on the soil surface (i.e., clay/silts) if the knife has passed through an area of NAPL.

There are a number of more sophisticated tests available to confirm/identify NAPL presence, these are:

- UV fluorescent analysis.
- Hydrophobic dyes.

- Centrifugation.
- Chemical analysis.

Typically consultants will utilize organic vapor detection results, visual examination, soil/water shake testing, and chemical analysis, to confirm NAPL presence. The more complex techniques described may be incorporated on sites where clear colorless NAPL is present and its field identification is critical to the program.

Note: When describing the presence of vegetative matter in the soil sample, do not use the term "organic" as this often leads to confusion with regards to the presence of organic chemicals (i.e., NAPL).

EQUIPMENT/MATERIALS

- Pocket knife or small spatula.
- Small handheld lense.
- Form FMG 2.6-01 - Stratigraphic Log - Overburden (Page 1/Page 2).
- Tape measure.

REFERENCES

American Society for Testing and Materials (1991), Standard D1452-80, "Practice for Soil Investigation and Sampling by Auger Borings", "Annual Book of ASTM Standard", Section 4, Volume 04.08.

ASTM Standards on Environmental Sampling (1995), Standard D2488-93, "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)"

ASTM Standards on Environmental Sampling (1995), Standard D4700-91, "Guide for Soil Sampling from the Vadose Zone".

ASTM Standards on Environmental Sampling (1995), Standard D1586-92, "Test Method for Penetration Test and Split-Barrel Sampling of Soils".

ASTM Standard D2487, "Classification of Soils for Engineering Purposes (Unified Soil Classification System)".

Geotechnical Gauge, Manufactured by W.F. McCollough, Beltsville, MD.

Sand Grading Chart, by Geological Specialty Company, Northport, Alabama.

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WELL CONSTRUCTION MATERIALS

INTRODUCTION

In environmental subsurface investigations, the information used to evaluate subsurface conditions often relies heavily on the installation of quality groundwater monitoring wells. The application and use of the proper well construction materials to the specific well installation is crucial to obtaining representative and reliable groundwater samples.

The two general types of wells are groundwater monitoring wells and pumping (also referred to as recovery, extraction, or withdrawal) wells. The specific use of a groundwater well dictates the types of materials used to construct it.

This FMG outlines the general types and use of well construction materials and considerations involved in selecting appropriate materials for specific well installation applications. Installation of these materials are described in detail in the specific well installation FMGs listed below.

PROCEDURES REFERENCED

- FMG 3.2 - Overburden Wells.
- FMG 3.3 - Top of Bedrock Wells.
- FMG 3.4 - Deep Bedrock Wells.
- FMG 3.5 - Pump Wells.
- FMG 3.6 - Piezometers.

EQUIPMENT DESCRIPTIONS

Well Screen

Well screen is the portion of the well pipe that contains appropriately sized openings and allows groundwater to enter the well. The screen materials used in groundwater monitoring wells are crucial to ensuring the installation of an efficient, productive, and durable groundwater well.

The diameter of the well screen is generally dependent upon the application of the well. For monitoring wells used in groundwater level measurements and groundwater sampling, screen diameter will generally be 2.0-inch inner diameter (ID) flush-threaded screen segments (piezometers are typically 1.0-inch inner diameter but may be 2-inch also). These screen segments are typically available in 10-foot lengths. Four-inch diameter or larger well screens are usually reserved for recovery or production well applications where larger diameters permit greater groundwater withdrawal rates. Larger diameter wells also allow a well to serve additional functions such as housing oil recovery systems.

Screen material will be either thermoplastic Schedule 40 Poly Vinyl Chloride (PVC) (ASTM D1785, ASTM D2665, ASTM F480) or Schedule 5 Type 316 stainless steel, depending primarily on the depth of the well and the groundwater quality (degree and nature of contamination). Shallower depths and generally low levels of contaminants in groundwater allow for PVC applications, whereas greater depths and severely degraded groundwater quality, or the presence of free-phase oils or solvents, may necessitate stainless steel due to its greater strength and resistance to chemical degradation. It should be noted that PVC and stainless steel are appropriate for the vast majority of environmental applications, and are generally accepted by regulatory agencies. Well materials other than PVC or stainless steel should be used only in certain instances, to be determined and approved by the Project Manager on a case-by-case basis.

Certain applications such as investigation of inorganic (metals) concentrations in groundwater, or the presence of low pH (acidic) conditions, may preclude the use of stainless steel wells. Stainless steel, which contains molybdenum in addition to its iron content, may leach out metal compounds which could lead to misleading groundwater analysis results.

PVC may likewise leach out or degrade specific thermoplastic elements of its composition which may compromise the well integrity or groundwater analyses. PVC generally performs well in acidic groundwater conditions; however, it may degrade in the presence of certain organic compounds such as ketones, aldehydes, or chlorinated compounds in high concentrations. Certain additives to the PVC may also affect groundwater quality.

Well screen slot sizes and well screen type will also be consistent for groundwater monitoring wells. Screen slot size is typically 0.010 inches; 0.020-inch slot size may be more appropriate for coarser formation materials or where the well may serve as a recovery well for free-phase oils. For monitoring applications, slot type should be either factory machine-slotted or continuous-wrap slotted. Perforated, bridge-slotted or louver-slotted well screens are generally not acceptable for most environmental applications and should be avoided.

Screen slot sizes may vary from these two sizes when used in production or recovery (pumping) well applications where the need to maximize groundwater withdrawal is essential. In such cases, screen slot sizes can be manufactured to exact specifications for a particular well based on particle size analysis results and formation transmissivity or permeability.

Well Riser Pipes and Casings

Well riser pipe is a solid extension of the well screen that extends from the screen up to the surface. The riser pipe protects the well screen, prevents outside groundwater from entering the well, and allows groundwater pumped from down in the open interval to be routed up through the well to the surface.

Well riser pipe should be of the same material and size as the well screen described above. In instances to be determined and approved by the Project Manager on a case-by-case basis only, differing materials may be approved for use in the same well (e.g., stainless steel well screen connected to PVC riser). Well risers should extend to the surface and should either be cut at grade in flush-mount completions or as an approximately 3-foot stickup to be covered with a steel protective casing.

Well riser pipe sections shall be flush-threaded and fitted with neoprene, rubber, or other appropriately constructed, durable o-rings to properly seal the threaded pipe joints. Glues or cements are not to be used in well construction.

In installations of bedrock monitoring wells, which have an open rock monitoring interval and a permanent well casing that extends from bedrock to the surface, the permanent casing (or casings in telescoping wells) shall be made of carbon steel or low-carbon steel (greater than 0.8 percent carbon and less than 0.8 percent carbon, respectively). The well casing should be a minimum of 4 inches in diameter (at least 4 inches diameter for the innermost casing).

On sites wells where dense, non-aqueous phase liquid (DNAPL) is present or may be a concern, in screened wells it is advisable to install a collection sump on the base of the well below the well screen to collect infiltrated DNAPL for possible measurement and/or sampling. Sumps should be installed as a 1- to 5-foot section of solid riser material with a sealed bottom placed below the well screen.

Sand Packs

The filter pack, or sand pack, installed in a well replaces formation material immediately around a well with a more permeable material (sand). The sand pack separates the well screen from the formation, increases the hydraulic diameter of the well, and prevents fines (silt or clay) from entering or clogging the well screen.

Sand pack of an appropriate size shall be utilized based on the well screen slot size being used. Sand pack size should be chosen so that the majority of the sand (sand pack has inherent variation in its particle grain size distribution) is larger than the screen slot size while sized small enough to prevent deleterious amounts of formation fines from entering the well through the sand pack. Screen slot sizes of 0.010-inch and 0.020-inch typically use a sand pack such as Morie or U.S. Silica No. 1, No. 0, No. 00N, or equivalent.

Sand pack shall be washed silica sand with a silica content of at least 95 percent. Sands should meet one or more of the following requirements: NSF 61, AWWA B-100, ANSI, or equivalent standards for uniformity and chemical inertness. In cases to be determined and approved by the Project Manager on a case-by-case basis only, differing sand pack materials may be approved for use in a well. Sand packs used for production and recovery wells with larger screen slot sizes will use larger particle sized sand packs of the same type and quality. The slot size and sand pack size for recovery wells should be chosen based on results of formation grain size distribution analysis.

Seals

Bentonite and grout seals are installed above the sand pack to isolate the monitoring interval and prevent groundwater from infiltrating into the well screen from other water-bearing zones. Seals also prevent migration of backfill or formation materials downward into the sand pack.

Bentonite is the generic name for a group of a naturally occurring clay minerals (montmorillonites) that come in a variety of forms: pellets, chips, granulated, or powdered. This material is commercially available as "Wyoming Bentonite". When hydrated it swells to many times its original volume and forms an ultra-low permeability clay seal.

Bentonite chips or pellets are generally used to create a seal immediately above the sand pack. The chips/pellets are dropped inside the augers or well casing by hand down through the water column onto the top of the sand pack. Care must be taken to prevent "bridging" of the bentonite particles in the casing above the target zone. Measurements of the depth to the top of the seal must be obtained during installation of the seal to ensure its proper position and thickness. In the absence of significant water in a casing or borehole, potable water must be added to hydrate the bentonite. The bentonite seal will be allowed to set for a minimum of one-half hour, in order to hydrate properly, before additional seals (grout) are applied. Once the bentonite has set for one-half hour the grout seal may be placed, as described below.

In saline groundwater environments, such as where ocean water may infiltrate the monitoring interval, a zeolite-based seal material may be used, as saline conditions may hamper the performance of bentonite pellets.

Portland cement grout (grout) forms a concrete-like seal that can be more manageable than bentonite (e.g., able to be pumped through a water pump). Grout is generally placed on top of the hydrated bentonite seal to form a solid cement seal around the well riser up to the surface. In certain circumstances, only under approval of the GM Project Manager, soil cuttings may be used to backfill the borehole in lieu of grout.

The grout mixture will consist of one 94-pound bag of Portland cement and 3 to 5 pounds of powdered bentonite added per sack of cement. Two pounds of calcium chloride may also be

added (under certain conditions, e.g., very cold days) to accelerate the setting time of the grout, as well as to increase the dry strength of the grout. The grout will be thoroughly mixed with 6.5 gallons of potable water per sack of cement. Grout is generally placed using either the tremie or Halliburton grouting methods. These are described in the specific well installation FMGs.

Protective Casings and Surface Seals

Once the well screen, riser, and all seals have been placed to ground surface, the well riser must be protected. This includes protection from vehicles, damage, surface water infiltration, and weather. This is typically accomplished using either a flush-mount roadbox or a stickup casing.

Flush-mount roadboxes are circular steel casing segments with a heavy-duty steel lid with locking bolts. These units are widely available and come in a number of diameters and lengths, depending on the well diameter. A stickup protective casing is generally a length of carbon or stainless steel pipe with a locking top.

For a typical 2-inch monitoring well, the roadbox should be at least 6 inches in diameter; a stickup casing should be at least 4 inches in diameter. A roadbox should be at least 12 inches in length (they are typically 16 to 18 inches long) and is installed flush with the ground surface. A stickup casing should be at least 5 to 6 feet long such that approximately 2.5 to 3 feet is below ground surface and 2.5 to 3 feet is protruding above grade. In wells where a permanent steel casing is installed (serves as the well riser pipe) and brought to the ground surface, it may be used as the protective casing provided it is equipped with a semi-permanent, metal, locking cap or cover that can be affixed to the steel casing.

Flush-mount installations should have at least the last 18 inches of the open borehole filled with coarse sand, placed up to ground surface to allow drainage of surface water infiltration down through and out of the roadbox. This also prevents infiltrating surface water from accumulating up over the top of the well riser and draining down into the well. This sand drain is not necessary in the locking cap stickup casings.

Both roadbox and stickup casings must be secured in the ground with concrete, which also serves as a surface seal.

In areas of high vehicle traffic activity, protective steel bollards should be installed. This is typically a vertically oriented, concrete-filled, steel pipe (minimum 4 inches diameter) cemented at least 3 feet into the ground, acting as a "guard rail" for the well casing and preventing it from being damaged by vehicles. Three bollards should be placed around a well to provide adequate protection.

EQUIPMENT/MATERIALS

- Drilling equipment.
- Well screen and riser materials.
- Sand pack.
- Bentonite pellets/chips.
- Powdered bentonite.
- Portland cement.

REFERENCES

ASTM D1785-99, Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.

ASTM D2665-00, Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings.

ASTM F480-00, Standard Specification for Thermoplastic Well Casing Pipe and Couplings Made in Standard Dimension Ratios (SDR), Schedule 40 and Schedule 80.

ASTM A53/A53M-01, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless for Ordinary Uses.

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(Following Text)

FMG 3.7-01 WELL DEVELOPMENT AND STABILIZATION FORM

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WELL DEVELOPMENT

INTRODUCTION

This procedure is for the development of groundwater monitoring wells that have been installed in overburden, top of bedrock, or deep bedrock formations. Before a newly constructed well can be used for water quality sampling, measuring water levels, or aquifer testing, it must be developed. Well development refers to the procedure used to clear the well and formation around the screen of fine-grained materials (sands, silts, and clays) produced during drilling or naturally occurring in the formation.

Well development is completed to remove fine grained materials from the well but in such a manner as to not introduce fines from the formation into the sand pack. Well development continues until the well responds to water level changes in the formation (i.e., a good hydraulic connection is established between the well and formation) and the well produces clear, sediment-free water to the extent practical.

PROCEDURES REFERENCED

- FMG 3.2 - Overburden Wells.
- FMG 3.3 - Bedrock Wells.
- FMG 10.0 - Waste Characterization.

PROCEDURAL GUIDELINES

The well development procedures presented below are the recommended standards. However, due to variations in conditions, changes in these standards may be necessary in order to facilitate successful monitoring well development.

Well development can be accomplished by using in-place pumps or by using portable equipment; either peristaltic, bladder, or other appropriate pumps depending on well depth. In the case of developing wells installed utilizing the mud rotary methods (least preferred method) it would be

beneficial to surge the well prior to and during development to help break down the filter cake that may have built up on the well screen.

- Don appropriate safety equipment.
- All equipment used for development purposes entering each monitoring well will be cleaned using a soapy wash (laboratory grade), tap water rinse, isopropyl alcohol rinse (or other rinse agent that is appropriate for site-specific conditions), and distilled/deionized water rinse.
- Uncap well and allow water level to stabilize. Attach appropriate pump and lower tubing into well.
- Turn on pump. If well runs dry, shut off pump and allow to recover.
- Collect the groundwater sample in a glass jar to determine relative turbidity, and measure and record the temperature, pH, turbidity, and specific electrical conductance.
- The above steps will be repeated until groundwater is relatively silt-free; no further change is noted; the temperature, pH, turbidity, and specific conductance readings have stabilized to within 10 percent.
- The time period between development and groundwater sampling will be dependent upon the project objectives, and the chemicals of concern (COCs). When sampling for COCs sensitive to turbidity presence (i.e., SVOCs, PCBs, metals), an extended time period between the development activity and the sampling event will be observed. On REALM/ENCORE sites sampling will be conducted in accordance with the following:

Primary COC	***Time Period Between Development and Sampling***
General Chemistry	24 hours
VOCs	24 hours
SVOCs, PCBs, Metals	2 weeks

Waste Disposal

- All waste generated will be disposed in accordance to the methods and procedures contained in FMG 10.0 - Waste Characterization.
- All water generated during cleaning and development procedures will be collected and contained in accordance to the site-specific disposal requirements.
- Personal protective equipment, such as gloves, disposable clothing, and other disposable equipment, resulting from personnel cleaning procedures and from soil sampling and handling activities, will be placed in plastic bags. These bags will be transferred into appropriately labeled 55-gallon drums or a covered roll-off box for appropriate disposal.

EQUIPMENT/MATERIALS

- Appropriate health and safety equipment.
- Knife.
- Power source (e.g., generator, battery).
- Field book.
- Form FMG 3.7-01 - Well Development and Stabilization Form.
- Well keys.
- Graduated pails.
- Pump and tubing.
- Cleaning supplies (including non-phosphate soap, buckets, brushes, laboratory-supplied distilled/deionized water, tap water, isopropyl alcohol or other site-specific rinse agent (e.g., nitric acid solution), aluminum foil, plastic sheeting, etc.).
- Water level meter.
- pH/temperature/conductivity meter.
- Turbidity meter.
- Clear glass jars (e.g., drillers' jars).

REFERENCES

Environmental Protection Agency (1986), RCRA Ground-Water Monitoring Technical Enforcement Guidance Document, OSWER-9950.1.

Environmental Protection Agency (1987), A Compendium of Superfund Field Operations Methods, EPA/540/P-87/001.

Environmental Protection Agency (1988), Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final, EPA/540/G-89/004.

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EQUIPMENT DECONTAMINATION

INTRODUCTION

This procedure describes decontamination of field equipment potentially exposed to contaminants. Proper decontamination is required to reduce the risk of transfer of contaminants from areas of contamination to other areas and to minimize the potential for cross-contamination that would compromise sample quality. The degree of decontamination required will be dependent on the nature of the activity, equipment used, and on the amount of exposure to contaminants.

PROCEDURES REFERENCED

- FMG 2.0 - Subsurface Investigations.
- FMG 5.0 - Aquifer Characterization.
- FMG 6.0 - Sample Collection for Laboratory Analysis.
- FMG 8.0 - Field Instruments – Use/Calibration.
- FMG 10.0 - Waste Characterization.

PROCEDURAL GUIDELINES

Decontamination activities must be performed in a controlled area outside any exclusion zones established on the site. Care must be taken to minimize the potential for transfer of contaminated materials to the ground or onto other materials. Regardless of the size or nature of the equipment being decontaminated, the process will utilize a series of steps that involve removal of gross material (dirt, grease, oil, etc.), washing with a detergent, and multiple rinsing steps. In lieu of a series of washes and rinse steps, steam cleaning with low-volume, high-pressure equipment (i.e., steam cleaner) is acceptable.

Drill rigs, backhoes, and other exploration equipment must be decontaminated prior to initiating site activities, in between exploration locations to minimize cross-contamination potential, and prior to mobilizing off site after completion of site work. Heavy equipment is generally best deconned with a combination of steam-cleaning equipment and detergent scrubbing. Particular

attention should be paid to parts in direct contact with contaminants, e.g., shovels, tires, augers, drilling decks, etc.

Control and containerization of all decontamination fluids is critical. A decontamination pad must be constructed that is appropriate for the size and type of equipment being decontaminated. At a minimum, the decontamination pad will have the following elements:

- An impermeable barrier capable of containing decontamination fluids.
- A low point where fluids will collect and can be pumped into appropriate containers.
- Durability to withstand equipment such as vehicle and foot traffic.
- Appropriate ancillary equipment such as racks to place decontaminated equipment to drain without further exposure to contaminated fluids.
- Labels to alert personnel as to the potential presence of contaminated materials.

Decontamination of Specific Sampling Equipment

The following specific decontamination procedure is recommended:

- Brush loose soil off of equipment.
- Wash equipment with laboratory grade detergent (i.e., Alconox or equivalent).
- Rinse with tap water (three rinses minimum).
- Rinse equipment with reagent grade methanol for VOC samples (this requirement may not be appropriate for sites where methanol is a contaminant of concern).
- Rinse equipment with nitric acid for metal samples (especially important for sites with potentially high metals concentrations.
- Rinse equipment with distilled water.
- Allow water to evaporate before reusing equipment

Decontamination of Monitoring Equipment

Because monitoring equipment is difficult to decontaminate, care should be exercised to *prevent* contamination. Sensitive monitoring instruments should be protected when they are at risk of exposure to contaminants. This may include enclosing them in plastic bags allowing an opening for the sample intake. Ventilation ports should not be covered.

If contamination does occur, decontamination of the equipment will be required; however, immersion in decontamination fluids is not possible. As such, care much be taken to wipe the instruments down with detergent-wetted wipes or sponges, and then with deionized water-wetted wipes or sponges.

Disposal of Wash Solutions and Contaminated Equipment

All contaminated wash water, rinsates, solids and materials used in the decontamination process that cannot be effectively decontaminated (such as polyethylene sheeting) will be containerized and disposed of in accordance with applicable regulations and GM requirements. All containers will be labeled with an indelible marker as to contents and date of placement in the container, and any appropriate stickers required (such as PCBs).

Sampling of containerized wastes will be performed immediately upon completion of the investigations to minimize storage time on site. Storage of decontamination wastes on site will not exceed 90 days under any circumstances.

EQUIPMENT/MATERIALS

Decontamination equipment and solutions are generally selected based on ease of decontamination and disposability.

- Polyethylene sheeting.
- Metal racks to hold decontaminated equipment.
- Soft-bristle scrub brushes or long-handle brushes for removing gross contamination and scrubbing with wash solutions.
- Large galvanized wash tubs, stock tanks, or wading pools for wash and rinse solutions.
- Plastic buckets or garden sprayers for rinse solutions.
- Large plastic garbage cans or other similar containers lined with plastic bags can be used to store contaminated clothing.
- Contaminated liquids and solids should be segregated and containerized in DOT-approved plastic or metal drums, appropriate for off-site shipping/disposal if necessary.

REFERENCES

ASTM D5088 - Practice for Decontamination of Field Equipment Used at Non-Radioactive Waste Sites.

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REMEDIATION SECTION	FIELD METHOD GUIDELINE NO.: FMG 10.0
WORLDWIDE FACILITIES GROUP	EFFECTIVE DATE: NOVEMBER 20, 2001
GENERAL MOTORS CORPORATION	
REVISION NO.: 0	REVISION DATE:

WASTE CHARACTERIZATION

INTRODUCTION

The following procedure describes the techniques for characterization of investigation derived waste (IDW) for disposal purposes.

PROCEDURAL GUIDELINES

IDW may consist of soil cuttings (augering, boring, well installation soils, test pit soils), rock core or rock flour (from coring, reaming operations), groundwater (from well development, purging, and sampling activities), decontamination fluids, personal protective equipment (spent gloves, tyveks), (PPE), and disposal equipment (DE).

This procedure applies when disposition of investigation soils and/or groundwater is required in accordance with the project Work Plan. Generally, this procedure is applicable to Facilities where the Project Manager has assessed the areas of investigation and has developed a waste handling plan. In some areas and/or sections within a Facility it is permitted to return soil cuttings/test pit soils and groundwater to the source area (RCRA guidance allows waste management techniques within an area of concern without 'triggering' new points of waste generation). In other areas it may not be practical to return cutting/soils to their origin, and are better handled by this characterization/disposal procedure. These practice is consistent with USEPA procedure for IDW at RCRA facilities and CERCLA sites (Reference 1, 2).

Typically investigative derived wastes are dealt with following "Best Management Practices"; and are not handled under RCRA regulations until proven to be listed and/or identified characteristically hazardous waste. Investigative soils and groundwater cannot be considered a listed waste (in most circumstances) due to the lack of generator knowledge concerning chemical source, chemical origin and timing of chemical introduction to the subsurface. Consequently, waste sampling and characterization is performed to determine if the wastes exhibit a characterization of hazardous waste. Once the waste characterization is complete RCRA regulations apply if determined hazardous, if determined to be non-hazardous solid wastes, best management practices apply.

The disposal of soil cuttings and/or purged groundwater must be reviewed on a case by case basis prior to initiation of field activities. Two scenarios typically exist:

i) Sufficient Facility and/or site information exists that allows investigative cutting and/or purged groundwater to be placed back into the borehole or spread on the ground surface; or discharged or in the case of purged water directly onto the ground surface - No disposal required.

ii) Site conditions warrant that all materials handled will be contained and disposed of.

DISPOSAL PROCEDURES

The following outlines the waste characterization procedures to be employed when IDW disposal is required.

Soil/Rock Cuttings

Soils removed from boring activities and well construction tasks (including, rock flour from bedrock coring) will be contained within an approved container, suitable for transportation and disposal.

- Once placed into the approved container, any free liquids (i.e., groundwater) will be poured off for disposal as waste fluids, or solidified within the approved container using a solidification agent such as speedy-dri (or equivalent). No free liquid as determined by the "paint filter test" shall be present.
- Contained soils will be screened for the presence of Volatile Organic Compounds (VOCs), using a photoionization detector (PID); this data will be logged for future reference.
- Once screened, full and closed the container will be labeled in accordance with the Facility labeling requirements and placed into the Facility container storage area. At a minimum the following information will be shown a each container label: date of filling/generation, Facility name, source of soils (i.e., borehole or well), and Facility contact. If necessary, the exterior of the container will be cleaned to remove any lose dirt/cuttings.
- Prior to container closure, representative samples from a percentage of the containers will be collected for waste characterization purposes and submitted to the project laboratory. The waste characterization sampling scheme will be dictated by the Work Plan and establish the volume of soils required for analysis (depending on parameters required), the number of containers considered representative, the homogenization procedure, volatile analysis collection procedure (if required) and preparation handling requirements. Typically at a location where an undetermined site-specific parameter group exists, sampling and analysis may consist of the full RCRA Waste Characterization (ignitability, corrosivity, reactivity, toxicity), or a subset of the above based upon data collected, historical information and generator knowledge.

Groundwater

Well construction development, purging and sampling groundwater which requires disposal will be contained. Containment may be performed in 55-gallon drums, tanks suitable for temporary storage (i.e., Nalgene or Facility provided tanks 500 to 1,000 gallons) or if large volumes of groundwater are anticipated, drilling "frac" tanks may be utilized (20,000 gallons ±), or tanker trailer (5,000 to 10.000 gallons ±). In all cases the container/tank used for groundwater storage must be clean before use such that cross-contamination does not occur.

Decontamination Waters/Decontamination Fluids

- Decontamination waters and/or fluids will be segregated, contained, and disposed of accordingly.
- Decontamination waters may be disposed of with the contained groundwater once analytical results have been acquired. Depending on the extent of chemistry present it may be appropriate to discharge the decontamination waters to the Publicly Owned Treatment Works (POTW); or discharge to an on-site treatment system; or send off site for treatment. (Proper permitting may be required.)
- Spent Solvent/Acid Rinses - Solvents and acids used during decontamination activities must be segregated and disposed separately from the groundwater/decontamination water. Often if only small amounts of solvents are involved these can be left to evaporate. If large volumes are involved then containerization, labeling, and storage is required.

PPE/DE

- A number of disposal options exists for spent PPE/DE generated from investigation tasks. The options typically employed are:
  - i) Immediately disposed of within on-site dumpster/municipal trash; or
  - ii) If known to be contaminated with RCRA hazardous waste, disposed of off site at a RCRA Subtitle C facility; or alternatively PPE/DE decontaminated and disposed of on site within dumpster/municipal trash; or
  - iii) Contained and stored until the final remedy is implemented.

WASTE CHARACTERIZATION PROCEDURES

The Work Plan will identify the appropriate sampling strategy and analytes required to determine the IDW characteristics and disposal requirements. USEPA SW-846 (Reference 5, Chapters 9 and 10) describes the rationale for sampling plan development and sampling procedures. Generally random sampling and preparation of a composite sample of the media is employed for most investigative programs. The "GM Statistical Guidance – 2nd Edition" (Reference 4, Section 2.5) outlines the statistical rationale and approaches applicable to one-time waste

streams. Often a minimum of four representative samples are required to gain valid waste characteristic data to determine the disposal option applicable (if statistics are employed).

Sampling procedures for IDW are:

- Solid Wastes - Grab sampling using precleaned sample spoons from bulk piles, lugger boxes, or as drums are being filled is commonly employed. In some instances sufficient media mixing may be evident to permit drum sampling from a random number of drums by accessing only the top solids. In other instances where stratification is evident, a sample trier/hand auger or device to collect from the entire vertical profile is required. Typically, a composite sample(s) from representative areas of the container(s) is homogenized and submitted for analysis. If VOCs are being evaluated, compositing and homogenization is not permitted. Individual grab samples are typically required for VOCs.
- Waste Waters - Grab sampling techniques using precleaned bailers or sampling pumps are typically employed. Waters in bulk are typically sampled once using a bailer or pump. The Work Plan will outline the appropriate sample frequency and analytes necessary to adequately characterize the contained waters. Facility sewer discharge permit parameters will be evaluated when disposal to the POTW is being considered.

  Note: If NAPL is present special sampling and handling requirements will apply. Precautions to separate the NAPL from the wastewater will commonly be employed, due to the special material handling and waste disposal requirements when dealing with phase materials.
- Spent Solvent/Acid Rinses - The need for sampling must be determined in consultation with the waste management organization handling the materials. If known that only the solvent and/or acids are present, then direct disposal/treatment using media specific options maybe possible without sampling (i.e., incineration).
- PPE/DE - Typically not sampled and included with the disposal of the solid wastes.

EQUIPMENT/MATERIALS

- Sample spoons, trier, auger.
- Sample mixing bowl.
- Sampling bailer, or pump.
- Sample glassware.

REFERENCES

USEPA RCRA - Guidance and Policies: Management of Remediation Waste Under RCRA (October 1998).

USEPA RCRA - Management of Contaminated Media (October 1998).

USEPA CERCLA Guidance (Options Relevant to RCRA Facilities): Guide to Management of Investigation-Derived Wastes (January 1992).

2nd Edition - GM Statistical Guidance Section 2.5.1. Solid Waste Characterization Subsection 2.5.1.1. One-Time Waste Stream Characterization (Date Required).

USEPA Office of Solid Waste - SW-846 Chapter 9 Sampling Plan, Chapter 10 Sampling Methods (September 1986).

Worldwide Facilities Group
Environmental Services
Remediation Team

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(248) 753-5829

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(248) 753-5800

SEP 11 2006

September 5, 2006

Mr. Rick Galloway
Site Investigation and Restoration Branch Department
State of Delaware Department of Natural Resources and Environmental Control
391 Lukens Drive
New Castle, Delaware 19720-2774

Re: Response to Work Plan for Supplemental Groundwater Investigation Comments
General Motors Corporation
Wilmington Assembly Plant, Wilmington, Delaware

Dear Mr. Galloway:

This correspondence has been prepared to provide a response to the Department of Natural Resources and Environmental Control (DNREC) August 11, 2006 comments on the Work Plan for Supplemental Groundwater Investigation of OU-2 Bulk Product Tank Areas (Work Plan) at the General Motors Corporation (GM) Wilmington Assembly Plant. The Plant is located at 801 Boxwood Road, Wilmington, Delaware.

Two issues were identified in the DNREC comments on the Work Plan and through subsequent discussions between DNREC and GM. The first concern involves the need to resample select wells on-Site for hexavalent chromium (i.e., MW-3, MW-3D, MW-6, and MW-10). This is due to exceeding sample holding times during the initial groundwater investigation which caused the results to be rejected. The second concern involves the sampling protocols for newly developed monitoring wells and the necessity to wait two weeks after well development prior to sampling a newly installed well in order for the well to acclimatize.

In response to reanalyzing select wells for hexavalent chromium (MW-3, MW-3D, MW-6 and MW-10) GM will resample all OU-2 monitoring wells for hexavalent chromium as part of the Work Plan groundwater sampling activities. Due to the very short holding time of hexavalent chromium, GM has arranged for the laboratory to pick up the samples on-Site on a daily basis throughout sampling activities in order to ensure the samples are analyzed within the allotted holding time.

In response to the sampling protocols of newly developed monitoring wells on-Site, GM will postpone sampling of the newly installed monitoring wells (i.e., MW-15 through MW-19) until September 5, 2006, two weeks following the last well development date. Existing monitoring wells were sampled and analyzed for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals during the week of August 21, 2006. Therefore, to demonstrate that groundwater characteristics have not significantly changed, GM will also sample two existing monitoring wells

(i.e., MW-2 and MW-6) during the September 5, 2006 sampling event and compare these concentrations to those from the August 21, 2006 sampling event.

Due to the short time period between the two sampling events, GM proposes to compare the analytical results of the two sampling events from monitoring wells MW-2 and MW-6. Results within ten percent will qualify the data from the two events as representative of the current groundwater conditions. This approach was discussed in a conversation between DNREC and GM's consultant, Conestoga-Rovers & Associates (CRA) on August 23 & 24, 2006 and verbally approved by DNREC on August 24, 2006.

If you have any questions regarding the enclosed, please call me at (248) 753-5800.

Sincerely,

GENERAL MOTORS CORPORATION

Kim D. Tucker-Billingslea, CHMM
Sr. Environmental Project Manager

c.c.: Greg Carli (CRA)
Qazi Salahuddin (DNREC)

Worldwide Facilities Group
Environmental Services
Remediation Team

June 18, 2007

Mr. Rick Galloway
Site Investigation and Restoration Branch Department
State of Delaware Department of Natural Resources and Environmental Control
391 Lukens Drive
New Castle, Delaware 19720-2774

Re: Results of Supplemental Groundwater Investigation Sampling
General Motors Corporation
Wilmington Assembly Plant, Wilmington, Delaware

Dear Mr. Galloway:

Subsequent to the Work Plan for Supplemental Groundwater Investigation of OU-2 Bulk Product Tank Areas (Work Plan) for the General Motors Corporation (GM) Wilmington Assembly Plant and letters from GM to the Department of Natural Resources and Environmental Control (DNREC) dated August 31, 2006 and November 3, 2006, this correspondence has been prepared to provide the results of the supplemental groundwater investigation sampling conducted in December 2006.

As noted in the November 3, 2006 letter, there were differences greater than ten percent between the August 21, 2006 sampling event, which included the sampling of 13 existing monitoring wells, and the September 5, 2006 groundwater sampling event, which included the sampling of five new monitoring wells (i.e., MW-15 through MW-19) and two existing monitoring wells (MW-2 and MW-6). As such, GM conducted another sampling event whereby the monitoring wells within the OU-2 area were sampled collectively. The locations of the monitoring wells within the OU-2 area are shown on Figure 1.

GM also proposed to remove hexavalent chromium from the list of parameters to be analyzed since hexavalent chromium was not detected in any of the samples taken during the previous two sampling events. In a letter to GM dated November 22, 2006, DNREC agreed with the need to resample the monitoring wells and the removal of hexavalent chromium from the list of analyzed compounds.

During the period of December 12, 2006 to December 15, 2006, groundwater samples were collected from the monitoring wells within the OU-2 area and sent to Severn Trent Laboratories in Edison, New Jersey (STL) to be analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals (total and dissolved). The results of the data from the December 2006 groundwater sampling round are provided in Table 1.

GM is currently conducting a risk evaluation of the entire OU-2 groundwater data set, including the vapor intrusion pathway. Following this risk evaluation, a Remedial Investigation (RI) Report will be prepared and submitted to DNREC for review. The RI Report will summarize available data, present the results of the vapor intrusion and risk-based evaluation, and propose a remedial action plan for the site.

If you have any questions regarding the enclosed, please call me at (248) 753-5800.

Sincerely,

for Kim Tucker-Billingslea
GM Remediation Team

c.c.: Greg Carli (CRA)
Kathy Stiller-Banning (DNREC)
Qazi Salahuddin (DNREC)
Bob Scholte (DNREC)

ANSI-RAB EMS ACCREDITED ISO 14001

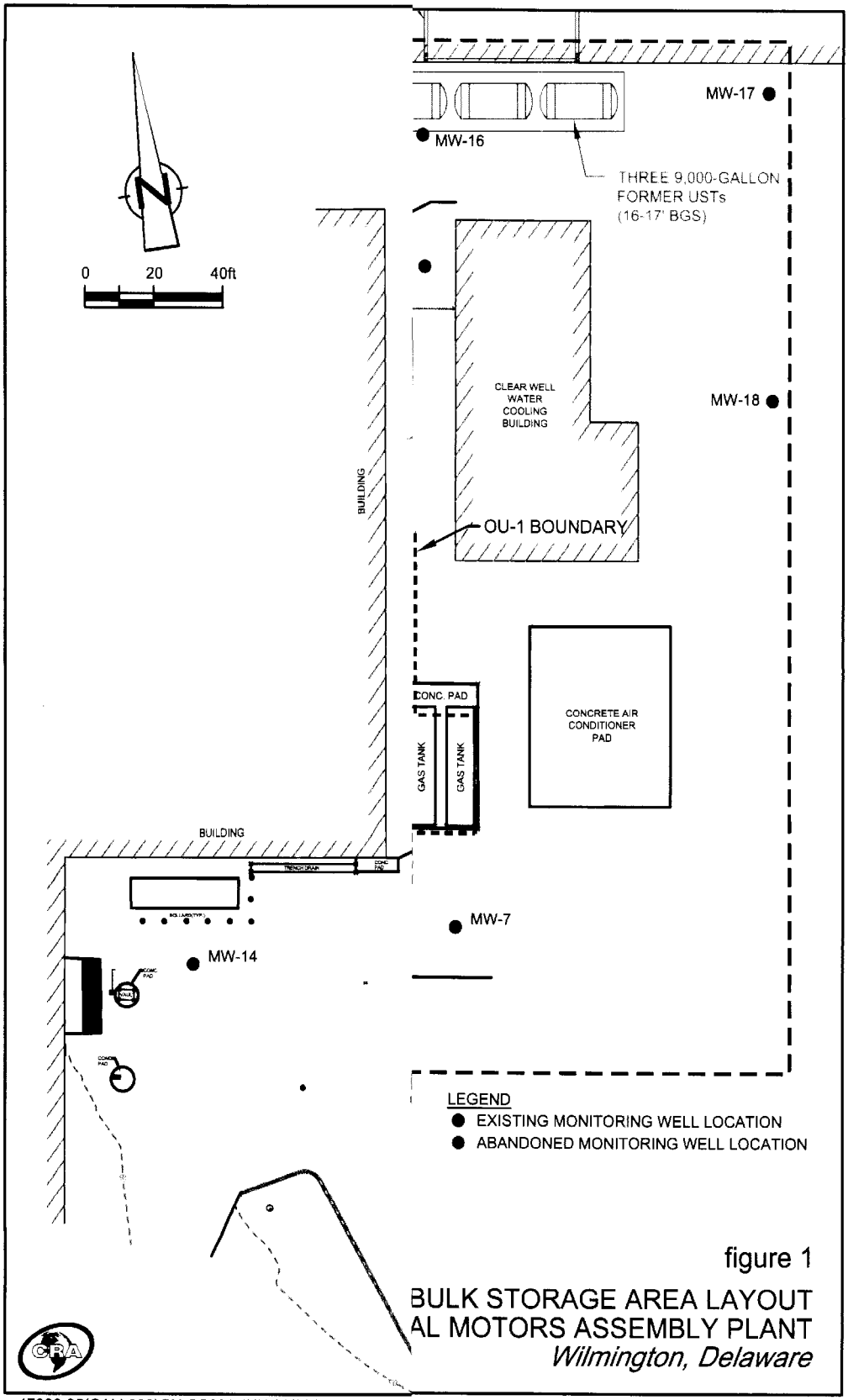


figure 1

BULK STORAGE AREA LAYOUT
AL MOTORS ASSEMBLY PLANT
Wilmington, Delaware

17338-25(GALL003)GN-SC001 JUN 08/2007

TABLE 1

DECEMBER 2006 GROUNDWATER ANALYTICAL RESULTS
OU-2 SUPPLEMENTAL GROUNDWATER INVESTIGATION
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW2*	*MW3*	*MW3D*	*MW6*	*MW7*
Sample ID:		*GW-17338-121406-MJW-17*	*GW-17338-121506-MJW-21*	*GW-17338-121406-MJW-16*	*GW-17338-121406-MJW-14*	*GW-17338-121406-MJW-11*
Sample Date:		*12/14/2006*	*12/15/2006*	*12/14/2006*	*12/14/2006*	*12/14/2006*
Parameters:	*Units*					
Volatile Organic Compounds						
Acetone	ug/L	R	370000 J	R	R	R
Benzene	ug/L	22	5000 U	23 J	10 U	0.5 J
Bromodichloromethane	ug/L	1.0 U	5000 U	50 U	10 U	1.0 U
Bromoform	ug/L	4.0 U	20000 U	200 U	40 U	4.0 U
Bromomethane (Methyl Bromide)	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
2-Butanone (Methyl Ethyl Ketone)	ug/L	R	R	R	R	R
Carbon disulfide	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
Carbon tetrachloride	ug/L	2.0 U	10000 U	100 U	20 U	2.0 U
Chlorobenzene	ug/L	5.0 U	25000 U	250 U	50 U	76
Chloroethane	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
Chloroform (Trichloromethane)	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
Chloromethane (Methyl Chloride)	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
Cyclohexane	ug/L	26	25000 U	250 U	50 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
Dibromochloromethane	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
1,2-Dichlorobenzene	ug/L	1.3 J	25000 U	250 U	50 U	5.0 U
1,3-Dichlorobenzene	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
1,4-Dichlorobenzene	ug/L	0.6 J	25000 U	250 U	50 U	0.8 J
Dichlorodifluoromethane (CFC-12)	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
1,1-Dichloroethane	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
1,2-Dichloroethane	ug/L	2.0 U	10000 U	100 U	20 U	2.0 U
1,1-Dichloroethene	ug/L	2.0 U	10000 U	100 U	20 U	2.0 U
cis-1,2-Dichloroethene	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
trans-1,2-Dichloroethene	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
1,2-Dichloropropane	ug/L	1.0 U	5000 U	50 U	10 U	1.0 U
cis-1,3-Dichloropropene	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
trans-1,3-Dichloropropene	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
Ethylbenzene	ug/L	2.5 J	11000 J	490	220	4.0 U
2-Hexanone	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
Isopropylbenzene	ug/L	8.8	25000 U	250 U	50 U	5.0 U
Methyl acetate	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
Methyl cyclohexane	ug/L	5.0	25000 U	70 J	50 U	5.0 U
Methyl Tert Butyl Ether	ug/L	13	25000 U	37 J	50 U	5.0 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
Methylene chloride	ug/L	3.0 U	15000 U	150 U	30 U	3.0 U

TABLE 1

DECEMBER 2006 GROUNDWATER ANALYTICAL RESULTS
OU-2 SUPPLEMENTAL GROUNDWATER INVESTIGATION
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW2*	*MW3*	*MW3D*	*MW6*	*MW7*
Sample ID:		*GW-17338-121406-MJW-17*	*GW-17338-121506-MJW-21*	*GW-17338-121406-MJW-16*	*GW-17338-121406-MJW-14*	*GW-17338-121406-MJW-11*
Sample Date:		*12/14/2006*	*12/15/2006*	*12/14/2006*	*12/14/2006*	*12/14/2006*
Parameters:	*Units*					
Volatile Organic Compounds (continued)						
Styrene	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	5000 U	50 U	10 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	5000 U	50 U	10 U	1.0 U
Toluene	ug/L	12	160000	6200	990	5.0 U
1,2,4-Trichlorobenzene	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
1,1,1-Trichloroethane	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
1,1,2-Trichloroethane	ug/L	3.0 U	15000 U	150 U	30 U	3.0 U
Trichloroethene	ug/L	0.7 J	5000 U	50 U	10 U	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
Trifluorotrichloroethane (Freon 113)	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
Vinyl chloride	ug/L	5.0 U	25000 U	250 U	50 U	5.0 U
Xylene (total)	ug/L	4.2 J	16000 J	2800	450	5.0 U
Semi-volatile Organic Compounds						
Acenaphthene	ug/L	10 U	100 U	10 U	0.9 J	10 U
Acenaphthylene	ug/L	10 U	100 U	10 U	11 U	10 U
Acetophenone	ug/L	10 U	25 J	10 U	2.2 J	10 U
Anthracene	ug/L	10 U	100 U	10 U	11 U	10 U
Atrazine	ug/L	10 U	100 U	10 U	11 U	10 U
Benzaldehyde	ug/L	10 UJ	100 UJ	10 UJ	11 UJ	10 UJ
Benzo(a)anthracene	ug/L	1.0 U	10 U	1.0 U	1.1 U	1.0 U
Benzo(a)pyrene	ug/L	1.0 U	10 U	1.0 U	1.1 U	1.0 U
Benzo(b)fluoranthene	ug/L	1.0 U	10 U	1.0 U	1.1 U	1.0 U
Benzo(g,h,i)perylene	ug/L	10 UJ	100 U	10 UJ	11 UJ	10 U
Benzo(k)fluoranthene	ug/L	1.0 U	10 U	1.0 U	1.1 U	1.0 U
Biphenyl	ug/L	10 U	100 U	10 U	11 U	10 U
bis(2-Chloroethoxy)methane	ug/L	10 U	100 U	10 U	11 U	10 U
bis(2-Chloroethyl)ether	ug/L	1.0 U	10 U	1.0 U	1.1 U	1.0 U
bis(2-Ethylhexyl)phthalate	ug/L	10 U	100 U	10 U	11 U	10 U
4-Bromophenyl phenyl ether	ug/L	10 U	100 U	10 U	11 U	10 U
Butyl benzylphthalate	ug/L	10 U	100 U	10 U	11 U	10 U
Caprolactam	ug/L	10 U	100 U	10 U	11 U	10 U
Carbazole	ug/L	10 U	100 U	10 U	11 U	10 U
4-Chloro-3-methylphenol	ug/L	10 U	100 U	10 U	11 U	10 U
4-Chloroaniline	ug/L	10 U	100 U	10 U	11 U	10 U
2-Chloronaphthalene	ug/L	10 U	100 U	10 U	11 U	10 U

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Sample Date:		*12/14/2006*	*12/15/2006*	*12/14/2006*	*12/14/2006*	*12/14/2006*
Parameters:	*Units*					
Semi-volatile Organic Compounds (continued)						
2-Chlorophenol	ug/L	10 U	100 U	10 U	11 U	10 U
4-Chlorophenyl phenyl ether	ug/L	10 U	100 U	10 U	11 U	10 U
Chrysene	ug/L	10 U	100 U	10 U	11 U	10 U
Dibenz(a,h)anthracene	ug/L	1.0 U	10 U	1.0 U	1.1 U	1.0 U
Dibenzofuran	ug/L	10 U	100 U	10 U	0.3 J	10 U
3,3'-Dichlorobenzidine	ug/L	21 U	200 U	21 U	22 U	21 U
2,4-Dichlorophenol	ug/L	10 U	100 U	10 U	11 U	10 U
Diethyl phthalate	ug/L	10 U	100 U	10 U	11 U	10 U
Dimethyl phthalate	ug/L	10 U	100 U	10 U	11 U	10 U
2,4-Dimethylphenol	ug/L	10 U	400	0.7 J	5.4 J	10 U
Di-n-butylphthalate	ug/L	10 U	100 U	10 U	11 U	10 U
4,6-Dinitro-2-methylphenol	ug/L	32 U	310 U	32 U	32 U	31 U
2,4-Dinitrophenol	ug/L	32 UJ	310 U	32 UJ	32 UJ	31 U
2,4-Dinitrotoluene	ug/L	2.1 U	20 U	2.1 U	2.2 U	2.1 U
2,6-Dinitrotoluene	ug/L	2.1 U	20 U	2.1 U	2.2 U	2.1 U
Di-n-octyl phthalate	ug/L	10 U	100 U	10 U	11 U	10 U
Fluoranthene	ug/L	10 U	100 U	10 U	1.8 J	10 U
Fluorene	ug/L	10 U	100 U	10 U	11 U	10 U
Hexachlorobenzene	ug/L	1.0 U	10 U	1.0 U	1.1 U	1.0 U
Hexachlorobutadiene	ug/L	2.1 U	20 U	2.1 U	2.2 U	2.1 U
Hexachlorocyclopentadiene	ug/L	10 U	100 U	10 U	11 U	10 U
Hexachloroethane	ug/L	1.0 U	10 U	1.0 U	1.1 U	1.0 U
Indeno(1,2,3-cd)pyrene	ug/L	1.0 U	10 U	1.0 U	1.1 U	1.0 U
Isophorone	ug/L	10 U	100 U	10 U	11 U	10 U
2-Methylnaphthalene	ug/L	10 U	100 U	10 U	11 U	10 U
2-Methylphenol	ug/L	10 U	130	10 U	33	10 U
4-Methylphenol	ug/L	10 U	640	10 U	12	10 U
Naphthalene	ug/L	0.5 J	5.5 J	0.6 J	2.7 J	10 U
2-Nitroaniline	ug/L	21 U	200 U	21 U	22 U	21 U
3-Nitroaniline	ug/L	21 U	200 U	21 U	22 U	21 U
4-Nitroaniline	ug/L	21 U	200 U	21 U	22 U	21 U
Nitrobenzene	ug/L	1.0 U	10 U	1.0 U	1.1 U	1.0 U
2-Nitrophenol	ug/L	10 U	100 U	10 U	11 U	10 U
4-Nitrophenol	ug/L	32 U	310 U	32 U	32 U	31 U
N-Nitrosodi-n-propylamine	ug/L	1.0 U	10 U	1.0 U	1.1 U	1.0 U
N-Nitrosodiphenylamine	ug/L	10 U	100 U	10 U	11 U	10 U

TABLE 1

DECEMBER 2006 GROUNDWATER ANALYTICAL RESULTS
OU-2 SUPPLEMENTAL GROUNDWATER INVESTIGATION
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW2*	*MW3*	*MW3D*	*MW6*	*MW7*
Sample ID:		*GW-17338-121406-MJW-17*	*GW-17338-121506-MJW-21*	*GW-17338-121406-MJW-16*	*GW-17338-121406-MJW-14*	*GW-17338-121406-MJW-11*
Sample Date:		*12/14/2006*	*12/15/2006*	*12/14/2006*	*12/14/2006*	*12/14/2006*
Parameters:	*Units*					
Semi-volatile Organic Compounds (continued)						
2,2'-oxybis(1-Chloropropane)	ug/L	10 U	100 U	10 U	11 U	10 U
Pentachlorophenol	ug/L	32 U	310 U	32 U	32 U	31 U
Phenanthrene	ug/L	10 U	100 U	10 U	11 U	10 U
Phenol	ug/L	10 U	26 J	10 U	11 U	10 U
Pyrene	ug/L	10 U	100 U	10 U	0.8 J	10 U
2,4,5-Trichlorophenol	ug/L	10 U	100 U	10 U	11 U	10 U
2,4,6-Trichlorophenol	ug/L	10 U	100 U	10 U	11 U	10 U
Metals						
Aluminum	ug/L	190 U	226 J	190 U	1850	1280
Aluminum (Dissolved)	ug/L	190 U	400 U	190 U	190 U	190 U
Antimony	ug/L	10 U	20 U	10 U	10 U	10 U
Antimony (Dissolved)	ug/L	10 U	20 U	10 U	10 U	10 U
Arsenic	ug/L	9.8	8.4 U	4.2 U	4.2 U	9.9
Arsenic (Dissolved)	ug/L	11.2	8.4 U	4.2 U	4.2 U	10.1
Barium	ug/L	439	470	268	412	230
Barium (Dissolved)	ug/L	435	489	276	418	240
Beryllium	ug/L	2 U	4 U	2 U	2 U	2 U
Beryllium (Dissolved)	ug/L	2 U	4 U	2 U	2 U	2 U
Cadmium	ug/L	4 U	8 U	4 U	4 U	4 U
Cadmium (Dissolved)	ug/L	4 U	8 U	4 U	4 U	4 U
Calcium	ug/L	37300	70100	34700	64500	23400
Calcium (Dissolved)	ug/L	36600	72100	36000	68200	24900
Chromium Total	ug/L	10 U	20 U	10 U	10 U	10 U
Chromium Total (Dissolved)	ug/L	10 U	20 U	10 U	10 U	10 U
Cobalt	ug/L	50 U	100 U	50 U	50 U	50 U
Cobalt (Dissolved)	ug/L	50 U	100 U	50 U	50 U	50 U
Copper	ug/L	25 U	50 U	25 U	25 U	25 U
Copper (Dissolved)	ug/L	25 U	50 U	25 U	25 U	25 U
Iron	ug/L	60800	210000	28700	20300	51400
Iron (Dissolved)	ug/L	59900	215000	29100	19400	54100
Lead	ug/L	3 U	6 U	3 U	3 U	3 U
Lead (Dissolved)	ug/L	3 U	6 U	3 U	3 U	3 U
Magnesium	ug/L	27800	73000	19200	24200	21600
Magnesium (Dissolved)	ug/L	27500	75200	19900	25200	22700
Manganese	ug/L	949	17600	726	930	1970

TABLE 1

DECEMBER 2006 GROUNDWATER ANALYTICAL RESULTS
OU-2 SUPPLEMENTAL GROUNDWATER INVESTIGATION
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW2*	*MW3*	*MW3D*	*MW6*	*MW7*
Sample ID:		*GW-17338-121406-MJW-17*	*GW-17338-121506-MJW-21*	*GW-17338-121406-MJW-16*	*GW-17338-121406-MJW-14*	*GW-17338-121406-MJW-11*
Sample Date:		*12/14/2006*	*12/15/2006*	*12/14/2006*	*12/14/2006*	*12/14/2006*
Parameters:	*Units*					
Metals (continued)						
Manganese (Dissolved)	ug/L	917	18100	750	946	2060
Mercury	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Mercury (Dissolved)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	ug/L	40 U	80 U	40 U	40 U	40 U
Nickel (Dissolved)	ug/L	40 U	80 U	40 U	40 U	40 U
Potassium	ug/L	5660	4790 J	5340	13300	5000 U
Potassium (Dissolved)	ug/L	5650	4870 J	5510	13700	2730 J
Selenium	ug/L	5 U	10 U	5 U	5 U	5 U
Selenium (Dissolved)	ug/L	5 U	10 U	5 U	5 U	5 U
Silver	ug/L	10 U	20 U	3.6 J	10 U	10 U
Silver (Dissolved)	ug/L	10 U	20 U	10 U	10 U	10 U
Sodium	ug/L	122000	60600	55400	88700	42400
Sodium (Dissolved)	ug/L	120000	62200	57000	92500	45500
Thallium	ug/L	9.5 U	19 U	9.5 U	9.5 U	9.5 U
Thallium (Dissolved)	ug/L	9.5 U	19 U	9.5 U	9.5 U	9.5 U
Vanadium	ug/L	50 U	100 U	50 U	50 U	50 U
Vanadium (Dissolved)	ug/L	50 U	100 U	50 U	50 U	50 U
Zinc	ug/L	16.1 J	60 U	7.0 J	15.7 J	11.1 J
Zinc (Dissolved)	ug/L	30 U	12.6 J	8.5 J	30 U	30 U

Notes:

J - Estimated concentration.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.

TABLE 1

DECEMBER 2006 GROUNDWATER ANALYTICAL RESULTS
OU-2 SUPPLEMENTAL GROUNDWATER INVESTIGATION
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW8*	*MW9*	*MW9*	*MW10*	*MW11*
Sample ID:		*GW-17338-121406-MJW-10*	*GW-17338-121206-MJW-05*	*GW-17338-121206-MJW-06*	*GW-17338-121406-MJW-18*	*GW-17338-121506-MJW-19*
Sample Date:		*12/14/2006*	*12/12/2006*	*12/12/2006*	*12/14/2006*	*12/15/2006*
				Duplicate		
Parameters:	*Units*					
Volatile Organic Compounds						
Acetone	ug/L	R	R	R	R	R
Benzene	ug/L	6.6	1.0 U	1.0 U	20	480
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	5.0 U	100 U
Bromoform	ug/L	4.0 U	4.0 U	4.0 U	20 U	400 U
Bromomethane (Methyl Bromide)	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
2-Butanone (Methyl Ethyl Ketone)	ug/L	R	R	R	R	R
Carbon disulfide	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
Carbon tetrachloride	ug/L	2.0 U	2.0 U	2.0 U	10 U	200 U
Chlorobenzene	ug/L	49	5.0 U	5.0 U	25 U	500 U
Chloroethane	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
Chloroform (Trichloromethane)	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
Chloromethane (Methyl Chloride)	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
Cyclohexane	ug/L	1.6 J	5.0 U	5.0 U	11 J	500 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
Dibromochloromethane	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
1,2-Dichlorobenzene	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
1,3-Dichlorobenzene	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
1,4-Dichlorobenzene	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
Dichlorodifluoromethane (CFC-12)	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
1,1-Dichloroethane	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
1,2-Dichloroethane	ug/L	2.0 U	2.0 U	2.0 U	10 U	200 U
1,1-Dichloroethene	ug/L	2.0 U	2.0 U	2.0 U	10 U	200 U
cis-1,2-Dichloroethene	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
trans-1,2-Dichloroethene	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	5.0 U	100 U
cis-1,3-Dichloropropene	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
trans-1,3-Dichloropropene	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
Ethylbenzene	ug/L	4.0 U	4.0 U	4.0 U	170	8100
2-Hexanone	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
Isopropylbenzene	ug/L	0.9 J	5.0 U	5.0 U	75	500 U
Methyl acetate	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
Methyl cyclohexane	ug/L	1.8 J	5.0 U	5.0 U	15 J	500 U
Methyl Tert Butyl Ether	ug/L	17	0.4 J	0.4 J	25 U	640
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
Methylene chloride	ug/L	3.0 U	3.0 U	3.0 U	15 U	300 U

TABLE 1

DECEMBER 2006 GROUNDWATER ANALYTICAL RESULTS
OU-2 SUPPLEMENTAL GROUNDWATER INVESTIGATION
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW8*	*MW9*	*MW9*	*MW10*	*MW11*
Sample ID:		*GW-17338-121406-MJW-10*	*GW-17338-121206-MJW-05*	*GW-17338-121206-MJW-06*	*GW-17338-121406-MJW-18*	*GW-17338-121506-MJW-19*
Sample Date:		*12/14/2006*	*12/12/2006*	*12/12/2006*	*12/14/2006*	*12/15/2006*
				Duplicate		
Parameters:	*Units*					
Volatile Organic Compounds (continued)						
Styrene	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	5.0 U	100 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	5.0 U	100 U
Toluene	ug/L	5.0 U	5.0 U	5.0 U	170	3600
1,2,4-Trichlorobenzene	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
1,1,1-Trichloroethane	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
1,1,2-Trichloroethane	ug/L	3.0 U	3.0 U	3.0 U	15 U	300 U
Trichloroethene	ug/L	1.0 U	1.0 U	1.0 U	5.0 U	100 U
Trichlorofluoromethane (CFC-11)	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
Trifluorotrichloroethane (Freon 113)	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
Vinyl chloride	ug/L	5.0 U	5.0 U	5.0 U	25 U	500 U
Xylene (total)	ug/L	5.0 U	5.0 U	5.0 U	860	9100
Semi-volatile Organic Compounds						
Acenaphthene	ug/L	0.6 J	11 U	10 U	11 U	100 U
Acenaphthylene	ug/L	10 U	11 U	10 U	11 U	100 U
Acetophenone	ug/L	10 U	11 U	10 U	2.6 J	100 U
Anthracene	ug/L	10 U	11 U	10 U	11 U	100 U
Atrazine	ug/L	10 U	11 U	10 U	11 U	100 U
Benzaldehyde	ug/L	10 UJ	11 UJ	10 UJ	11 UJ	100 UJ
Benzo(a)anthracene	ug/L	1.0 U	1.1 U	1.0 U	1.1 U	10 U
Benzo(a)pyrene	ug/L	1.0 U	1.1 U	1.0 U	1.1 U	10 U
Benzo(b)fluoranthene	ug/L	1.0 U	1.1 U	1.0 U	1.1 U	10 U
Benzo(g,h,i)perylene	ug/L	10 U	11 U	10 U	11 UJ	100 UJ
Benzo(k)fluoranthene	ug/L	1.0 U	1.1 U	1.0 U	1.1 U	10 U
Biphenyl	ug/L	10 U	11 U	10 U	11 U	100 U
bis(2-Chloroethoxy)methane	ug/L	10 U	11 U	10 U	11 U	100 U
bis(2-Chloroethyl)ether	ug/L	1.0 U	1.1 U	1.0 U	1.1 U	10 U
bis(2-Ethylhexyl)phthalate	ug/L	10 U	11 U	10 U	11 U	100 U
4-Bromophenyl phenyl ether	ug/L	10 U	11 U	10 U	11 U	100 U
Butyl benzylphthalate	ug/L	10 U	11 U	10 U	11 U	100 U
Caprolactam	ug/L	10 U	11 U	10 U	11 U	100 U
Carbazole	ug/L	10 U	11 U	10 U	11 U	100 U
4-Chloro-3-methylphenol	ug/L	10 U	11 U	10 U	11 U	100 U
4-Chloroaniline	ug/L	10 U	11 U	10 U	11 U	100 U
2-Chloronaphthalene	ug/L	10 U	11 U	10 U	11 U	100 U

TABLE 1

DECEMBER 2006 GROUNDWATER ANALYTICAL RESULTS
OU-2 SUPPLEMENTAL GROUNDWATER INVESTIGATION
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW8*	*MW9*	*MW9*	*MW10*	*MW11*
Sample ID:		*GW-17338-121406-MJW-10*	*GW-17338-121206-MJW-05*	*GW-17338-121206-MJW-06*	*GW-17338-121406-MJW-18*	*GW-17338-121506-MJW-19*
Sample Date:		*12/14/2006*	*12/12/2006*	*12/12/2006* *Duplicate*	*12/14/2006*	*12/15/2006*
Parameters:	*Units*					
Semi-volatile Organic Compounds (continued)						
2-Chlorophenol	ug/L	10 U	11 U	10 U	11 U	100 U
4-Chlorophenyl phenyl ether	ug/L	10 U	11 U	10 U	11 U	100 U
Chrysene	ug/L	10 U	11 U	10 U	11 U	100 U
Dibenz(a,h)anthracene	ug/L	1.0 U	1.1 U	1.0 U	1.1 U	10 U
Dibenzofuran	ug/L	0.3 J	11 U	10 U	11 U	100 U
3,3'-Dichlorobenzidine	ug/L	21 U	22 U	20 U	22 U	210 U
2,4-Dichlorophenol	ug/L	10 U	11 U	10 U	11 U	100 U
Diethyl phthalate	ug/L	10 U	11 U	10 U	11 U	100 U
Dimethyl phthalate	ug/L	10 U	11 U	10 U	11 U	100 U
2,4-Dimethylphenol	ug/L	10 U	11 U	10 U	4.9 J	57 J
Di-n-butylphthalate	ug/L	10 U	11 U	10 U	11 U	100 U
4,6-Dinitro-2-methylphenol	ug/L	31 U	32 U	31 U	32 U	320 U
2,4-Dinitrophenol	ug/L	31 U	32 U	31 U	32 UJ	320 UJ
2,4-Dinitrotoluene	ug/L	2.1 U	2.2 U	2.0 U	2.2 U	21 U
2,6-Dinitrotoluene	ug/L	2.1 U	2.2 U	2.0 U	2.2 U	21 U
Di-n-octyl phthalate	ug/L	10 U	11 U	10 U	11 U	100 U
Fluoranthene	ug/L	0.3 J	11 U	10 U	11 U	100 U
Fluorene	ug/L	0.6 J	11 U	10 U	11 U	100 U
Hexachlorobenzene	ug/L	1.0 U	1.1 U	1.0 U	1.1 U	10 U
Hexachlorobutadiene	ug/L	2.1 U	2.2 U	2.0 U	2.2 U	21 U
Hexachlorocyclopentadiene	ug/L	10 U	11 U	10 U	11 U	100 U
Hexachloroethane	ug/L	1.0 U	1.1 U	1.0 U	1.1 U	10 U
Indeno(1,2,3-cd)pyrene	ug/L	1.0 U	1.1 U	1.0 U	1.1 U	10 U
Isophorone	ug/L	10 U	11 U	10 U	11 U	100 U
2-Methylnaphthalene	ug/L	10 U	11 U	10 U	2.6 J	100 U
2-Methylphenol	ug/L	10 U	11 U	10 U	1.4 J	100 U
4-Methylphenol	ug/L	10 U	11 U	10 U	1.4 J	41 J
Naphthalene	ug/L	5.2 J	11 U	10 U	17	100 U
2-Nitroaniline	ug/L	21 U	22 U	20 U	22 U	210 U
3-Nitroaniline	ug/L	21 U	22 U	20 U	22 U	210 U
4-Nitroaniline	ug/L	21 U	22 U	20 U	22 U	210 U
Nitrobenzene	ug/L	1.0 U	1.1 U	1.0 U	1.1 U	10 U
2-Nitrophenol	ug/L	10 U	11 U	10 U	11 U	100 U
4-Nitrophenol	ug/L	31 U	32 U	31 U	32 U	320 U
N-Nitrosodi-n-propylamine	ug/L	1.0 U	1.1 U	1.0 U	1.1 U	10 U
N-Nitrosodiphenylamine	ug/L	10 U	11 U	10 U	11 U	100 U

TABLE 1

DECEMBER 2006 GROUNDWATER ANALYTICAL RESULTS
OU-2 SUPPLEMENTAL GROUNDWATER INVESTIGATION
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW8*	*MW9*	*MW9*	*MW10*	*MW11*
Sample ID:		*GW-17338-121406-MJW-10*	*GW-17338-121206-MJW-05*	*GW-17338-121206-MJW-06*	*GW-17338-121406-MJW-18*	*GW-17338-121506-MJW-19*
Sample Date:		*12/14/2006*	*12/12/2006*	*12/12/2006*	*12/14/2006*	*12/15/2006*
				Duplicate		
Parameters:	*Units*					
Semi-volatile Organic Compounds (continued)						
2,2'-oxybis(1-Chloropropane)	ug/L	10 U	11 U	10 U	11 U	100 U
Pentachlorophenol	ug/L	31 U	32 U	31 U	32 U	320 U
Phenanthrene	ug/L	10 U	11 U	10 U	11 U	100 U
Phenol	ug/L	10 U	11 U	10 U	11 U	100 U
Pyrene	ug/L	10 U	11 U	10 U	11 U	100 U
2,4,5-Trichlorophenol	ug/L	10 U	11 U	10 U	11 U	100 U
2,4,6-Trichlorophenol	ug/L	10 U	11 U	10 U	11 U	100 U
Metals						
Aluminum	ug/L	293	541	328 U	3400	4730
Aluminum (Dissolved)	ug/L	200 U	200 U	200 U	190 U	190 U
Antimony	ug/L	10 U	10 U	10 U	10 U	10 U
Antimony (Dissolved)	ug/L	10 U	10 U	10 U	10 U	10 U
Arsenic	ug/L	4.2 U	4.2 U	4.2 U	4.2 U	40.0
Arsenic (Dissolved)	ug/L	4.2 U	4.2 U	4.2 U	4.2 U	47.4
Barium	ug/L	302	163 J	158 J	385	355
Barium (Dissolved)	ug/L	305	174 J	176 J	384	357
Beryllium	ug/L	2 U	2 U	2 U	2 U	2 U
Beryllium (Dissolved)	ug/L	2 U	2 U	2 U	2 U	2 U
Cadmium	ug/L	4 U	4 U	4 U	4 U	4 U
Cadmium (Dissolved)	ug/L	4 U	4 U	4 U	4 U	4 U
Calcium	ug/L	51400	30100	29700	34400	73400
Calcium (Dissolved)	ug/L	51100	32600	32000	35900	77300
Chromium Total	ug/L	10 U	10 U	10 U	10 U	10 U
Chromium Total (Dissolved)	ug/L	10 U	10 U	10 U	10 U	10 U
Cobalt	ug/L	21.6 J	50 U	50 U	50 U	176
Cobalt (Dissolved)	ug/L	21.4 J	50 U	50 U	50 U	171
Copper	ug/L	25 U	25 U	25 U	25 U	25 U
Copper (Dissolved)	ug/L	25 U	25 U	25 U	25 U	25 U
Iron	ug/L	56700	1250	1280	24400	120000
Iron (Dissolved)	ug/L	56600	150 U	150 U	23000	121000
Lead	ug/L	3 U	3 U	3 U	3.9	5.3
Lead (Dissolved)	ug/L	3 U	3 U	3 U	3 U	3 U
Magnesium	ug/L	32900	13400	13100	27200	57800
Magnesium (Dissolved)	ug/L	33100	14400	14300	27700	60900
Manganese	ug/L	1980	238	227	1290	1260

TABLE 1

DECEMBER 2006 GROUNDWATER ANALYTICAL RESULTS
OU-2 SUPPLEMENTAL GROUNDWATER INVESTIGATION
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW8*	*MW9*	*MW9*	*MW10*	*MW11*
Sample ID:		*GW-17338-121406-MJW-10*	*GW-17338-121206-MJW-05*	*GW-17338-121206-MJW-06*	*GW-17338-121406-MJW-18*	*GW-17338-121506-MJW-19*
Sample Date:		*12/14/2006*	*12/12/2006*	*12/12/2006*	*12/14/2006*	*12/15/2006*
				Duplicate		
Parameters:	*Units*					
Metals (continued)						
Manganese (Dissolved)	ug/L	1990	258	285	1410	1290
Mercury	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Mercury (Dissolved)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	ug/L	40 U	3.2 J	3.7 J	40 U	40 U
Nickel (Dissolved)	ug/L	4.6 J	2.6 J	40 U	40 U	40 U
Potassium	ug/L	3150 J	5380	5180	4800 J	4700 J
Potassium (Dissolved)	ug/L	3140 J	5600	5580	4830 J	4590 J
Selenium	ug/L	5 U	5 U	5 U	5 U	5 U
Selenium (Dissolved)	ug/L	5 U	5 U	5 U	5 U	5 U
Silver	ug/L	10 U	10 U	10 U	10 U	10 U
Silver (Dissolved)	ug/L	10 U	10 U	10 U	10 U	10 U
Sodium	ug/L	55100	42100	40900	61600	82000
Sodium (Dissolved)	ug/L	56000	44600	44900	63300	87500
Thallium	ug/L	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
Thallium (Dissolved)	ug/L	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
Vanadium	ug/L	50 U	50 U	50 U	5.9 J	9.6 J
Vanadium (Dissolved)	ug/L	50 U	50 U	50 U	50 U	50 U
Zinc	ug/L	30 U	30 U	30 U	11.0 J	14.8 J
Zinc (Dissolved)	ug/L	12.5 J	30 U	9.6 U	30 U	9.4 J

Notes:

J - Estimated concentration.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.

TABLE 1

DECEMBER 2006 GROUNDWATER ANALYTICAL RESULTS
OU-2 SUPPLEMENTAL GROUNDWATER INVESTIGATION
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW11R*	*MW12*	*MW13*	*MW14*	*MW15*
Sample ID:		*GW-17338-121406-MJW-07*	*GW-17338-121506-MJW-20*	*GW-17338-121406-MJW-15*	*GW-17338-121406-MJW-09*	*GW-17338-121406-MJW-08*
Sample Date:		*12/14/2006*	*12/15/2006*	*12/14/2006*	*12/14/2006*	*12/14/2006*
Parameters:	*Units*					
Volatile Organic Compounds						
Acetone	ug/L	R	R	R	R	R
Benzene	ug/L	1.0 U	370	4.0	1.0 U	1.0 U
Bromodichloromethane	ug/L	1.0 U	20 U	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	4.0 U	80 U	4.0 U	4.0 U	4.0 U
Bromomethane (Methyl Bromide)	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
2-Butanone (Methyl Ethyl Ketone)	ug/L	R	R	R	R	R
Carbon disulfide	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/L	2.0 U	40 U	2.0 U	2.0 U	2.0 U
Chlorobenzene	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
Chloroethane	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
Chloromethane (Methyl Chloride)	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
Cyclohexane	ug/L	5.0 U	12 J	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
1,2-Dichlorobenzene	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
1,3-Dichlorobenzene	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
1,4-Dichlorobenzene	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	ug/L	2.0 U	40 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	ug/L	2.0 U	40 U	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	ug/L	1.0 U	20 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	ug/L	4.0 U	1200	6.7	4.0 U	4.0 U
2-Hexanone	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
Isopropylbenzene	ug/L	5.0 U	51 J	1.3 J	5.0 U	5.0 U
Methyl acetate	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
Methyl cyclohexane	ug/L	5.0 U	15 J	0.6 J	5.0 U	5.0 U
Methyl Tert Butyl Ether	ug/L	5.0 U	39 J	2.2 J	5.0 U	5.0 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
Methylene chloride	ug/L	3.0 U	60 U	3.0 U	3.0 U	3.0 U

TABLE 1

DECEMBER 2006 GROUNDWATER ANALYTICAL RESULTS
OU-2 SUPPLEMENTAL GROUNDWATER INVESTIGATION
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW11R*	*MW12*	*MW13*	*MW14*	*MW15*
Sample ID:		*GW-17338-121406-MJW-07*	*GW-17338-121506-MJW-20*	*GW-17338-121406-MJW-15*	*GW-17338-121406-MJW-09*	*GW-17338-121406-MJW-08*
Sample Date:		*12/14/2006*	*12/15/2006*	*12/14/2006*	*12/14/2006*	*12/14/2006*
Parameters:	*Units*					
Volatile Organic Compounds (continued)						
Styrene	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	20 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	20 U	1.0 U	1.1	0.6 J
Toluene	ug/L	5.0 U	14 J	7.4	5.0 U	5.0 U
1,2,4-Trichlorobenzene	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
1,1,1-Trichloroethane	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	3.0 U	60 U	3.0 U	3.0 U	3.0 U
Trichloroethene	ug/L	1.0 U	20 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
Trifluorotrichloroethane (Freon 113)	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
Vinyl chloride	ug/L	5.0 U	100 U	5.0 U	5.0 U	5.0 U
Xylene (total)	ug/L	5.0 U	4600	10	5.0 U	5.0 U
Semi-volatile Organic Compounds						
Acenaphthene	ug/L	10 U	10 U	100 U	10 U	10 U
Acenaphthylene	ug/L	10 U	10 U	100 U	10 U	10 U
Acetophenone	ug/L	10 U	10 U	180	10 U	10 U
Anthracene	ug/L	10 U	10 U	100 U	10 U	10 U
Atrazine	ug/L	10 U	10 U	100 U	10 U	10 U
Benzaldehyde	ug/L	10 UJ	10 UJ	100 UJ	10 UJ	10 UJ
Benzo(a)anthracene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Benzo(a)pyrene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Benzo(b)fluoranthene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Benzo(g,h,i)perylene	ug/L	10 U	10 UJ	100 UJ	10 U	10 U
Benzo(k)fluoranthene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Biphenyl	ug/L	10 U	10 U	100 U	10 U	10 U
bis(2-Chloroethoxy)methane	ug/L	10 U	10 U	100 U	10 U	10 U
bis(2-Chloroethyl)ether	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
bis(2-Ethylhexyl)phthalate	ug/L	10 U	10 U	100 U	10 U	10 U
4-Bromophenyl phenyl ether	ug/L	10 U	10 U	100 U	10 U	10 U
Butyl benzylphthalate	ug/L	10 U	10 U	100 U	10 U	10 U
Caprolactam	ug/L	10 U	10 U	100 U	10 U	10 U
Carbazole	ug/L	10 U	10 U	100 U	10 U	10 U
4-Chloro-3-methylphenol	ug/L	10 U	10 U	100 U	10 U	10 U
4-Chloroaniline	ug/L	10 U	10 U	100 U	10 U	10 U
2-Chloronaphthalene	ug/L	10 U	10 U	100 U	10 U	10 U

TABLE 1

DECEMBER 2006 GROUNDWATER ANALYTICAL RESULTS
OU-2 SUPPLEMENTAL GROUNDWATER INVESTIGATION
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW11R*	*MW12*	*MW13*	*MW14*	*MW15*
Sample ID:		*GW-17338-121406-MJW-07*	*GW-17338-121506-MJW-20*	*GW-17338-121406-MJW-15*	*GW-17338-121406-MJW-09*	*GW-17338-121406-MJW-08*
Sample Date:		*12/14/2006*	*12/15/2006*	*12/14/2006*	*12/14/2006*	*12/14/2006*
Parameters:	*Units*					
Semi-volatile Organic Compounds (continued)						
2-Chlorophenol	ug/L	10 U	10 U	100 U	10 U	10 U
4-Chlorophenyl phenyl ether	ug/L	10 U	10 U	100 U	10 U	10 U
Chrysene	ug/L	10 U	10 U	100 U	10 U	10 U
Dibenz(a,h)anthracene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Dibenzofuran	ug/L	10 U	10 U	100 U	10 U	10 U
3,3'-Dichlorobenzidine	ug/L	20 U	20 U	210 U	21 U	20 U
2,4-Dichlorophenol	ug/L	10 U	10 U	100 U	10 U	10 U
Diethyl phthalate	ug/L	10 U	10 U	100 U	10 U	10 U
Dimethyl phthalate	ug/L	10 U	10 U	100 U	10 U	10 U
2,4-Dimethylphenol	ug/L	10 U	11	18 J	10 U	10 U
Di-n-butylphthalate	ug/L	10 U	10 U	100 U	10 U	10 U
4,6-Dinitro-2-methylphenol	ug/L	30 U	31 U	310 U	31 U	31 U
2,4-Dinitrophenol	ug/L	30 U	31 UJ	310 UJ	31 U	31 U
2,4-Dinitrotoluene	ug/L	2.0 U	2.0 U	21 U	2.1 U	2.0 U
2,6-Dinitrotoluene	ug/L	2.0 U	2.0 U	21 U	2.1 U	2.0 U
Di-n-octyl phthalate	ug/L	10 U	10 U	100 U	10 U	10 U
Fluoranthene	ug/L	10 U	10 U	100 U	10 U	10 U
Fluorene	ug/L	10 U	10 U	100 U	10 U	10 U
Hexachlorobenzene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Hexachlorobutadiene	ug/L	2.0 U	2.0 U	21 U	2.1 U	2.0 U
Hexachlorocyclopentadiene	ug/L	10 U	10 U	100 U	10 U	10 U
Hexachloroethane	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Isophorone	ug/L	10 U	10 U	100 U	10 U	10 U
2-Methylnaphthalene	ug/L	10 U	3.2 J	52 J	10 U	10 U
2-Methylphenol	ug/L	10 U	10 U	7.8 J	10 U	10 U
4-Methylphenol	ug/L	10 U	10 U	22 J	10 U	10 U
Naphthalene	ug/L	10 U	110	1700	0.3 J	10 U
2-Nitroaniline	ug/L	20 U	20 U	210 U	21 U	20 U
3-Nitroaniline	ug/L	20 U	20 U	210 U	21 U	20 U
4-Nitroaniline	ug/L	20 U	20 U	210 U	21 U	20 U
Nitrobenzene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
2-Nitrophenol	ug/L	10 U	10 U	100 U	10 U	10 U
4-Nitrophenol	ug/L	30 U	31 U	310 U	31 U	31 U
N-Nitrosodi-n-propylamine	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
N-Nitrosodiphenylamine	ug/L	10 U	10 U	100 U	10 U	10 U

TABLE 1

DECEMBER 2006 GROUNDWATER ANALYTICAL RESULTS
OU-2 SUPPLEMENTAL GROUNDWATER INVESTIGATION
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW11R*	*MW12*	*MW13*	*MW14*	*MW15*
Sample ID:		*GW-17338-121406-MJW-07*	*GW-17338-121506-MJW-20*	*GW-17338-121406-MJW-15*	*GW-17338-121406-MJW-09*	*GW-17338-121406-MJW-08*
Sample Date:		*12/14/2006*	*12/15/2006*	*12/14/2006*	*12/14/2006*	*12/14/2006*
Parameters:	*Units*					
Semi-volatile Organic Compounds (continued)						
2,2'-oxybis(1-Chloropropane)	ug/L	10 U	10 U	100 U	10 U	10 U
Pentachlorophenol	ug/L	30 U	31 U	310 U	31 U	31 U
Phenanthrene	ug/L	10 U	10 U	100 U	10 U	10 U
Phenol	ug/L	10 U	1.5 J	100 U	10 U	10 U
Pyrene	ug/L	10 U	10 U	100 U	10 U	10 U
2,4,5-Trichlorophenol	ug/L	10 U	10 U	100 U	10 U	10 U
2,4,6-Trichlorophenol	ug/L	10 U	10 U	100 U	10 U	10 U
Metals						
Aluminum	ug/L	2610	63900	524	6710	632
Aluminum (Dissolved)	ug/L	200 U	499	190 U	200 U	200 U
Antimony	ug/L	10 U	10 U	10 U	10 U	10 U
Antimony (Dissolved)	ug/L	10 U	10 U	10 U	10 U	10 U
Arsenic	ug/L	4.2 U	10.7	23.8	4.2 U	4.2 U
Arsenic (Dissolved)	ug/L	4.2 U	6.6	23.3	4.2 U	4.2 U
Barium	ug/L	247	518	322	255	141 J
Barium (Dissolved)	ug/L	231	192 J	340	156 J	148 J
Beryllium	ug/L	2 U	1.7 J	2 U	2 U	2 U
Beryllium (Dissolved)	ug/L	2 U	2 U	2 U	2 U	2 U
Cadmium	ug/L	4 U	4 U	4 U	4 U	4 U
Cadmium (Dissolved)	ug/L	4 U	4 U	4 U	4 U	4 U
Calcium	ug/L	25600	28000	43600	33400	30200
Calcium (Dissolved)	ug/L	27300	27000	46300	34900	32600
Chromium Total	ug/L	10 U	127	10 U	11.6	10 U
Chromium Total (Dissolved)	ug/L	10 U	10 U	10 U	10 U	10 U
Cobalt	ug/L	66.8	21.5 J	50 U	50 U	50 U
Cobalt (Dissolved)	ug/L	68.0	50 U	50 U	50 U	50 U
Copper	ug/L	25 U	65.7	25 U	25 U	25 U
Copper (Dissolved)	ug/L	25 U	25 U	25 U	25 U	25 U
Iron	ug/L	19300	127000	52400	6850	844
Iron (Dissolved)	ug/L	8080	64000	54500	150 U	150 U
Lead	ug/L	3 U	83.5	3 U	3 U	3 U
Lead (Dissolved)	ug/L	3 U	3.3	3 U	3 U	3 U
Magnesium	ug/L	18500	27000	23200	20600	14800
Magnesium (Dissolved)	ug/L	19400	22000	24400	20800	15900
Manganese	ug/L	1130	875	566	40.3	75.8

TABLE 1

DECEMBER 2006 GROUNDWATER ANALYTICAL RESULTS
OU-2 SUPPLEMENTAL GROUNDWATER INVESTIGATION
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW11R*	*MW12*	*MW13*	*MW14*	*MW15*
Sample ID:		*GW-17338-121406-MJW-07*	*GW-17338-121506-MJW-20*	*GW-17338-121406-MJW-15*	*GW-17338-121406-MJW-09*	*GW-17338-121406-MJW-08*
Sample Date:		*12/14/2006*	*12/15/2006*	*12/14/2006*	*12/14/2006*	*12/14/2006*
Parameters:	*Units*					
Metals (continued)						
Manganese (Dissolved)	ug/L	1180	512	587	25.2	75.5
Mercury	ug/L	0.20 U	0.12 J	0.20 U	0.20 U	0.20 U
Mercury (Dissolved)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	ug/L	6.0 J	56.1	40 U	11.7 J	5.2 J
Nickel (Dissolved)	ug/L	3.5 J	40 U	40 U	6.0 J	3.0 J
Potassium	ug/L	5680	8500	6510	5250	5990
Potassium (Dissolved)	ug/L	5780	2690 J	6820	5110	6230
Selenium	ug/L	5 U	5 U	5 U	5 U	5 U
Selenium (Dissolved)	ug/L	5 U	5 U	5 U	5 U	5 U
Silver	ug/L	10 U	10 U	10 U	10 U	10 U
Silver (Dissolved)	ug/L	10 U	10 U	10 U	10 U	10 U
Sodium	ug/L	85700	27800	100000	153000	65500
Sodium (Dissolved)	ug/L	89500	27800	106000	162000	69300
Thallium	ug/L	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
Thallium (Dissolved)	ug/L	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
Vanadium	ug/L	5.2 J	196	50 U	14.8 J	50 U
Vanadium (Dissolved)	ug/L	50 U	50 U	50 U	50 U	50 U
Zinc	ug/L	31.5	237	30 U	27.7 J	7.3 J
Zinc (Dissolved)	ug/L	21.0 J	6.9 J	30 U	22.9 J	30 U

Notes:

J - Estimated concentration.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.

TABLE 1

DECEMBER 2006 GROUNDWATER ANALYTICAL RESULTS
OU-2 SUPPLEMENTAL GROUNDWATER INVESTIGATION
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW16*	*MW16*	*MW17*	*MW18*	*MW19*
Sample ID:		*GW-17338-121406-MJW-12*	*GW-17338-121406-MJW-13*	*GW-17338-121206-MJW-01*	*GW-17338-121206-MJW-02*	*GW-17338-121206-MJW-03*
Sample Date:		*12/14/2006*	*12/14/2006*	*12/12/2006*	*12/12/2006*	*12/12/2006*
			Duplicate			
Parameters:	*Units*					
Volatile Organic Compounds						
Acetone	ug/L	R	R	R	R	R
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Bromomethane (Methyl Bromide)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone (Methyl Ethyl Ketone)	ug/L	R	R	R	R	R
Carbon disulfide	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chlorobenzene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 J
Chloroethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane (Methyl Chloride)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cyclohexane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromoethane (Ethylene Dibromide)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichlorobenzene	ug/L	5.0 U	5.0 U	1.2 J	5.0 U	4.8 J
1,3-Dichlorobenzene	ug/L	5.0 U	5.0 U	0.3 J	5.0 U	1.0 J
1,4-Dichlorobenzene	ug/L	5.0 U	5.0 U	1.3 J	5.0 U	4.1 J
Dichlorodifluoromethane (CFC-12)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	ug/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethene	ug/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	ug/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
2-Hexanone	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Isopropylbenzene	ug/L	4.9 J	6.0	5.0 U	5.0 U	5.0 U
Methyl acetate	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methyl cyclohexane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methyl Tert Butyl Ether	ug/L	5.0 U	5.0 U	0.4 J	5.0 U	0.5 J
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	ug/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U

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Sample Location:		*MW16*	*MW16*	*MW17*	*MW18*	*MW19*
Sample ID:		*GW-17338-121406-MJW-12*	*GW-17338-121406-MJW-13*	*GW-17338-121206-MJW-01*	*GW-17338-121206-MJW-02*	*GW-17338-121206-MJW-03*
Sample Date:		*12/14/2006*	*12/14/2006*	*12/12/2006*	*12/12/2006*	*12/12/2006*
			Duplicate			
Parameters:	*Units*					
Volatile Organic Compounds (continued)						
Styrene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4-Trichlorobenzene	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	0.7 J
1,1,1-Trichloroethane	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Trichloroethene	ug/L	1.0 U	1.0 U	0.4 J	1.0 U	1.8
Trichlorofluoromethane (CFC-11)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trifluorotrichloroethane (Freon 113)	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl chloride	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Xylene (total)	ug/L	5.0 U	5.0 U	5.0 U	0.5 J	5.0 U
Semi-volatile Organic Compounds						
Acenaphthene	ug/L	0.6 J	0.8 J	10 U	10 U	10 U
Acenaphthylene	ug/L	10 U	10 U	10 U	10 U	10 U
Acetophenone	ug/L	10 U	10 U	10 U	10 U	10 U
Anthracene	ug/L	10 U	10 U	10 U	10 U	10 U
Atrazine	ug/L	10 U	10 U	10 U	10 U	10 U
Benzaldehyde	ug/L	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
Benzo(a)anthracene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(a)pyrene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(b)fluoranthene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(g,h,i)perylene	ug/L	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Biphenyl	ug/L	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	ug/L	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Ethylhexyl)phthalate	ug/L	10 U	10 U	10 U	10 U	10 U
4-Bromophenyl phenyl ether	ug/L	10 U	10 U	10 U	10 U	10 U
Butyl benzylphthalate	ug/L	10 U	10 U	10 U	10 U	10 U
Caprolactam	ug/L	10 U	10 U	10 U	10 U	10 U
Carbazole	ug/L	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	ug/L	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	ug/L	10 U	10 U	10 U	10 U	10 U
2-Chloronaphthalene	ug/L	10 U	10 U	10 U	10 U	10 U

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Sample Date:		*12/14/2006*	*12/14/2006*	*12/12/2006*	*12/12/2006*	*12/12/2006*
			Duplicate			
Parameters:	*Units*					
Semi-volatile Organic Compounds (continued)						
2-Chlorophenol	ug/L	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether	ug/L	10 U	10 U	10 U	10 U	10 U
Chrysene	ug/L	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibenzofuran	ug/L	10 U	0.2 J	10 U	10 U	10 U
3,3'-Dichlorobenzidine	ug/L	20 U	20 U	21 U	21 U	21 U
2,4-Dichlorophenol	ug/L	10 U	10 U	10 U	10 U	10 U
Diethyl phthalate	ug/L	10 U	10 U	10 U	10 U	10 U
Dimethyl phthalate	ug/L	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	ug/L	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	ug/L	10 U	10 U	10 U	10 U	10 U
4,6-Dinitro-2-methylphenol	ug/L	30 U	31 U	32 U	32 U	32 U
2,4-Dinitrophenol	ug/L	30 U	31 U	32 U	32 U	32 U
2,4-Dinitrotoluene	ug/L	2.0 U	2.0 U	2.1 U	2.1 U	2.1 U
2,6-Dinitrotoluene	ug/L	2.0 U	2.0 U	2.1 U	2.1 U	2.1 U
Di-n-octyl phthalate	ug/L	10 U	10 U	10 U	10 U	10 U
Fluoranthene	ug/L	1.6 J	2.2 J	10 U	10 U	10 U
Fluorene	ug/L	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorobutadiene	ug/L	2.0 U	2.0 U	2.1 U	2.1 U	2.1 U
Hexachlorocyclopentadiene	ug/L	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isophorone	ug/L	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	ug/L	10 U	10 U	10 U	10 U	10 U
2-Methylphenol	ug/L	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	ug/L	10 U	10 U	10 U	10 U	10 U
Naphthalene	ug/L	1.0 J	1.3 J	10 U	10 U	10 U
2-Nitroaniline	ug/L	20 U	20 U	21 U	21 U	21 U
3-Nitroaniline	ug/L	20 U	20 U	21 U	21 U	21 U
4-Nitroaniline	ug/L	20 U	20 U	21 U	21 U	21 U
Nitrobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Nitrophenol	ug/L	10 U	10 U	10 U	10 U	10 U
4-Nitrophenol	ug/L	30 U	31 U	32 U	32 U	32 U
N-Nitrosodi-n-propylamine	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodiphenylamine	ug/L	10 U	10 U	10 U	10 U	10 U

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Sample Date:		*12/14/2006*	*12/14/2006*	*12/12/2006*	*12/12/2006*	*12/12/2006*
			Duplicate			
Parameters:	*Units*					
Semi-volatile Organic Compounds (continued)						
2,2'-oxybis(1-Chloropropane)	ug/L	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	ug/L	0.4 J	0.6 J	32 U	32 U	32 U
Phenanthrene	ug/L	10 U	10 U	10 U	10 U	10 U
Phenol	ug/L	10 U	10 U	10 U	10 U	10 U
Pyrene	ug/L	0.9 J	1.1 J	10 U	10 U	10 U
2,4,5-Trichlorophenol	ug/L	10 U	10 U	10 U	10 U	10 U
2,4,6-Trichlorophenol	ug/L	10 U	10 U	10 U	10 U	10 U
Metals						
Aluminum	ug/L	543	641	2300	1370	16000
Aluminum (Dissolved)	ug/L	190 U	190 U	200 U	200 U	200 U
Antimony	ug/L	10 U	10 U	10 U	10 U	10 U
Antimony (Dissolved)	ug/L	10 U	10 U	10 U	10 U	10 U
Arsenic	ug/L	4.2 U	4.2 U	4.2 U	4.2 U	3.8 J
Arsenic (Dissolved)	ug/L	4.2 U	4.2 U	4.2 U	4.2 U	3.2 J
Barium	ug/L	357	359	122 J	47.1 J	274
Barium (Dissolved)	ug/L	384	379	117 J	46.2 J	188 J
Beryllium	ug/L	2 U	2 U	2 U	2 U	2 U
Beryllium (Dissolved)	ug/L	2 U	2 U	2 U	2 U	2 U
Cadmium	ug/L	4 U	4 U	4 U	4 U	4 U
Cadmium (Dissolved)	ug/L	4 U	4 U	4 U	4 U	4 U
Calcium	ug/L	58200	58600	28200	9740	44300
Calcium (Dissolved)	ug/L	62500	61500	30400	10200	44600
Chromium Total	ug/L	10 U	10 U	10 U	10 U	25.4
Chromium Total (Dissolved)	ug/L	10 U	10 U	10 U	10 U	10 U
Cobalt	ug/L	50 U	50 U	50 U	50 U	50 U
Cobalt (Dissolved)	ug/L	50 U	50 U	50 U	50 U	50 U
Copper	ug/L	25 U	25 U	25 U	25 U	17.5 J
Copper (Dissolved)	ug/L	25 U	25 U	25 U	25 U	25 U
Iron	ug/L	10000	10100	7590	924	12500
Iron (Dissolved)	ug/L	10800	10600	175	180	3020
Lead	ug/L	3 U	2.9 J	3 U	3 U	11.2
Lead (Dissolved)	ug/L	3 U	3 U	3 U	3 U	3 U
Magnesium	ug/L	17300	17400	12900	8880	12300
Magnesium (Dissolved)	ug/L	18700	18400	13700	9330	11600
Manganese	ug/L	354	359	161	544	461

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Sample Date:		*12/14/2006*	*12/14/2006*	*12/12/2006*	*12/12/2006*	*12/12/2006*
			Duplicate			
Parameters:	*Units*					
Metals (continued)						
Manganese (Dissolved)	ug/L	380	373	105	571	422
Mercury	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Mercury (Dissolved)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	ug/L	40 U	40 U	5.6 J	40 U	12.4 J
Nickel (Dissolved)	ug/L	40 U	40 U	3.0 J	40 U	40 U
Potassium	ug/L	13100	13100	5050	5000 U	6020
Potassium (Dissolved)	ug/L	13900	13800	5110	5000 U	5140
Selenium	ug/L	5 U	5 U	5 U	5 U	5 U
Selenium (Dissolved)	ug/L	5 U	5 U	5 U	5 U	5 U
Silver	ug/L	10 U	10 U	10 U	10 U	10 U
Silver (Dissolved)	ug/L	10 U	10 U	10 U	10 U	10 U
Sodium	ug/L	86700	86700	27600	60400	59100
Sodium (Dissolved)	ug/L	93000	92100	29100	63100	56800
Thallium	ug/L	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
Thallium (Dissolved)	ug/L	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
Vanadium	ug/L	50 U	50 U	6.9 J	5.9 J	39.6 J
Vanadium (Dissolved)	ug/L	50 U	50 U	50 U	50 U	50 U
Zinc	ug/L	30 U	10.6 J	30 U	30 U	80.4
Zinc (Dissolved)	ug/L	9.2 J	30 U	30 U	8.2 U	8.9 U

Notes:

J - Estimated concentration.
R - Rejected.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.

Revision 0
December 4, 2007

GROUNDWATER REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT
OU-2 BULK PRODUCT TANK AREA

GM Wilmington Assembly Plant

Prepared For:

GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

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LIST OF ACRONYMS AND SHORT FORMS

ACGIH	American Conference of Governmental Industrial Hygienists
ADD	average daily dose
AT	averaging time
ATSDR	Agency for Toxic Substances and Disease Registry
AST	aboveground storage tank
BCa	bias-corrected and accelerated
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylene
C_{air}	concentration in air
COC	chemical of concern
CRA	Conestoga-Rovers & Associates
CSM	conceptual site model
DNREC	Delaware Department of Natural Resources and Environmental Control
ECSA	Ecologically Sensitive Areas
ED	exposure duration
EF	exposure frequency
EnecoTech	EnecoTech Midwest, Inc.
ENVIRON	ENVIRON International Corporation
^{O}F	degrees Fahrenheit
GM	General Motors Corporation
HI	hazard index
HQ	hazard quotient
IRIS	Integrated Risk Information System
kg	kilogram
Kp	permeability coefficient
LADD	lifetime average daily dose
L/hour	liters per hour
MCL	maximum contaminant level
MDEQ	Michigan Department of Environmental Quality
MEK	methyl ethyl ketone
MRL	minimal risk level
MTBE	methyl tert butyl ether
MY	million years
NIOSH	National Institute for Occupational Safety and Health
NPDES	National Pollutant Discharge Elimination System
PCB	polychlorinated biphenyl
PEL	permissible exposure limits
PPRTV	Provisional Peer Reviewed Toxicity Values
NFA	no further action

LIST OF ACRONYMS AND SHORT FORMS
(continued)

OSHA	Occupational Safety and Health Administration
OSWER	Office of Solid Waste and Emergency Response
OU	operable unit
PRG	preliminary remediation goal
QAPP	Quality Assurance Project Plan
REL	recommended exposure limits
RfD	reference dose
RfC	reference concentration
RI/FS	Remedial Investigation/Feasibility Study
RME	reasonable maximum exposure
SAP	Sampling and Analysis Plan
SF	slope factor
SIRB	Site Investigation and Restoration Branch
Site	GM Wilmington Assembly Plant in Wilmington, Delaware
SVOC	semi-volatile organic compound
TEPP	Technology Enabled Permitting Process
TLV	threshold limit values
UCL	upper confidence limit
UD	University of Delaware
URF	unit risk factor
URS	Uniform Risk-Based Standard
U.S. EPA	United States Environmental Protection Agency
USTB	Underground Storage Tank Branch
VOC	volatile organic compound
WRPA	Water Resource Protection Area

EXECUTIVE SUMMARY

Conestoga-Rovers & Associates (CRA) in collaboration with ENVIRON International Corporation (ENVIRON) has prepared this Groundwater Remedial Investigation and Feasibility Study (RI/FS) report on behalf of General Motors Corporation (GM) for the Operable Unit 2 Bulk Product Storage Tank Area (OU-2 Area) at the GM Wilmington Assembly Plant located at 801 Boxwood Road in Wilmington, Delaware (Site).

Bulk product storage areas occupy approximately 1.5 acres near the center of the plant and are divided into OU-1 and OU-2 Areas. The OU-1 Area includes the pump house and the Tank L through Tank O aboveground storage tank (AST) containment area. The OU-2 Area includes the Large AST Area/Truck Unloading Rack and surrounding areas.

Investigation activities and remedial alternatives conducted in the OU-1 Area to address soil exceedances was presented in the "Report of Findings OU-1 Soils Bulk Product Tank Areas" (CRA, 2004), which resulted in no further action (NFA) for soil, as documented by Delaware Department of Natural Resources and Environmental Control (DNREC) Site Investigation and Restoration Branch's (SIRB) January 15, 2004 letter to GM. Investigation activities in the OU-2 Area resulted in approval of the document entitled "Report of Findings for OU-2 Bulk Product Area Tanks Soil Investigation", which requested written concurrence from DNREC that NFA is appropriate with regards to the soil in the OU-2 Area (CRA, 2006a). Based on subsequent discussions with DNREC SIRB, a NFA letter for the OU-2 Area soil will be issued once groundwater conditions within the OU-2 Area are addressed. As such, only groundwater conditions in the OU-2 Area are addressed in this RI/FS report.

Groundwater investigations were conducted within the OU-2 Area in June 2005, November 2005, August 2006, and December 2006. Samples were collected from monitoring wells within the OU-2 Area monitoring network and were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs).

The combined results of the June and November 2005 OU-2 Area groundwater investigation activities identified groundwater impacts within the OU-2 Area based on DNREC's groundwater Uniform Risk-Based Standard (URS) under Delaware's Hazardous Substance Cleanup Act (HSCA). Additional investigation activities were conducted in 2006 to ensure that the downgradient extent of groundwater impact was adequately characterized based on drinking water criteria. These drinking water criteria were based on federal maximum contaminant levels (MCLs), and risk-based tap water

ingestion preliminary remediation goals (PRGs) from U.S. EPA Region 9 (2004) for chemicals that lack MCLs.

Benzene, toluene, ethylbenzene, and xylenes (BTEX) are the primary compounds that have been detected in groundwater at OU-2 at concentrations exceeding the drinking water criteria. The highest concentrations have been located in the northeast section of the OU-2 Area near MW-3. Further comparison between MW-3 and MW-3D, which is located deeper within the aquifer, indicates that the high concentrations are primarily associated with the upper portion of the aquifer.

No concentrations of VOCs or SVOCs exceed the drinking water criteria beyond the OU-2 downgradient boundary. There are minimal exceedances of metals (i.e., manganese and vanadium) at the downgradient boundary of the OU-2 Area. However, these metals have been detected throughout the OU-2 Area monitoring network and are not believed to be a result of activities within the OU-2 Area. Although drinking water criteria were used to guide the field investigation, groundwater at the Site is not currently used or expected to be used in the future as a source of potable water.

A human health risk assessment was conducted to determine whether the presence of hazardous constituents in groundwater at OU-2 poses a risk to human health that would warrant remedial action. The significance of potential exposures to site-related concentrations of constituents in groundwater was evaluated based on conservative estimates of reasonable maximum exposures under current and reasonable expected future land use in the OU-2 Area. OU-2 is an outdoor area that is located within an active portion of the GM Wilmington Assembly Plant. As such, routine and construction workers constitute the main receptor populations at OU-2, although trespassers could represent another receptor population. Routine workers and trespassers at OU-2 could be exposed to constituents in the underlying groundwater that volatize and migrate into outdoor air. Routine workers also could be exposed to constituents in the underlying groundwater that volatize and migrate into indoor air through possible cracks in the foundations of the buildings at OU-2. Construction workers could be exposed to constituents in groundwater via incidental ingestion, dermal contact, and inhalation of vapors during excavations that extend into the water table.

Upper-bound cancer and noncancer risk estimates show that the highest concentrations of constituents in groundwater at OU-2 do not pose a significant risk to routine workers either under current conditions or potential future exposure scenarios if future operations at OU-2 were to entail a much higher degree of worker presence and were

not regulated by Occupational Safety and Health Administration (OSHA). This conclusion means that the potential exposure of trespassers also does not pose a significant risk. Upper-bound cancer risk estimates and refined noncancer risk estimates show that the concentrations of constituents in groundwater at OU-2 do not pose a significant risk to construction workers. These refinements include segregation of noncancer risk by critical effects and calculating 95 percent upper confidence limits (UCLs) for naphthalene, xylenes, and toluene, instead of using the highest concentrations ever detected at OU-2.

An ecological risk assessment for the OU-2 Area was deemed unnecessary since no Ecologically Sensitive Areas (ECSA) were identified at or adjacent to the Site and no endangered and/or threatened species are expected to be present at the Site.

Since groundwater impacts at the OU-2 downgradient boundary have been delineated to the drinking water criteria and the risk assessment determined that there is no significant risk to human health or the environment under current land use and continued industrial land use at OU-2, the following remedial alternatives were developed and screened: No Action and Limited Action (i.e., continued groundwater monitoring for two years).

It is proposed that the remedial action of continued groundwater monitoring for two years be implemented (i.e., Limited Action). The groundwater monitoring would consist of four rounds of sampling conducted at six month intervals over two years. The first and third rounds of sampling would include only the wells that have concentrations exceeding the drinking water criteria, while the second and fourth rounds would include all wells in OU-2. This proposed remedial action would meet the remedial action objectives in a cost-effective manner.

The Limited Action alternative is preferred over the No Action alternative as it provides additional confirmation of the groundwater conditions observed at the Site to date for a reasonable cost.

Groundwater sampling is proposed to end after the second annual sampling event, unless the results from future events indicate that the area of groundwater impact extends beyond the OU-2 Area downgradient boundary or the groundwater concentrations increase beyond the current maximum concentrations.

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) in collaboration with ENVIRON International Corporation (ENVIRON) has prepared this Groundwater Remedial Investigation and Feasibility Study (RI/FS) report on behalf of General Motors Corporation (GM) for the Operable Unit 2 Bulk Product Storage Tank Area (OU-2 Area) at the GM Wilmington Assembly Plant located at 801 Boxwood Road in Wilmington, Delaware (Site). The Site location map is shown on Figure 1.1. A Site layout is provided on Figure 1.2.

1.1 PURPOSE OF REPORT

This RI/FS has been prepared to describe the groundwater conditions at the OU-2 Area, to characterize the risk associated with potential exposures at the OU-2 Area, and to develop a range of remedial alternatives that meet the OU-2 Area's remedial action objectives from which to select the appropriate remedial action. The objectives of the RI/FS are to:

- Characterize the OU-2 Area groundwater and its actual or potential hazards to public health, welfare, and the environment;
- Identify sources of contamination;
- Evaluate the nature and extent, if any, of air, soil, and groundwater contamination at the OU-2 Area;
- Develop remedial alternatives;
- Screen the remedial alternatives; and
- Prepare a detailed analysis of remedial alternatives.

1.2 FACILITY BACKGROUND

Bulk product storage areas occupy approximately 1.5 acres near the center of the plant and are divided into OU-1 and OU-2 Areas as shown on Figure 1.3. GM conducted environmental assessments of the OU-1 and OU-2 Areas in 1998. The results from the investigations were provided to the Delaware Department of the Natural Resources and Environmental Control (DNREC) Underground Storage Tank Branch (USTB). A review of the soil data showed minimal exceedances of DNREC Uniform Risk Based Standards (URS). Further investigation activities and subsequent remedial alternatives were conducted in the OU-1 Area to address the soil exceedances as presented in the "Report

of Findings OU-1 Soils Bulk Product Tank Areas" (CRA, 2004). The additional work in the OU-1 Area resulted in no further action (NFA) for soil, as documented by DNREC Site Investigation and Restoration Branch's (SIRB) January 15, 2004 letter to GM. Subsequent work in the OU-2 Area resulted in approval of the document entitled "Report of Findings for OU-2 Bulk Product Area Tanks Soil Investigation", which requested written concurrence from DNREC that NFA is appropriate with regards to the soil in the OU-2 Area (CRA, 2006a). Based on subsequent discussions with DNREC SIRB, a NFA letter for the OU-2 Area soil will be issued once groundwater conditions within the OU-2 Area are addressed. As such, only groundwater conditions in the OU-2 Area are addressed in this RI/FS report.

1.2.1 FACILITY DESCRIPTION

Bulk product storage areas, located near the center of the facility, are divided into OU-1 and OU-2 Areas. The OU-1 Area includes the pump house and the Tank L through Tank O aboveground storage tank (AST) containment area. The OU-2 Area includes the Large AST Area/Truck Unloading Rack and surrounding areas.

Three existing tanks (i.e., Tanks A, B, and C) represent the Large AST Area (see Figure 1.3). These tanks were installed prior to September 1995. The size and content of these ASTs are identified as follows:

- A – 39,000-gallon AST currently empty, formerly containing thinner;
- B – 60,900-gallon AST currently containing (less than 10,000 gallons) diesel fuel oil; and
- C – 40,000-gallon AST currently containing unleaded gasoline.

AST containment areas are located around each of the large ASTs and are constructed of approximately 4-foot earthen berm walls covered with crushed gravel. Product piping from the ASTs runs to a pump house to the east.

In addition, a former large AST known as AST A2, was identified by GM as a 39,000-gallon AST that had previously contained thinner. This tank was decommissioned in the early 1980s. The former AST and its associated containment area were located directly north of the existing 40,000-gallon AST containing unleaded gasoline (i.e., Tank C). This area is currently utilized as a paved drive.

There are two AST containment areas and a pump house in the adjacent AST Containment/Truck Unloading Area. The northern AST containment area was constructed prior to 1955 and consists of 5-foot concrete walls and a stone-filled base. The northern AST containment pad contains four 12,000-gallon ASTs, which are identified by GM as Tanks H through K. The contents of these ASTs are identified as follows:

- H – 12,000-gallon AST currently empty, formerly containing thinner;
- I – 12,000-gallon AST currently empty, formerly containing diesel oil;
- J – 12,000-gallon AST current empty, formerly containing thinner; and
- K – 12,000 gallon AST currently empty, formerly containing glycol (approximately 2.5 percent) and water (approximately 97.5 percent).

The southern AST containment area, located within the OU-1 Area boundary, was constructed prior to 1955 and consists of 5-foot concrete walls and a concrete base. The southern AST containment pad contains four 12,000-gallon ASTs, which are identified by GM as Tanks L through O. The contents of these ASTs are identified as follows:

- L – 12,000-gallon AST currently containing power steering fluid, formerly containing rear axle fluid;
- M – 12,000-gallon AST currently and formerly containing glycol;
- N – 12,000-gallon AST currently empty, formerly containing automatic transmission fluid; and
- O – 12,000-gallon AST currently empty, formerly containing manual transmission fluid.

The Truck Unloading Area is located directly west of the northern and southern AST containment areas and consists of a stone-filled area between two paved driveways, with steel pits housing the unloading piping. Product piping from the truck unloading station runs underground to the pump house, located between the two AST containment areas, and then to the respective ASTs. Additional piping runs from the ASTs to the plant.

1.2.2 FACILITY HISTORY

The Site is currently owned and operated by GM for automotive manufacturing. GM has conducted operations at the Site since the facility was initially constructed between

1945 and 1946. Through the years, many additions have been made to the original facility.

1.2.3 PREVIOUS INVESTIGATIONS

In 1998, GM conducted environmental assessments of the Large AST Area and the AST Containment/Truck Unloading Area. The results of the 1998 environmental assessments were provided to the DNREC USTB in February 1999 in the following reports:

- Environmental Assessment Report – Large AST Area [EnecoTech Midwest, Inc. (EnecoTech), 1998a]; and
- Environmental Assessment Report – AST Containment/Truck Unloading Rack (EnecoTech, 1998b).

A review of the 1998 data showed minimal exceedances of DNREC URS in soils and groundwater in the OU-1 and OU-2 Areas. Prior to 2002, there were no identified or documented releases of petroleum products or other hazardous substances. On January 11, 2002, the Site experienced a release of power steering fluid from Tank L, located in the southern AST containment area. CRA implemented a focused soil sampling plan in the Tank L area, the results of which did not show an impact, as indicated in the "Report of Findings – Soil Sampling Program at Tank L Product Release Area" (CRA, 2002).

In April 2005, GM prepared and submitted a work plan to investigate the soil and groundwater exceedances identified in 1998 and to conduct a general surface soil screening of the OU-2 Area (CRA, 2005). The work plan was reviewed and approved by DNREC SIRB. The purpose of the OU-2 Area soil and groundwater investigation was to further characterize the nature and extent of regulated substances at the OU-2 Area. Investigation activities took place in June and November 2005. The results of the 2005 investigation activities were provided to DNREC in the following reports:

- Report of Findings OU-2 Bulk Product Tank Area Soil Investigation, GM Wilmington Assembly Plant (CRA, 2006a); and
- Report of Findings OU-2 Bulk Product Tank Area Groundwater Investigation, GM Wilmington Assembly Plant (CRA, 2006b).

Analytical results from the 2005 OU-2 Area soil investigation were compared to the URS for Restricted Use and the Modified URS for benzo(a)pyrene. A modified URS for benzo(a)pyrene was determined to be appropriate for the Site based on the Site Specific Standard development provisions provided in the DNREC Remediation Standards Guidance. A review of the data indicates that there are no exceedances of the applicable standards. The Soil Investigation Report identified that deed restrictions will be placed on the property to limit future use to industrial/commercial activities. (CRA, 2006a)

The combined results of the June and November 2005 OU-2 Area groundwater investigation activities identified groundwater impacts within the OU-2 Area based on DNREC's groundwater Uniform Risk-Based Standard (URS) under Delaware's Hazardous Substance Cleanup Act (HSCA). Additional investigation activities were conducted in 2006 to ensure that the downgradient extent of groundwater impact was adequately characterized based on drinking water criteria. These drinking water criteria were based on federal maximum contaminant levels (MCLs), and risk-based tap water ingestion preliminary remediation goals (PRGs) from U.S. EPA Region 9 (2004) for chemicals that lack MCLs. A summary of the groundwater URS and the drinking water criteria is provided in Table 1.1.

The impacts consisted primarily of benzene, toluene, ethylbenzene, and xylene (BTEX) and other gasoline-related compounds, however, a few other volatile organic compound (VOC) and semi-volatile organic compound (SVOC) parameters, as well as some metals, were detected at concentrations exceeding the DNREC URS screening levels. The highest concentrations of BTEX parameters were found in groundwater at the northeastern portion of the OU-2 Area. Elevated levels of acetone were also present in the groundwater in this area. The results of the 2005 groundwater investigations are provided in Tables 1.2, 1,3, 1.4, and 1.5 for VOCs, SVOCs, metals, and polychlorinated biphenyls (PCBs), respectively. The locations of the monitoring wells are shown on Figure 1.4. The soil stratigraphic and monitoring well instrumentation logs are provided in Appendix A. The analytical data reports and validation memoranda are provided in Appendix B.

A comparison of the June and November 2005 analytical results from MW-3, which is screened across the water table from 10 feet to 15 feet below ground surface (bgs), and MW-3D, which is screened deeper within the aquifer from 20 feet to 25 feet bgs, shows a significant decrease in the concentrations of detected compounds as well as the number of compounds detected in the deeper well. These results indicate that impacts to groundwater in this area are primarily associated with the upper portion of the aquifer. Monitoring wells located at the downgradient boundary of the OU-2 Area (i.e.,

MW-11R, MW-14, MW-15, MW-9, and MW-19) have no groundwater impacts for VOCs and SVOCs above the drinking water criteria and therefore, the groundwater impacts do not extend beyond the OU-2 Area downgradient boundary.

Based on the results of the 2005 groundwater investigation activities, GM prepared and submitted a work plan for supplemental groundwater investigation to DNREC in July 2006 (CRA, 2006c). The work plan was discussed by DNREC and GM's consultant, CRA, on August 23 and August 24, 2006 and verbally approved by DNREC on August 24, 2006.

Since hexavalent chromium was not detected in any of the samples taken during the August and September 2006 sampling events, GM proposed the removal of hexavalent chromium from the December 2006 sampling event but continued to analyze for chromium total. In a letter to GM dated November 22, 2006, DNREC agreed with the removal of hexavalent chromium from the list of analyzed compounds starting with the December 2006 sampling. During the period of December 12, 2006 to December 15, 2006, groundwater samples were collected from the monitoring wells within the OU-2 Area and sent to Severn Trent Laboratories in Edison, New Jersey (STL) to be analyzed for VOCs, SVOCs, and metals (total and dissolved). The results of the supplemental groundwater investigation were submitted to DNREC in a letter from GM dated June 18, 2007 (CRA, 2007) and are presented in Table 1.2 through Table 1.5. The locations of the monitoring wells are provided on Figure 1.4. The soil stratigraphic and monitoring well instrumentation logs are provided in Appendix A. The analytical laboratory reports and data validation memoranda are provided in Appendix B.

2.0 SITE PHYSICAL CHARACTERISTICS

2.1 OPERATIONAL HISTORY

GM has been the sole owner and operator at the Site since the GM Wilmington facility was built in 1945. All manufacturing operations conducted at the Site have been associated with automotive assembly.

2.2 GEOLOGY

Cross sections of geology within the OU-2 Area were generated based on the soil stratigraphic log data from the work plan. Figure 2.1 is a plan view showing the locations of the cross sections. Cross sections A-A' and B-B' are depicted on Figure 2.2 and Figure 2.3, respectively.

A review of soil borings advanced during previous investigations show the presence of a fill material from ground surface to depths ranging from approximately 5 feet bgs to 10 feet bgs throughout much of the storage tank areas. The fill generally consists of sands, silts, and clays. In some areas, such as within the diked containment areas, a few inches to more than a foot of crushed stone is present. There is a continuous sand layer ranging from 16 to 30 feet in thickness with starting depths ranging from approximately 7.8 feet bgs to 11.5 feet bgs and extending to depths ranging from approximately 23.8 feet bgs to 40 feet bgs. The sand layer is underlain by reddish-brown clay.

The natural soils present in this area are associated with the Cretaceous Age [65-136 million years (MY)] Potomac Formation. The Potomac Formation is principally variegated silt and/or clay with interbedded quartzitic sands. The Potomac Formation consists of deltaic fluvial deposits that rest unconformably upon Precambrian-Age (> 570 MY) basement rock, which is considered to be the Wilmington Complex gneiss in the vicinity of the Site. The thickness of the Potomac Formation on-Site is unknown, however published literature indicates that the Potomac Formation can be relatively thin (less than 50 feet) in areas near the Fall Line, as is the case with this Site. The Fall Line represents a lineament (fault) separating the igneous and metamorphic rocks of the Piedmont Province from the unconsolidated, flat-lying sediments of the Atlantic Coastal Plain.

2.3 HYDROGEOLOGY

Groundwater was typically observed at approximately 11.4 to 13.4 feet bgs during the 2005 and 2006 groundwater investigations. Groundwater elevations recorded between June 2005 and December 2006 are provided in Table 2.1. Groundwater contours from the most recent and complete groundwater sampling event (i.e., December 2006) are provided on Figure 2.4. Groundwater flow direction beneath the OU-2 Area is to the west / west southwest.

A review of the DNREC Technology Enabled Permitting Process (TEPP), which is an automated program that the Water Supply Section uses to store and retrieve water well data derived from permit applications, well completion reports, and well abandonment reports, indicates that there are potentially 14 water well locations within a 2-mile radius of the Site as shown on Figure 2.5. It should be noted that the locations of two of the water wells could not be identified through the TEPP data. Furthermore, the remaining 12 water well locations correspond to 28 water wells, which are listed in Table 2.2 along with information related to the well use, desired capacity, screen depth, address, casing diameter, daily use, completion date, well location, and approximate distance to the Site. None of these 28 wells were located within a one mile radius of the Site. For two of the wells listed in Table 2.2, the physical location of the wells could not be determined, but based on the information that is available, it is believed that these wells are located at least a one mile from the Site.

2.4 SURFACE WATER HYDROLOGY

Surface water flow across the Site is directed to the Site storm sewer system, which discharges to Little Mill Creek through the Site's National Pollutant Discharge Elimination System (NPDES) Permit Number DE0000523. There are no surface water bodies in the OU-2 Area. According to a University of Delaware (UD) study, there are no waterways (streams, rivers, lakes, or tidal waves), including associated wetlands, floodplains, and riparian zones present on-Site or immediately adjacent to the Site as shown on the Water Resource Protection Areas (WRPAs) map provided in Appendix C (UD, 2001).

The Red Clay Creek runs approximately 1.1 miles west of the Site. There is also a surface water body located approximately 1.3 miles southeast of the Site in Banning Park, which is located immediately northwest of the Christina River.

2.5 METEOROLOGY

The average total precipitation in Wilmington, Delaware is approximately 54.3 inches with a peak of 8.1 inches in July. The average monthly precipitation (in inches) is summarized on Figure 2.6. The average temperature in Wilmington, Delaware is 63.4 degrees Fahrenheit (^{O}F) with an average low of 44.9 ^{O}F in January and an average high of 80.1 ^{O}F in July. The average monthly temperatures are summarized on Figure 2.7.

A wind rose of Wilmington, New Castle County Airport, which is located approximately 3 miles south of the Site, is shown on Figure 2.8. The average wind speed is 7.5 knots from the west.

2.6 DEMOGRAPHY AND LAND USE

According to the 2000 census, there are 72,664 people, 28,617 households, and 15,882 families residing in Wilmington, Delaware. The population density is 2,585.8 per square kilometer (6,698.1 per square mile). The Site is located in a mixed commercial and residential area of Wilmington with a number of rail lines located to the north of the Site, a multi-lane divided highway to the west of the Site, and residential land use to the south and east of the Site.

2.7 ECOLOGY

Based on observations noted during the 2005 investigation activities, no environmentally sensitive habitats exist at the Site and no endangered and/or threatened species are expected to be present at the Site currently. In addition, the Site is located in a highly developed area bordered by residential properties, railway tracks, and Delaware State Road 41, which further supports that ecologically sensitive areas are not present at the Site. An Ecologically Sensitive Areas (ECSA) Analysis for the Site is provided in Appendix D.1. Furthermore, a letter from the DNREC Heritage Division of Wildlife dated September 25, 2007 confirms that there are currently no records of state-rare or federally listed plants, animals or natural communities at or adjacent to the Site and, as such, Critical Resource Waters are not present at or adjacent to the Site. The DNREC letter is provided in Appendix D.2.

3.0 NATURE AND EXTENT OF CONTAMINATION

As noted in Section 1.2.3, groundwater impact was initially identified based on DNREC's groundwater URS criteria, and then further data evaluation was conducted by comparing the groundwater data to drinking water criteria based on federal MCLs and risk-based tap water ingestion PRGs from U.S. EPA Region 9 (2004) for chemicals that lack MCLs. It should be noted that groundwater at the Site is not currently or expected in the future to be used as a source of potable water either on or off the Site. As such, using drinking water criteria was a conservative approach for assessing the adequacy of the data collected to support the risk assessment.

The drinking water criteria were utilized to prepare a list of data presentation parameters for groundwater as presented in Table 3.1. A groundwater parameter with at least one exceedance of these criteria was included in the list for data presentation purposes. The nature of the groundwater impacts include VOCs [i.e., acetone, BTEX, chlorobenzene, and methyl tert butyl ether (MTBE)], SVOCs [i.e., benzo(a)pyrene, bis(2-ethylhexyl)phthalate, methylphenol (cresol), and naphthalene], and metals [i.e., arsenic (total and dissolved), chromium total, lead, manganese (total and dissolved), and vanadium]. The results of previous groundwater investigations are provided in Table 1.2 through Table 1.5. The results of the data presentation parameters are summarized on Figure 3.1.

A comparison of analytical results from MW-3 and MW-3D shows a significant decrease in the concentrations of detected compounds as well as the number of compounds detected in the deeper well (i.e., MW-3D). These results indicate that impacts to groundwater in this area are primarily associated with the upper portion of the aquifer. Furthermore, groundwater impacts at the OU-2 downgradient boundary (i.e., MW-9, MW-11R, MW-15, and MW-19) have been delineated to the drinking water criteria, with the exception of some metals [i.e., manganese (total and dissolved) and vanadium], which are located throughout the Site and do not appear to be a result of activities within the OU-2 Area.

3.1 SOURCES

The highest concentrations are located in the northeastern portion of the OU-2 Area and the data from the monitoring wells downgradient of the northeastern portion of the OU-2 Area are either non-detect or have very low concentrations. The source of BTEX and petroleum related compounds appear to be in the vicinity of the MW-3 monitoring

well nest. A former gas pump fillbox and several underground pipes that convey products to the pump house are located in this area. These are the suspected sources of the chemicals in groundwater in the OU-2 Area.

3.2 SOIL

A review of the data from the 2005 soil investigation indicates that that there are no exceedances of the applicable standards (i.e., URS for Restricted Use and the Modified URS for benzo(a)pyrene). As such, GM requested written concurrence from DNREC that NFA is appropriate with regard to the soil in the OU-2 Area. In a letter to GM dated February 28, 2006, DNREC SIRB approved the Soil Investigation Report but deferred on issuing a NFA letter until the groundwater investigations were complete.

3.3 GROUNDWATER

A summary of the previous groundwater investigations is provided in Section 1.2.3. The results of the previous groundwater investigations are provided in Table 1.2 through Table 1.5. The list of data presentation parameters is provided in Table 3.1. The results for the data presentation parameters are summarized on Figure 3.1. The soil stratigraphic and monitoring well instrumentation logs are provided in Appendix A.

The extent of OU-2 Area groundwater impacts at the OU-2 downgradient boundary has been delineated to the drinking water criteria. There are no concentrations of VOCs or SVOCs above the drinking water criteria at the downgradient boundary of the OU-2 Area. There are minimal exceedances of metals concentrations above drinking water criteria at the downgradient boundary of the OU-2 Area. However, these metals (i.e., manganese and vanadium) are present throughout the OU-2 Area monitoring network and do not appear to be a result of activities within the OU-2 Area.

PCBs were detected in a sample of water present in near surface soils (i.e., less than 0.5 feet bgs) during investigations conducted in May 2005 in the northwest corner of the Tank H, I, J, K containment area. Subsequent sampling of the water present in the near surface soils was conducted in January 2006 and it was determined that the PCBs present in the May 2005 were a result of suspended material in the water and not in the water matrix itself. The near surface water sampling was discussed in detail in the "Report of Findings for OU-2 Bulk Product Area Tanks Soil Investigation" (CRA, 2006a). The report concluded that no further evaluation of PCBs in this area is necessary.

3.4 SURFACE WATER

No surface water body exists at or in the vicinity of OU-2.

3.5 SEDIMENTS

No sediments exist at or in the vicinity of OU-2.

3.6 AIR

The potential for groundwater constituents to affect outdoor and indoor air is addressed in the human health risk assessment.

3.7 BIOTA

No biota exist at or in the vicinity of OU-2.

4.0 CONTAMINANT FATE AND TRANSPORT

The following sections discuss the contaminant fate and transport of chemicals in groundwater at OU-2 Area.

4.1 POTENTIAL ROUTES OF MIGRATION

The routes of migration associated with the chemicals in groundwater include volatilization from water to outdoor and indoor air. There are no surface water bodies in the vicinity of the Site, and therefore, migration of contaminants through venting groundwater is not a concern. Groundwater will migrate through the sandy aquifer present at the Site, however, groundwater monitoring has determined the extent of groundwater impacts.

4.2 CONTAMINANT PERSISTENCE

The primary contaminants present in the OU-2 Area groundwater consist of BTEX compounds. These compounds are known to be biodegradable and none are considered to be persistent.

4.3 CONTAMINANT MIGRATION

The extent of VOC and SVOC groundwater impacts at the OU-2 downgradient boundary have been delineated to the drinking water criteria. The minimal exceedances of metals (i.e., manganese and vanadium) above drinking water criterion at the downgradient boundary of the OU-2 Area do not appear to be a result of activities within the OU-2 Area.

4.3.1 VOC AND SVOC RESULTS

Several VOCs and SVOCs were detected at concentrations that exceed the drinking water criteria. The compounds that were consistently detected at concentrations above drinking water criteria include BTEX, and MTBE, which are typically indicative of gasoline contamination. Other compounds, such as acetone, chlorobenzene, methyl ethyl ketone (MEK), bis(2-ethylhexyl)phthalate, and methylphenol were also detected at concentrations that exceed drinking water criteria.

The highest concentrations of BTEX and other gasoline related compounds occur in the northeastern portion of the OU-2 Area near MW-3. A comparison of the analytical results from MW-3 and MW-3D shows a significant decrease in the concentrations of detected compounds as well as the number of compounds detected in the deeper well (i.e., MW-3D). These results indicate that impacts to groundwater in this area are primarily associated with the upper portion of the aquifer. Monitoring wells located near the downgradient edge of the OU-2 Area boundary have no or substantially lower concentrations of VOCs and SVOCs indicating that the groundwater impacts do not extend beyond the OU-2 Area boundary downgradient of the higher groundwater concentrations. Groundwater results for VOCs and SVOCs are provided in Table 1.2 and Table 1.3, respectively.

4.3.2 METALS RESULTS

Several metals were detected at concentrations that exceed drinking water criteria, including arsenic, chromium (total), lead, manganese, and vanadium. Concentrations of arsenic, chromium (total), and lead are detected above drinking water criteria in the northwest portion of the OU-2 Area and do not extend beyond the OU-2 Area boundary. Concentrations of manganese and vanadium minimally exceed the drinking water criteria at the downgradient boundary of the OU-2 Area. However, these metals are present across the OU-2 Area monitoring network and do not appear to be a result of activities within the OU-2 Area. Groundwater results for metals are provided in Table 1.4.

4.3.3 PCB RESULTS

Monitoring wells MW-3, MW-6, and MW-7 were analyzed for PCBs based on PCB-detection in soil and near surface water samples collected in the northeast corner of the Tank H, I, J, K containment area. All sample results were non detect for PCBs as shown in Table 1.5.

4.4 FACTORS AFFECTING CONTAMINANT MIGRATION

Due to proximity of the Site buildings to the extent of groundwater contamination, volatilization from groundwater to air is considered a possible contaminant migration pathway within the OU-2 Area.

4.5 MODELING METHODS AND RESULTS

The extent of groundwater impacts at the OU-2 downgradient boundary has been delineated to the drinking water criteria. As such, modeling is not necessary to establish the area of groundwater impact at OU-2.

5.0 BASELINE RISK ASSESSMENT

5.1 HUMAN HEALTH EVALUATION

This section discusses the evaluation of potential human exposures to hazardous constituents in groundwater at OU-2. The methods used in the evaluation are based on U.S. EPA human health risk assessment guidance and are consistent with DNREC guidance. The scope of the human health evaluation is summarized in the conceptual site model (CSM) shown in Table 5.1. The CSM identifies the scenarios for potential human exposure under current and reasonably expected future conditions at and around the OU-2 Area in terms of the potentially exposed populations, the environmental media to which they could be exposed, and the potential routes of exposure. The CSM was developed based on the data from the OU-2 Area investigations and general Site information discussed in Sections 1 and 2, respectively. The scenarios for potential human exposure are further discussed in Section 5.1.2.

Discussion of the human health evaluation is organized as follows:

- Preparation of data used in the evaluation are discussed in Section 5.1.1 – Data Evaluation;
- Scenarios for potential human exposure are discussed in Section 5.1.2 – Exposure Assessment, which also discusses the estimation of exposure concentrations and chemical intakes for each exposure scenario;
- Toxicity information for the constituents included in the evaluation is summarized in Section 5.1.3 – Toxicity Assessment; and
- Estimates of risks associated with the potential exposures discussed in Section 5.1.2.2 and their significance are discussed in Section 5.1.4 – Risk Characterization. Uncertainties associated with the risk estimates are also discussed in this section.

5.1.1 DATA EVALUATION

5.1.1.1 DATA COLLECTION

The risk assessment evaluated groundwater data that were collected during the OU-2 Area groundwater investigation, which was conducted during 2005 and 2006 to assess the extent to which soil conditions at OU-2 have affected groundwater quality (CRA, 2006b and GM, 2007). These data are listed in Tables 1.2 through 1.5. The groundwater

samples collected during this investigation were analyzed for VOCs, SVOCs, and metals, as described in the investigation work plans (CRA, 2005 and 2006c).

5.1.1.2 DATA PREPARATION

All groundwater data were validated consistent with the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines for organic and inorganic data review as discussed in the Quality Assurance Project Plan (QAPP) (see Appendix G). In addition, the following procedures were used to prepare the data for quantitative risk assessment. These procedures, which are based on U.S. EPA guidance on human health risk assessment (U.S. EPA 1989), are as follows:

- Constituent concentrations qualified as not detected (i.e., U or UJ-qualified data) during data validation are evaluated as non-detects;
- Constituent concentrations qualified as not usable (i.e., R-qualified data) during data validation are not included in the risk assessment;
- Concentrations qualified as estimated (i.e., J-qualified data) are included for quantitative assessment;
- Concentrations in duplicate field samples are averaged to obtain a representative concentration for the sample location. When a constituent was detected in only one sample of a duplicate pair, the average of the detected concentration and one-half the quantitation limit is used in further calculations;
- The concentration of methylphenol (total) in a sample is the sum of the concentrations of the detected isomers and half the quantitation limit of isomers not detected in the sample but detected elsewhere in groundwater at OU-2. If no isomer is detected in a sample, methylphenol is considered to be not detected in the sample;
- As a conservative assumption, all concentrations of organic and inorganic constituents detected in groundwater are assumed to be Site-related. However site data shows that inorganic constituents are detected in upgradient monitoring well locations; and
- Earth metals, including aluminum, calcium, iron, magnesium, potassium, and sodium, were not included in the risk assessment.

5.1.2 EXPOSURE ASSESSMENT

This section discusses the potential exposures that are relevant under current and reasonably expected future land use at and around the OU-2 Area. The exposure setting, potentially exposed populations, and exposure pathways are discussed below in Sections 5.1.2.1 to 5.1.2.3.

Potential exposures of workers via inhalation are quantified as average daily concentrations in indoor and outdoor air. The methods for estimating average daily concentrations in indoor and outdoor air are discussed in Sections 5.1.2.6.1 and 5.1.2.6.2, respectively. Since the Plant is currently regulated by the Occupational Safety and Health Administration (OSHA), the indoor and outdoor air concentrations are compared to occupational inhalation limits, as discussed further in Section 5.1.4.1.1. To assess worker inhalation exposures in the event that future industrial operations at OU-2 are not subject to OSHA regulations (e.g., if GM no longer owned the site), the indoor and outdoor air concentrations are also used to estimate cancer and noncancer risks, as further discussed in Section 5.1.4.1.2.

Potential exposures of workers via ingestion and dermal contact are quantified as doses, which are defined as follows:

The dose for evaluating cancer risk is averaged over a lifetime and is called a lifetime average daily dose (LADD). For evaluating long-term (chronic) noncancer effects, the dose is averaged over the duration of potential exposure and is called an average daily dose (ADD). The concentration term in the dose equation refers to the concentration in an environmental medium to which a population is exposed over a specified duration. The intake term refers to the intake rate of the contaminated environmental medium, which is a function of the magnitude, frequency, and duration of exposure. The methods for estimating the concentration term are discussed in Section 5.1.2.5. The exposure factors that are used to quantify the magnitude, frequency, and duration of potential exposures are discussed in Section 5.1.2.7.

5.1.2.1 EXPOSURE SETTING

The environmental setting at and around the OU-2 Area, including climate, geology, hydrogeology, and surface water, is discussed in Section 2.

5.1.2.2 POTENTIALLY EXPOSED POPULATIONS

OU-2 is an outdoor area that is located within an active portion of the GM Wilmington Assembly Plant. As such, workers constitute the main receptor population at OU-2, although trespassers could represent another receptor population. Currently, routine workers are expected to be present in OU-2 only occasionally and only for a portion of their work day, since their main tasks in this area are checking flow meters and cooling systems, performing chemical tests on the cooling systems, pumping chemicals from drums to holding tanks, and performing maintenance work. In the future, industrial use of the OU-2 Area could potentially entail a much higher degree of worker presence either outdoors or indoors. To account for this possibility, a conservative exposure frequency was used in the exposure assessment, as discussed in Section 5.1.2.6.1. Construction workers also could be present in the OU-2 Area, and may conduct construction or maintenance activities that involve subsurface excavation. Trespasser presence in the OU-2 Area, while possible, is considered unlikely, since access to the Plant is controlled by security personnel and fencing.

In summary, the potentially exposed populations at and around the OU-2 Area under current and reasonably expected future land use include the following:

- Routine workers;
- Construction workers; and
- Trespassers.

5.1.2.3 EXPOSURE PATHWAYS

The exposure pathways evaluated in the risk assessment are summarized in the conceptual site model shown in Table 5.1. Potential receptors include routine workers, construction workers, and trespassers. The types of potential exposures for each receptor are discussed below.

5.1.2.3.1 ROUTINE WORKERS

While outdoors in the OU-2 Area, routine workers could be exposed to constituents in the underlying groundwater that volatilize and migrate into outdoor air, since OU-2 is mostly covered with crushed stone. Routine workers also occasionally enter the two buildings (i.e., the Weld Water Building and the Pump House) that are located over the main area of groundwater impact in OU-2. While in the buildings, routine workers

could be exposed to constituents in the underlying groundwater that volatilize and migrate into indoor air through possible cracks in the buildings' foundations.

Exposure of routine workers via potable groundwater use is not expected because groundwater is not used as a drinking water supply at the Site, and future potable use of groundwater at the Site is not reasonably expected. Potable water is currently obtained from the Artesian Water Company, Newark, Delaware. The Plant also uses this water for non-potable purposes (e.g., as process water in manufacturing operations).

5.1.2.3.2 CONSTRUCTION WORKERS

Construction workers could be exposed to constituents in groundwater at OU-2 via contact with groundwater during construction or maintenance activities that involve excavation to the water table, which is 10 feet or more below ground at OU-2 (CRA 2006a). Since underground utilities are typically less than 5 feet below ground in the OU-2 Area, excavations that extend to the water table are expected to be infrequent. However, if such excavations were to occur, workers could be exposed to constituents in groundwater via incidental ingestion, dermal contact, and inhalation of vapors.

5.1.2.3.3 TRESPASSERS

Trespassers are unlikely to be present in OU-2, as discussed in Section 5.1.2.2. However, if trespassers were to be in OU-2, they could be exposed to constituents in the underlying groundwater that volatilize and migrate into outdoor air.

5.1.2.4 ESTIMATION OF EXPOSURE CONCENTRATIONS

The highest constituent concentrations among the groundwater data, including total and dissolved metal concentrations, were initially used as highly conservative estimates of the exposure concentrations for the inhalation, ingestion, and dermal contact routes of exposure for all receptors. The risk assessment took this highly conservative approach because the monitoring data were collected over a relatively short period of approximately two years, and concentrations at a few locations have varied somewhat over time. The exposures estimated in this approach are considered upper-bound estimates and are expected to grossly overestimate the reasonable maximum exposure (RME). To provide more realistic but still conservative exposure estimates, 95 percent upper confidence limits (UCLs) were also calculated for constituents that were found to

have the highest risk estimates based on the upper-bound exposure estimates, as discussed in Section 5.1.4.2. These 95 percent UCLs were still conservatively based on the highest detected groundwater concentrations at each monitoring well. The 95 percent UCLs were calculated using the nonparametric bootstrap method known as the bias-corrected and accelerated (BCa) method with 4,000 bootstrap replications (Efron and Tibshirani, 1998).

5.1.2.5 AIR EMISSION AND DISPERSION MODELS

The following models are used to estimate indoor and outdoor air concentrations for the exposure scenarios discussed in Section 5.1.2.3. These models are used by U.S. EPA and state regulatory agencies for screening-level analysis. The following are brief descriptions of the models. Further details of these models are provided in Appendix E.

5.1.2.5.1 VAPOR INTRUSION INTO BUILDINGS

Indoor air concentrations resulting from migration of vapors from groundwater into a building are estimated using the model described by Johnson and Ettinger (1991), which U.S. EPA recommends for screening-level evaluations (U.S. EPA, 2004a). The vapor intrusion scenario for routine workers is evaluated using the building parameters for the two buildings located over the main area of groundwater impact in OU-2, the Weld Water Building and the Pump House. The soil-related parameters of the model are based on the stratigraphy of the vadose zone soil at OU-2, which consists of several alternating layers of sand and silty-clay as determined from the boring logs for the locations nearest to the buildings (MW-6 for the Weld Water Building and MW-13 for the Pump House). Further discussion of the model and the input parameters used in the assessment is provided in Appendix E.

5.1.2.5.2 VAPOR EMISSION INTO OUTDOOR AIR

The model for estimating groundwater vapor migration through the vadose zone soil to outdoor air is based on steady-state diffusion. Further discussion of the model and the input parameters used is provided in Appendix E.

5.1.2.5.3 VAPOR EMISSION FROM EXPOSED GROUNDWATER

The model for estimating vapor emission from exposed groundwater in excavations is based on mass-transfer coefficients recommended in U.S. EPA guidance (U.S. EPA, 1995). Further discussion of the model and the input parameters used in the assessment is provided in Appendix E.

5.1.2.5.4 AIR DISPERSION OF VAPORS

Outdoor air concentrations are conservatively estimated using U.S. EPA's empirical correlation for annual-average, on-source, ground-level concentrations (U.S. EPA, 2002). The correlation was applied conservatively assuming a square source area the size of OU-2 (3 acres) even though the area of VOC-affected groundwater is smaller. The correlation was applied using the correlation coefficients for the Philadelphia, PA meteorological area, which is the closest city to the Site within the Site's climate zone (U.S. EPA, 2002).

5.1.2.6 ESTIMATION OF INTAKES

The exposure factors for evaluating the exposure scenarios summarized in the CSM and in Section 5.1.2.3 are discussed in this section. In this risk assessment, standard default exposure factors recommended by U.S. EPA for estimating reasonable maximum exposures are used where available and appropriate. Where standard default exposure factors are not available or not appropriate for an exposure scenario, the evaluation is conducted using similarly conservative exposure factors that are based on site-specific considerations and professional judgment. The exposure factors used in the risk assessment are summarized in Appendix E and discussed further below.

5.1.2.6.1 ROUTINE WORKERS

Potential exposures of current and future workers via inhalation are quantified as an average daily concentration in indoor and outdoor air. The methods for estimating the average daily concentration for indoor and outdoor air are discussed in Sections 5.1.2.6.1 and 5.1.2.6.2, respectively. Since the Plant is currently regulated by OSHA, the indoor and outdoor air concentrations are compared to occupational inhalation limits, as discussed further in Section 5.1.4.1.1. To assess worker inhalation exposures in the event that future industrial operations at OU-2 are not subject to OSHA regulation, the indoor

and outdoor air concentrations are also used to estimate cancer and noncancer risks. The risk estimates are calculated using the standard default exposure factors discussed below. According to U.S. EPA (1991a), standard default exposure factors are conservative assumptions about the magnitude, frequency, and duration of exposures, which in combination are intended to provide estimates of exposures that are higher than actual exposures to a large portion (90 percent to 99 percent) of a potentially exposed population.

Exposure Frequency

The frequency of 250 days/year is U.S. EPA's recommended value for evaluating RME in industrial settings (U.S. EPA, 1991a). The value is based on a 5-day work week and 50 weeks per year. Although routine workers are in OU-2 only occasionally and for only a portion of the work day, the risk assessment conservatively evaluates worker exposure to groundwater constituents in outdoor air by assuming exposure during the entire work day and for 250 work days per year. Similarly, the risk assessment conservatively evaluates exposure to groundwater constituents in indoor air by assuming exposure during the entire work day for 250 work days per year, even though workers spend much less time in the buildings in OU-2. These highly conservative assumptions are used so that the risk assessment's conclusions regarding the significance of potential exposures to groundwater constituents in OU-2 would remain valid even if future industrial use of the area were to entail a much higher degree of worker presence either outdoors or indoors.

Exposure Duration

The duration of 25 years is U.S. EPA's recommended value for evaluating RME in industrial settings (U.S. EPA, 1991a). The value is the 95th percentile number of years workers work at one location.

Averaging Time

The averaging time for evaluating exposures to carcinogens is 70 years. The averaging time for evaluating exposures to noncarcinogens is the exposure duration (U.S. EPA, 1989).

5.1.2.6.2 CONSTRUCTION WORKERS

The exposure factors used for evaluating potential exposure of construction workers to groundwater are as follows:

Groundwater Ingestion Rate

A rate of 0.005 liters / hour (L / hour) is used for incidental ingestion of groundwater during construction work in excavations that extend into groundwater. This rate is 10 percent of the rate that U.S. EPA (1989) recommends for ingestion while swimming, and represents a very conservative estimate of incidental groundwater ingestion that could occur while workers are in an excavation pit.

Groundwater Dermal Contact Rates

The exposed skin surface area of 3,300 square centimeters is based on the U.S. EPA-recommended exposed skin surface area for evaluating high-end contact with soil by workers in industrial settings (U.S. EPA, 2004b). Workers are conservatively assumed to be covered with groundwater over this exposed skin surface area for 2 hours per event. The absorbed dose for organic chemicals is estimated using a nonsteady-state approach (U.S. EPA, 2004b), which is more conservative than the steady-state approach (U.S. EPA, 1989), particularly for hydrophobic chemicals. The permeability coefficients (K_p) for dermal absorption from groundwater are estimated following U.S. EPA guidance (2004b). The calculations of the nonsteady-state dermal absorption are shown in Appendix E.

Exposure Frequency and Duration

The number of days of construction / maintenance activities that involve excavations into groundwater at OU-2 is conservatively assumed to be 50 days, which is assumed to occur at a frequency of 5 days per year for a period of 10 years. This combination of exposure frequency and exposure duration is expected to be conservative for the amount of time that workers are actually in contact with groundwater in OU-2 (as opposed to the total time for maintenance or construction, which typically includes time not associated with excavation). The assumption of 5 days per year can represent the time for a few small repairs per year or one larger repair. The duration of 10 years is more than twice the length of time that workers typically work at one location (U.S. EPA, 1997c).

Body Weight

The body weight of 70 kilograms (kg) is the standard U.S. EPA-recommended body weight for assessing exposure to adults (U.S. EPA, 1989).

Averaging Time

The averaging time for evaluating cancer risk is equal to a lifetime of 70 years, and the averaging time for evaluating noncancer risk is equal to the exposure duration (U.S. EPA, 1989).

5.1.2.6.3 TRESPASSERS

In this risk assessment, the significance of trespasser exposure to groundwater constituents in outdoor air is indirectly evaluated using the results for routine workers, since trespasser exposures would be much lower than those for routine workers.

5.1.3 TOXICITY ASSESSMENT

A toxicity assessment identifies potential adverse health effects that are associated with exposure to chemicals, and determines the dose-response relationship between exposure and the occurrence of adverse effects. The toxicity values used in deriving site-specific estimates of cumulative cancer risks and noncancer hazard indices (HIs), were compiled from the following U.S. EPA hierarchy of sources (U.S. EPA, 2003):

1. Integrated Risk Information System (IRIS);
2. Provisional Peer Reviewed Toxicity Values (PPRTV); and
3. Other (i.e., additional U.S. EPA and non-EPA sources of toxicity information).

The toxicity values are current as of December 2006. When a toxicity value was not available from the first two tiers of sources, other U.S. EPA sources of toxicity values were consulted and the availability of Agency for Toxic Substances and Disease Registry (ATSDR) minimal risk levels (MRLs) was checked. The toxicity values used in the risk assessment and their sources are presented in Appendix E and are discussed below.

5.1.3.1 TOXICITY VALUES FOR CARCINOGENS

U.S. EPA considers chemicals belonging to the following U.S. EPA cancer weight-of-evidence groups as human carcinogens:

Group A — Known Human Carcinogen: Sufficient evidence of carcinogenicity in humans

Group B1 — Probable or Likely Human Carcinogen: Limited evidence of carcinogenicity in humans

Group B2 — Probable or Likely Human Carcinogen: Sufficient evidence of carcinogenicity in animals with inadequate or lack of evidence in humans

Group C — Possible Human Carcinogen: Suggestive evidence of carcinogenicity in animals and inadequate, insufficient, or lack of evidence in humans

As shown in Appendix E, U.S. EPA has designated some of the constituents as Group B2 or Group C, which means that U.S. EPA acknowledges that there is either inadequate or a lack of evidence that these constituents actually cause cancer in humans. Therefore, evaluating these constituents as human carcinogens in the risk assessment is highly conservative.

U.S. EPA-derived cancer slope factors (SFs) and inhalation unit risk factors (URFs) for carcinogenic constituents and their sources are shown in Appendix E. The oral SFs and URFs represent 95 percent upper confidence bounds on the probability of getting cancer over a lifetime per unit dose. As recognized by U.S. EPA, there is significant scientific evidence that some of the SFs and URFs may be overly conservative and may ignore the potential existence of threshold doses. Nonetheless, they are used here as conservative assessment tools.

5.1.3.2 TOXICITY VALUES FOR NONCARCINOGENS

U.S. EPA-derived chronic reference doses (RfDs) and chronic inhalation reference concentrations (RfCs) and their sources are shown in Appendix E. The oral RfDs and inhalation RfCs represent conservative estimates of the daily exposure to the human population, including sensitive subpopulations (e.g., children), which are likely to be without an appreciable risk of deleterious effects during a lifetime. These RfDs and RfCs typically incorporate several safety factors to account for uncertainties in their derivation, which in combination often result in overall uncertainty factors of 1,000 or more. Furthermore, for many constituents, there is significant scientific debate about the

validity of these RfDs and RfCs, and the association of these doses and concentrations with potential adverse health consequences. Nonetheless, the RfDs and RfCs are used here as conservative assessment tools.

5.1.3.3 EXTRAPOLATION OF TOXICITY VALUES

The U.S. EPA sources of toxicity values do not provide dermal toxicity values for any of the constituents. Therefore, oral toxicity values (i.e., oral SFs and RfDs) are used as dermal toxicity values in this risk assessment. Adjustments to the oral toxicity values are made in this route-to-route extrapolation based on U.S. EPA guidance (U.S. EPA 2004b).

The U.S. EPA sources of toxicity values do not provide inhalation toxicity values (URFs and RfCs) for all of the constituents. For a constituent that has no inhalation toxicity value, the oral SF and/or RfD, if available, is converted to an URF and/or RfC using default U.S. EPA assumptions (U.S. EPA 1997a).

5.1.4 RISK CHARACTERIZATION

The health significance of the potential exposures identified in Section 5.1.2 is discussed in the following subsections. Section 5.1.4.1.1 describes the methods for quantifying occupational inhalation exposures via comparison of estimated air concentration to occupational inhalation limits. Section 5.1.4.1.2 describes the method for quantifying cancer risks and noncancer hazard indices; it also discusses the risk estimates and their significance. Uncertainties in the risk evaluation are discussed in Section 5.1.5.

5.1.4.1 METHODS AND APPROACHES

5.1.4.1.1 OCCUPATIONAL INHALATION EVALUATION

Since the Plant is regulated by OSHA, the risk assessment evaluates current worker inhalation exposures by comparing estimated air concentrations with occupational inhalation limits from the following hierarchy: permissible exposure limits (PELs) established by OSHA (29 CFR 1910), threshold limit values (TLVs) recommended by the American Conference of Government Industrial Hygienists (ACGIH, 2005), and the recommended exposure limits (RELs) established by National Institute for Occupational

Safety and Health (NIOSH). These inhalation limits for constituents detected in groundwater are shown in Appendix E.

The significance of potential exposure of routine workers to constituents in groundwater via assumed vapor intrusion is evaluated by dividing the estimated indoor air concentrations by their corresponding occupational inhalation limits, and then summing the resulting ratios. These ratios should be much less than 1 (e.g., less than 0.01) to ensure that the estimated indoor air concentrations from assumed vapor intrusion do not contribute materially to total indoor air concentrations (which would include contributions from indoor occupational sources).

Similarly, the significance of potential exposure of routine workers to constituents in groundwater via vapor migration through the soil into outdoor air is evaluated by dividing the estimated outdoor air concentrations by their corresponding occupational inhalation limits, and then summing the resulting ratios. These ratios also should be much less than 1 to ensure that estimated outdoor air concentrations from vapor migration through the soil into outdoor air do not contribute materially to total outdoor air concentrations (which would include contributions from outdoor occupational sources).

5.1.4.1.2 CANCER RISK AND NONCANCER HAZARD INDEX

The cancer risk associated with potential exposure to a carcinogenic chemical via ingestion and dermal contact is calculated by multiplying an estimate of the LADD for a particular exposure scenario by the cancer slope factor SF for the chemical, as follows:

$$Risk = LADD \cdot SF$$

For the inhalation route, the inhalation cancer risk is calculated using the chemical concentration in air (C_{air}) during the period of exposure and the URF, as follows:

$$Risk = C_{air} \cdot URF \cdot \frac{EF \cdot ED}{AT}$$

where EF is exposure frequency, ED is exposure duration, and AT is averaging time.

The noncancer HQ associated with potential exposure via ingestion and dermal contact to a chemical being evaluated for potential noncarcinogenic health effects is calculated

by dividing an estimate of the ADD for a particular exposure scenario by the RfD for the chemical, as follows:

$$HQ = \frac{ADD}{RfD}$$

For the inhalation route, the inhalation HQ is calculated using C_{air} and the RfC, as follows:

$$HQ = \frac{C_{air}}{RfC} \cdot \frac{EF \cdot ED}{AT}$$

The potential cancer risk and noncancer effects that may result from exposure to the combination of groundwater constituents at the OU-2 Area are estimated following U.S. EPA guidance (1989), as follows:

$$Cumulative\ Risk = \sum_i Risk_i$$

$$Hazard\ Index = \sum_i HQ_i$$

where:

$Risk_i$	=	estimated cancer risk for the *i*th constituent
HQ_i	=	hazard quotient for the *i*th constituent

For constituents that were found to have the highest noncancer risk estimates based on the upper-bound exposure estimates, the noncancer risk estimates are segregated by critical effect. This method of segregating noncancer risk estimates by critical effect is described in U.S. EPA (1989).

The significance of the estimates of cumulative cancer risk and HI was evaluated by comparing the estimates to a cumulative cancer risk limit of 10^{-4} and an HI limit of 1, which DNREC and U.S. EPA use to determine whether remediation is warranted (DNREC 1999, 61 FR 19432, May 1, 1996; U.S. EPA, 1991b). The risk estimates and results of the comparison to these limits are discussed in the following sections.

5.1.4.2 RISK CHARACTERIZATION RESULTS

5.1.4.2.1 ROUTINE WORKERS

Tables 5.2a and 5.2b summarize the estimated indoor air concentrations in the Weld Water Building and the Pump House, respectively, and their ratios to the occupational inhalation limits. Tables 5.2a and 5.2b show that the ratio for each constituent is much less than 1. It also shows that the sum of the ratios, which accounts for exposure to the mixture of constituents in the indoor air, is also much less than 1 (i.e., 0.0002).

Tables 5.2c and 5.2d summarize the estimates of cumulative cancer risk and HI that are associated with worker exposure to the estimated indoor air concentrations in the Weld Water Building. Tables 5.2e and 5.2f summarize the estimates of cumulative cancer risk and HI that are associated with worker exposure to the estimated indoor air concentrations in the Pump House. These tables show that the cumulative cancer risk and HI estimates do not exceed 10^{-4} or 1, respectively.

Table 5.3a summarizes the estimated outdoor air concentrations from migration of groundwater constituents through the vadose zone into outdoor air and their ratios to the occupational inhalation limits. Table 5.3a shows that the ratio for each constituent is much less than 1. It also shows that the sum of the ratios, which accounts for exposure to the mixture of constituents in the outdoor air, is also much less than 1 (i.e., 0.001).

Tables 5.3b and 5.3c summarize the estimates of cumulative cancer risk and HI that are associated with worker exposure to the estimated outdoor air concentrations. These tables show that the cumulative cancer risk and HI estimates do not exceed 10^{-4} or 1, respectively.

The results discussed above show that the concentrations of constituents in groundwater at OU-2 do not pose a significant risk to routine workers either under current conditions or if future operations at OU-2 were to entail a much higher degree of worker presence and were to be not regulated by OSHA.

5.1.4.2.2 CONSTRUCTION WORKERS

Tables 5.4a and 5.4b summarize the estimates of cumulative cancer risk and HI for worker exposure to constituents in groundwater during occasional excavations into the water table. As shown on these tables, the cumulative cancer risk estimate does not exceed the limit of 10^{-4}, but the HI estimate is 2, which exceeds the limit of 1. The largest

contributions to the HI estimate of 2 are from naphthalene with a HQ of 0.9, xylenes with a HQ of 0.5, and toluene with a HQ of 0.2. Since the HI estimate of 2 is an upper-bound estimate that assumes all chemicals have the same target organ and critical effect, and the workers would be exposed to the highest concentrations of all chemicals at the same time and constantly, refinements were conducted to provide more appropriate RME risk estimates. These refinements include segregation of HQs by critical effects and calculating 95 percent UCLs for naphthalene, xylenes, and toluene.

Segregation of HQs

The upper-bound HI estimate of 2 was segregated by critical effect. The critical effect and HQ estimates for naphthalene, toluene, and xylenes are shown in Table 5.4c. In addition, the HI estimate for the remaining chemicals, those not segregated by critical effect, is presented on Table 5.4c. None of these HQ or HI estimates exceeds the threshold of 1.

95 percent UCLs

95 percent UCLs were conservatively calculated using the highest detected groundwater concentrations at each well for naphthalene, toluene, and xylenes. Using these 95 percent UCLs and the highest detected concentrations for the remaining chemicals, the HI estimate is 0.6, as shown on Table 5.4d. This HI estimate was further segregated by critical effects for naphthalene, toluene, and xylenes, as shown on Table 5.4e. The HI estimate for the remaining chemicals, those not segregated by critical effect, is also presented on Table 5.4e. These HQ and HI estimates are considerably less than the limit of 1.

The results discussed above show that the concentrations of constituents in groundwater at OU-2 do not pose a significant risk to construction workers.

5.1.4.2.3 TRESPASSERS

As discussed in Section 5.1.4.2.1, the concentrations of constituents in groundwater at OU-2 do not pose a significant risk to routine workers. This conclusion means that the potential exposure of trespassers is also insignificant.

5.1.5 UNCERTAINTY ANALYSIS

5.1.5.1 EXPOSURE CONCENTRATIONS

The groundwater exposure concentrations used to estimate cancer and noncancer risks for routine workers and cancer risks for construction workers are based on the highest concentrations detected groundwater in the OU-2 Area. This approach inflates the cumulative cancer risk and HI estimates that did not exceed 10^{-4} and 1, respectively, relative to those that could have been calculated using realistic exposure concentrations rather than maximum concentrations. The use of maximum concentrations for all constituents introduces more conservatism than necessary for RME risk estimates because it assumes simultaneous worst-case exposure to all constituents constantly, when the RME generally would not have all constituents at worst-case concentrations at all times. The inflation of these risk and HI estimates makes them closer to the cumulative cancer risk limit of 10^{-4} and the HI limit of 1 than they would be if 95 percent UCLs were used for groundwater concentrations. The highest detected groundwater concentration, regardless of sample collection date, was used in this assessment. This approach is conservative since some current groundwater concentrations are less then the highest detected concentrations among all sampling events.

Most exposure concentrations that are based on mathematical modeling of constituent transfer from groundwater to air are conservative for the same reasons discussed above, since the model estimates are based on the use of maximum concentrations in groundwater. In addition, the model estimates are conservative because they generally do not account for the reduction of constituent concentrations in the groundwater as constituents transfer from these media. As a result, risk estimates that are based on the sum of risk estimates for multiple media are more conservative than necessary for RME estimates.

For the chromium (total) groundwater data, it was conservatively assumed that the concentrations represent hexavalent chromium. In reality, these concentrations likely are made up of only trivalent chromium. Chromium speculation data collected during the August and September 2006 sampling event showed that no hexavalent chromium was present in the groundwater samples. Therefore, the assumption that chromium (total) concentrations represent hexavalent chromium concentrations is conservative.

5.1.5.2 EXPOSURE FACTORS

As discussed in Section 5.1.2.7, most of the exposure factors used in the risk assessment are high-end (i.e., 90th to 95th percentile) estimates of the magnitude, frequency, and duration of potential exposures. When several such high-end factors are multiplied, the resulting estimates of dose will be higher than the 90th percentile of the distribution of exposures in the potentially exposed population and could be higher than the exposure to the maximally exposed individual, particularly when such exposure factors are combined with exposure concentrations that are based on maximum concentrations.

5.1.5.3 EXTRAPOLATED TOXICITY VALUES

As discussed in Section 5.1.3.3, the dermal toxicity values used in the risk assessment are oral toxicity values that were extrapolated to the dermal route without chemical-specific judgment regarding whether such extrapolation might be appropriate for a particular chemical. This is a conservative approach to ensure that potential risk via the dermal route is not overlooked. However, some constituents might exhibit different degrees of toxicity for the dermal route relative to the oral route. For such constituents, the extrapolation approach used in the risk evaluation could introduce uncertainty.

The conversion of an oral toxicity value to an inhalation toxicity value generally should be justified by consideration of a number of factors, including point of entry effects, pharmacokinetic data on the chemical's behavior in the different routes of exposure, and differences in the target organs affected. However, as a conservative measure for constituents without any inhalation toxicity values, oral SFs and RfDs were converted to inhalation URFs and RfCs in this risk assessment. Use of these extrapolated inhalation toxicity values reduces the potential for underestimating inhalation risks, but could introduce uncertainty.

5.1.5.4 RISK CHARACTERIZATION

Cancer and noncancer risk estimates for routine workers and cancer risk estimates for construction worker were summed regardless of the critical effect of the constituents. The summation of cancer and noncancer risks for multiple constituents is based on U.S. EPA guidance (1989) to assume dose additivity, which means that constituents in a mixture are assumed to have no synergistic or antagonistic interactions and each constituent has the same mode of action and elicits the same health effects. In general, this approach can introduce significant uncertainty. However, the majority of the

cumulative cancer risk and HI estimates in this risk assessment are dominated by contributions from no more than a few constituents, so that the cumulative risk estimates are nearly the same as those for the few key constituents.

5.2 ECOLOGICAL ASSESSMENT

The Site is located in a highly developed area bordered by residential, properties, railway tracks, and Delaware State Road 41. The Site is an active industrial property with little natural soil or vegetation at ground surface. As previously noted, no ECSA have been identified at or adjacent to the Site and no endangered and/or threatened species are expected to be present at the Site currently. Further, because the Site is expected to remain an active industrial property, the creation of habitats at the Site in the future is unlikely.

5.2.1 ECOLOGICAL CHARACTERIZATION

Since there are no ECSA identified at or adjacent to the Site and no endangered and/or threatened species are expected to be present at the Site, groundwater impacts at the OU-2 Area are not expected to have any negative effects on ecology at or adjacent to the Site.

5.2.2 IDENTIFICATION OF CHEMICALS OF CONCERN

The chemicals of concern within the OU-2 are parameters that exceed at least of the above noted drinking water criterion. The chemicals of concern are summarized in Table 3.1. However, due to the highly developed area of the Site, groundwater impacts within the OU-2 Area are not expected to have a negative effect on ecology at or adjacent to the Site.

5.2.3 EXPOSURE ASSESSMENT

Since no ECSA were identified at or adjacent to the Site and no endangered and/or threatened species are expected to be present at the Site, there is no evidence to suggest that any type of ecology will be exposed to the groundwater impacts within the OU-2 Area.

5.2.4 ECOLOGICAL EFFECTS ASSESSMENT

Since there are no known ECSA at the Site and no endangered and/or threatened species are expected to be present at the Site, the groundwater impacts within the OU-2 Area are not expected to have any negative ecological effects at the Site.

5.2.5 ECOLOGICAL RISK CHARACTERIZATION

An ecological risk assessment for the OU-2 Area was deemed unnecessary since no ECSA were identified at or adjacent to the Site and no endangered and/or threatened species are expected to be present at the Site.

5.2.6 UNCERTAINTY EVALUATION

There are no known ECSA currently present at the Site and there are no endangered and/or threatened species expected to be present at the Site. However, should future ECSA analysis of the Site reveal otherwise, an ecological assessment may be deemed necessary.

6.0 SUMMARY AND CONCLUSIONS

This section summarizes the results of the previous groundwater investigations within the OU-2 Area and provides conclusions related to the extent of OU-2 Area groundwater impacts.

6.1 SUMMARY

Groundwater investigations were conducted within the OU-2 Area in June 2005, November 2005, August 2006, and December 2006. Samples were collected from monitoring wells within the OU-2 Area monitoring network and were analyzed for VOCs, SVOCs, metals, and PCBs. The results of the groundwater investigations are summarized in Table 1.2 through Table 1.5.

6.1.1 NATURE AND EXTENT OF CONTAMINATION

BTEX and other gasoline-related compounds have been detected in concentrations exceeding drinking water criteria. The highest concentrations have been located in the northeast section of the OU-2 Area near MW-3. Further comparison between MW-3 and MW-3D, located deeper within the aquifer, indicates that the high concentrations are primarily associated with the upper portion of the aquifer.

No concentrations of VOCs or SVOCs exceed drinking water criteria beyond the OU-2 downgradient boundary. There are minimal exceedances of metals (i.e., manganese and vanadium) at the downgradient boundary of the OU-2 Area. However, these metals have been detected throughout the OU-2 Area monitoring network and are not believed to be a result of activities within the OU-2 Area. Although drinking water criteria were used to guide the investigation, groundwater at the Site is not currently used or expected to be used in the future as a source of potable water.

6.1.2 FATE AND TRANSPORT

The fate and transport mechanisms of BTEX compounds are highly influenced by number of factors including the contaminant characteristics, soil and groundwater characteristics, and the presence of natural bacterial flora in the soil. BTEX compounds are generally highly degradable in the natural environment and remedial approaches for

BTEX compounds often rely on the natural degradation of the use of nutrients and oxygen to enhance the degradation processes.

6.1.3 RISK ASSESSMENT

The results of the risk assessment indicate that the concentrations of constituents in groundwater within the OU-2 Area do not pose a significant risk either under current conditions or if future operations at OU-2 were to entail a much higher degree of worker presence and were to be not regulated by OSHA.

6.2 CONCLUSIONS

Groundwater impacts at the OU-2 downgradient boundary have been delineated to drinking water criteria. Despite the elevated concentrations of BTEX and other gasoline-related compounds in the northeastern portion of the OU-2 Area, the results of the risk assessment indicate that the concentrations of constituents in groundwater within the OU-2 Area do not pose a significant risk to human health.

6.2.1 DATA LIMITATIONS AND RECOMMENDATIONS FOR FUTURE WORK

There are at least two rounds of groundwater data collected for each monitoring well within the OU-2 Area monitoring network. Further groundwater monitoring for the next two years is appropriate to verify that extent of groundwater impact remains consistent with the conditions evaluated in the risk assessment.

7.0 DEVELOPMENT OF REMEDIAL ACTION ALTERNATIVES

7.1 INTRODUCTION

The objectives of the remedial action alternatives are to ensure that:

- Impacted groundwater does not pose an unacceptable risk to human health or the environment;
- The extent of groundwater contamination is within the OU-2 Area; and
- The concentrations of groundwater contaminants do not increase over time.

7.2 IDENTIFICATION OF GENERAL RESPONSE ACTIONS

Typically remedial response actions for groundwater include the following broad categories:

- No Action / Deferral to another program;
- Limited Action;
- Institutional Controls;
- Hydraulic Containment;
- Treatment; and
- Pump and treat.

Since the groundwater impacts resulting from the activities within the OU-2 Area have been delineated to drinking water criteria at the OU-2 Area downgradient boundary and the concentrations do not pose a significant risk to human health or the environment, the containment, treatment, and pump and treat actions are unnecessary for the Site conditions.

7.3 IDENTIFICATION AND SCREENING OF TECHNOLOGY TYPES

The screening process for the remedial actions is summarized below:

Remedial Response Action	*Remedial Technology*	*Screening Status*	*Reason for Screening*
No action	N / A	Retained	Feasible
Limited Action	Additional groundwater monitoring	Retained	Provides sufficient mechanism to evaluate protectiveness of remedy
Institutional Controls	Deed restrictions or other administrative controls	Evaluated in "No action"	Restrictions on groundwater use already exist
Hydraulic Containment		Rejected	Plume does not extend beyond OU-2 downgradient boundary
Treatment	1) Physical Treatment	Rejected	Contaminants do not pose a significant risk under current and reasonably expected future land use
	2) Biological Treatment	Rejected	
	3) Vapor Extraction	Rejected	
	4) Chemical Extraction	Rejected	

The No Action and Limited Action response actions have been retained as feasible remedial alternatives. OU-2 is located within an active industrial plant where land use is expected to remain industrial and groundwater is not currently used for potable or non-potable use. GM has procedures in place to ensure that the Facility will not use groundwater for any purpose. State regulations provide DNREC with authority to prohibit installation of water supply wells where groundwater is not suitable for use. Therefore, institutional controls on groundwater use are already in place, and as such, are an inherent part of the No Action response. Should ownership of the Site change, GM will evaluate the need for additional institutional controls on land use and groundwater use (e.g., deed restriction) at that time. Containment and treatment response actions have been rejected as remedial alternatives since contaminants do not pose a significant risk under current or reasonably expected future use.

7.4 IDENTIFICATION AND SCREENING OF PROCESS OPTIONS

No process options have been evaluated as part of this RI/FS.

7.5 DEVELOPMENT OF ALTERNATIVES

The No Action and Limited Action remedial actions will be evaluated as potential remedial alternatives for the OU-2 Area. Section 8 discussed the screening of alternatives and Section 9 presents a detailed analysis of the remedial alternatives.

8.0 SCREENING OF ALTERNATIVES

Remedial action alternatives include:

- No Action; and
- Limited Action.

Since the groundwater impacts at the OU-2 downgradient boundary have been delineated to drinking water criteria and the risk assessment concluded that there is no significant risk to human health or the environment, no active remedial action is deemed necessary.

8.1 INTRODUCTION

The following sections describe and evaluate the No Action and Limited Action approaches as remedial action alternatives within the OU-2 Area.

8.2 ALTERNATIVE 1: NO ACTION

8.2.1 DESCRIPTION

The No Action alternative would require GM to conduct no further investigation or remediation activities associated with OU-2. Concentrations of gasoline-related compounds would remain in excess of drinking water criteria. However, since there is no significant risk to human health or the environment, the No Action approach is a feasible remedial action for the OU-2 Area. Furthermore, the gasoline-related compounds are expected to degrade in the natural environment. The No Action alternative represents the baseline for comparison to other alternatives.

8.2.2 EVALUATION

No activity would be required for this alternative and, as such, no capital costs would be associated with this alternative.

8.2.3 ALTERNATIVE 2: LIMITED ACTION

8.2.4 DESCRIPTION

The Limited Action alternative would consist of semi-annual groundwater sampling rounds for two years (i.e., four additional rounds). The first and third sampling round would consist of the monitoring wells that currently have concentrations that exceed drinking water criterion (i.e., MW-2, MW-3, MW-3D, MW-6 through MW-8, MW-10, MW-11, MW-11R, MW-12, MW-13, and MW-19). The second and fourth sampling round would consist of all the monitoring wells within the OU-2 monitoring network. Groundwater monitoring is proposed to cease after two years, unless the groundwater impacts appear to worsen (i.e., groundwater concentrations exceed the current maximum concentration or if the groundwater impacts appear to expand downgradient beyond the OU-2 Area).

8.2.5 EVALUATION

The Limited Action alternative would consist of four rounds of semi-annual groundwater sampling and associated reporting. The capital cost associated with the sampling and reporting portion of this alternative is approximately $96,000, as shown in Table 8.1.

8.3 SELECTION OF ALTERNATIVES FOR DETAILED ANALYSIS

Since the groundwater impacts at the downgradient boundary of OU-2 have been delineated to drinking water criteria and the risk assessment concluded there is no significant risk to human health or the environment, only the No Action and Limited Action alternative will be evaluated as remedial alternatives for OU-2.

9.0 DETAILED ANALYSIS OF ALTERNATIVES

The following sections present a detailed analysis of the No Action and Limited Action remedial alternatives.

9.1 INTRODUCTION

The objective of the detailed analysis of remedial alternatives is to present the relative advantages and disadvantages of different contaminant management approaches for the Site.

9.2 INDIVIDUAL ANALYSIS OF ALTERNATIVES

The following sections evaluate the No Action (i.e., Alternative 1) and the Limited Action (i.e., Alternative 2) in terms of protection of public health, welfare and the environment; compliance with applicable laws and regulations; community acceptance; compliance monitoring requirements; permanence; technical practicability; restoration time frame; reduction of toxicity, mobility and volume of contamination; long-term effectiveness; and short-term effectiveness.

9.2.1 DESCRIPTION

ALTERNATIVE 1

The No Action remedial alternative requires no further action related to OU-2.

ALTERNATIVE 2

The Limited Action remedial alternative would include further groundwater monitoring of the established OU-2 Area monitoring well network.

9.2.2 PROTECTION OF PUBLIC HEALTH, WELFARE, AND THE ENVIRONMENT

ALTERNATIVE 1

The No Action remedial alternative would not reduce risks to human health and the environment. Based on the results of the risk assessment discussed in Section 5.0, there is no significant risk to human health or the environment. As such, the No Action approach is a feasible remedial action for the OU-2 Area.

ALTERNATIVE 2

The Limited Action remedial alternative would not reduce the risks to human health and the environment. Based on the results of the risk assessment presented in Section 5.0, there is no significant risk to human health or the environment. As such, the Limited Action alternative is a feasible remedial action for the OU-2 Area. Groundwater monitoring will ensure that the groundwater impacts remain within the boundary of the OU-2 Area and that the chemicals of concern (COCs) continue their degradation process in the natural environment.

9.2.3 COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS

ALTERNATIVE 1

The No Action alternative will not immediately reduce the COCs to the drinking water criteria. The groundwater impacts at the OU-2 downgradient boundary have been delineated to drinking water criteria.

ALTERNATIVE 2

The No Action alternative will not immediately reduce the COCs to the drinking water criteria. The groundwater impacts at the OU-2 downgradient boundary have been delineated to drinking water criteria.

9.2.4 COMMUNITY ACCEPTANCE

Community acceptance is not an applicable evaluation criteria since the groundwater impacts and proposed remedial action are limited to on-Site activities.

9.2.5 COMPLIANCE MONITORING REQUIREMENTS

ALTERNATIVE 1

The No Action remedial alternative does not include any continued monitoring within the OU-2 Area.

ALTERNATIVE 2

The Limited Action remedial alternative will ensure continued monitoring for another two years to evaluate the groundwater within the OU-2 Area.

9.2.6 PERMANENCE

ALTERNATIVE 1

The No Action alternative provides no additional short term reduction in the toxicity, mobility, or volume of COCs within the OU-2 Area. It should be noted, however, that due to natural attenuation and degradation, a reduction in toxicity could be expected over the long term.

ALTERNATIVE 2

The No Action alternative provides no additional short term reduction in the toxicity, mobility, or volume of COCs within the OU-2 Area. It should be noted, however, that due to natural attenuation and degradation, a reduction in toxicity could be expected over the long term. Continued groundwater monitoring within the OU-2 monitoring well network will confirm the degradation of the COCs.

9.2.7 TECHNICAL PRACTICABILITY

ALTERNATIVE 1

There is no technology or equipment associated with the No Action remedial alternative.

ALTERNATIVE 2

There is no technology or equipment associated with the Limited Action remedial alternative.

9.2.8 RESTORATION TIME FRAME

ALTERNATIVE 1

It is expected that that COCs identified within the OU-2 Area will degrade within the natural environment over time. As such, the COC concentrations may reduce to the drinking water criteria in the future.

ALTERNATIVE 2

It is expected that that identified COCs within the OU-2 Area will degrade within the natural environment over time. As such, the COC concentrations may reduce to the drinking water criteria in the future.

9.2.9 REDUCTION OF TOXICITY, MOBILITY AND VOLUME OF CONTAMINATION

ALTERNATIVE 1

The No Action alternative will not result in a reduction of toxicity, mobility or volume contamination. However, the risk assessment presented in this RI/FS has determined that there is no significant risk to human health or the environment. Furthermore, the COCs identified within the OU-2 Area are expected to degrade within the natural environment.

ALTERNATIVE 2

The Limited Action alternative will not result in a reduction of toxicity, mobility, or volume of contamination. However, the risk assessment presented in this RI/FS has determined that there is no significant risk to human health or the environment. Furthermore, the COCs identified within the OU-2 Area are expected to degrade within the natural environment. The continued monitoring of the OU-2 Area monitoring well network will confirm the COC concentrations do not increase over time.

9.2.10 LONG-TERM EFFECTIVENESS

ALTERNATIVE 1

COCs identified within the OU-Area are expected to degrade within the natural environment. As such, the long-term effectiveness of the No Action alternative is adequate for the Site conditions (i.e., active industrial, and no on-Site source of potable water).

ALTERNATIVE 2

COCs identified within the OU-Area are expected to degrade within the natural environment. As such, the long-term effectiveness of the Limited Action alternative is adequate for the Site conditions (i.e., active industrial property, and no on-Site source of potable water).

9.2.11 SHORT-TERM EFFECTIVENESS

ALTERNATIVE 1

As the No Action approach involves no remedial action, there would be no additional risk, over that presently existing, to the community, workers, or the environment as a result of the implementation of this alternative.

ALTERNATIVE 2

Since the Limited Action approach includes the monitoring of the existing monitoring network within the OU-2 Area, there would be no additional risk, over that presently existing, to the community, workers, or the environment as a result of the implementation of this alternative.

9.3 PREFERRED ALTERNATIVE AND JUSTIFICATION

It is proposed that the remedial action of continued groundwater monitoring for two years, as described in Section 8.2.3, be implemented (i.e., Limited Action). This proposed remedial action would meet the remedial action objectives in a cost-effective manner.

The proposed groundwater monitoring schedule is as follows:

- Initial semi-annual monitoring event — April 2008
- First annual sampling event — October 2008
- Subsequent semi-annual monitoring event — April 2009
- Subsequent annual sampling event — October 2009

The Limited Action alternative is preferred over the No Action alternative as it provides additional confirmation of the groundwater conditions observed at OU-2 to date for reasonable cost.

Groundwater sampling is proposed to end after the second annual sampling event, unless groundwater impacts extend beyond the OU-2 Area downgradient boundary or the groundwater concentrations exceed the current maximum concentrations.

Groundwater sampling will be conducted in accordance with the Sampling and Analysis Plan (SAP) and the Quality Assurance Project Plan (QAPP) as provided in Appendix F and G, respectively.

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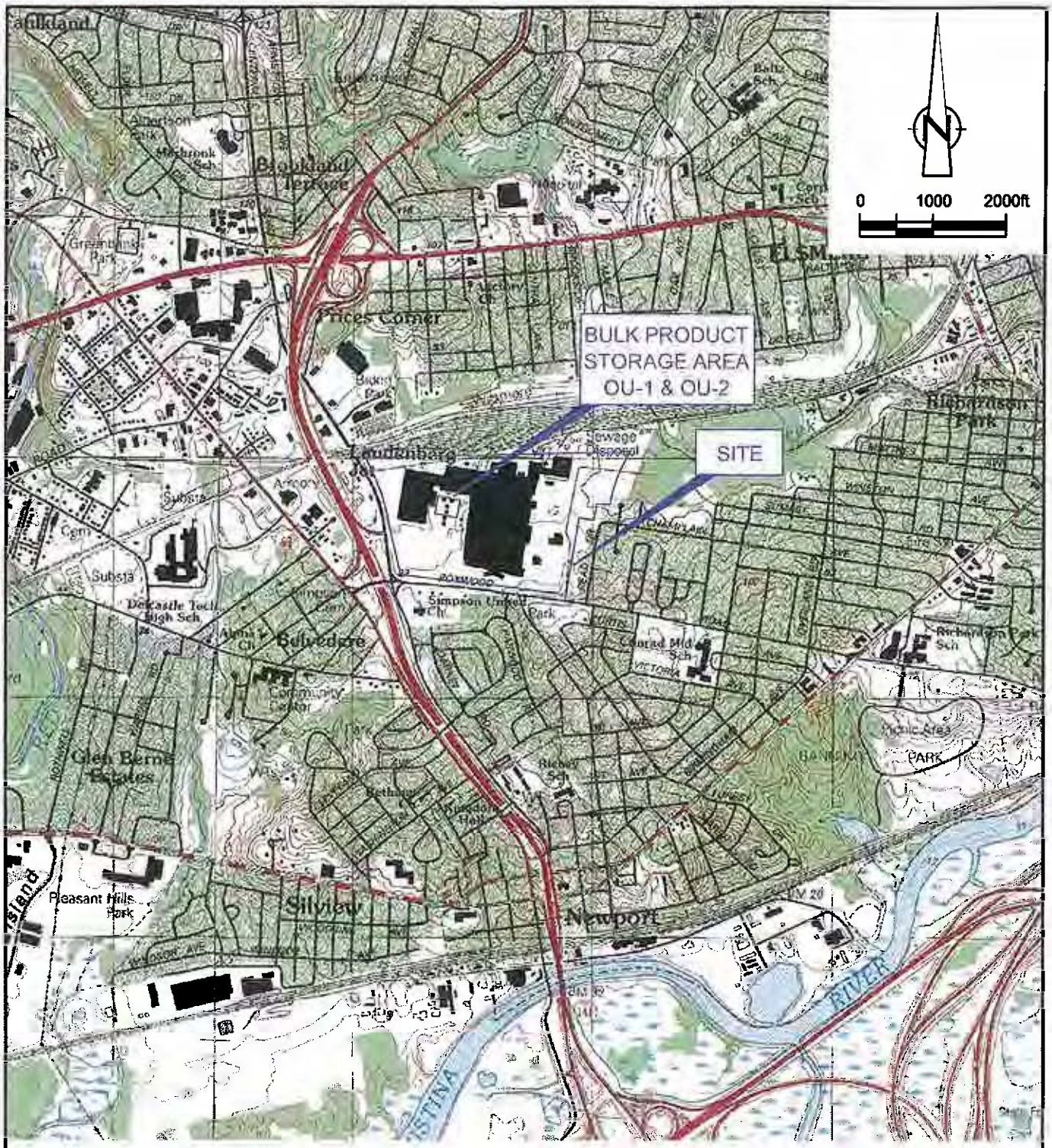


figure 1.1

SITE LOCATION MAP
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
Wilmington, Delaware

SOURCE:
USGS 1:24,000 DIGITAL RASTER QUADS 1997
WILMINGTON SOUTH,NEWARK EAST

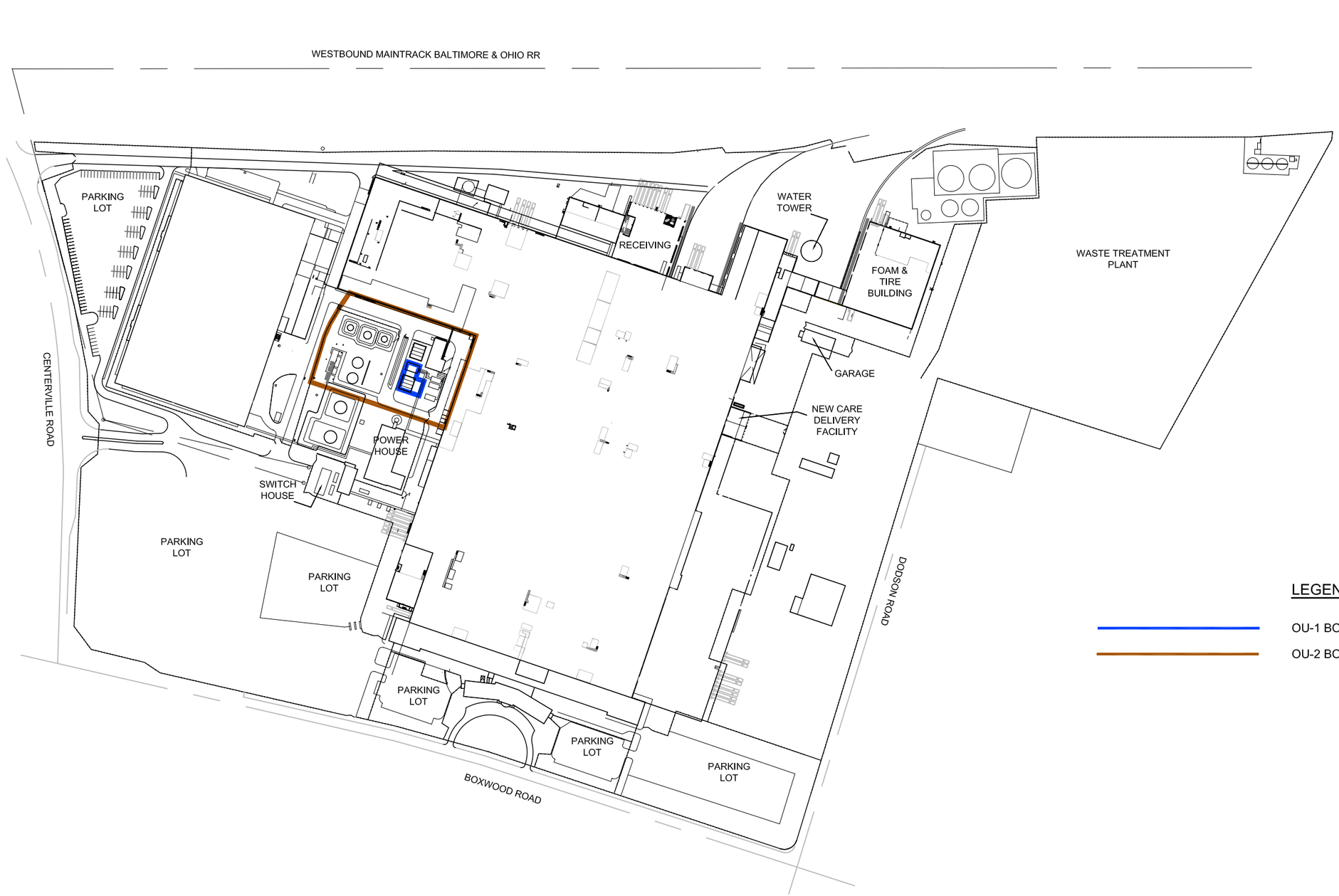


figure 1.2

SITE PLAN
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
Wilmington, Delaware

SOURCE: WILMINGTON SITE PLAN, SATURN ENGINEERING, DWG. SK1091901

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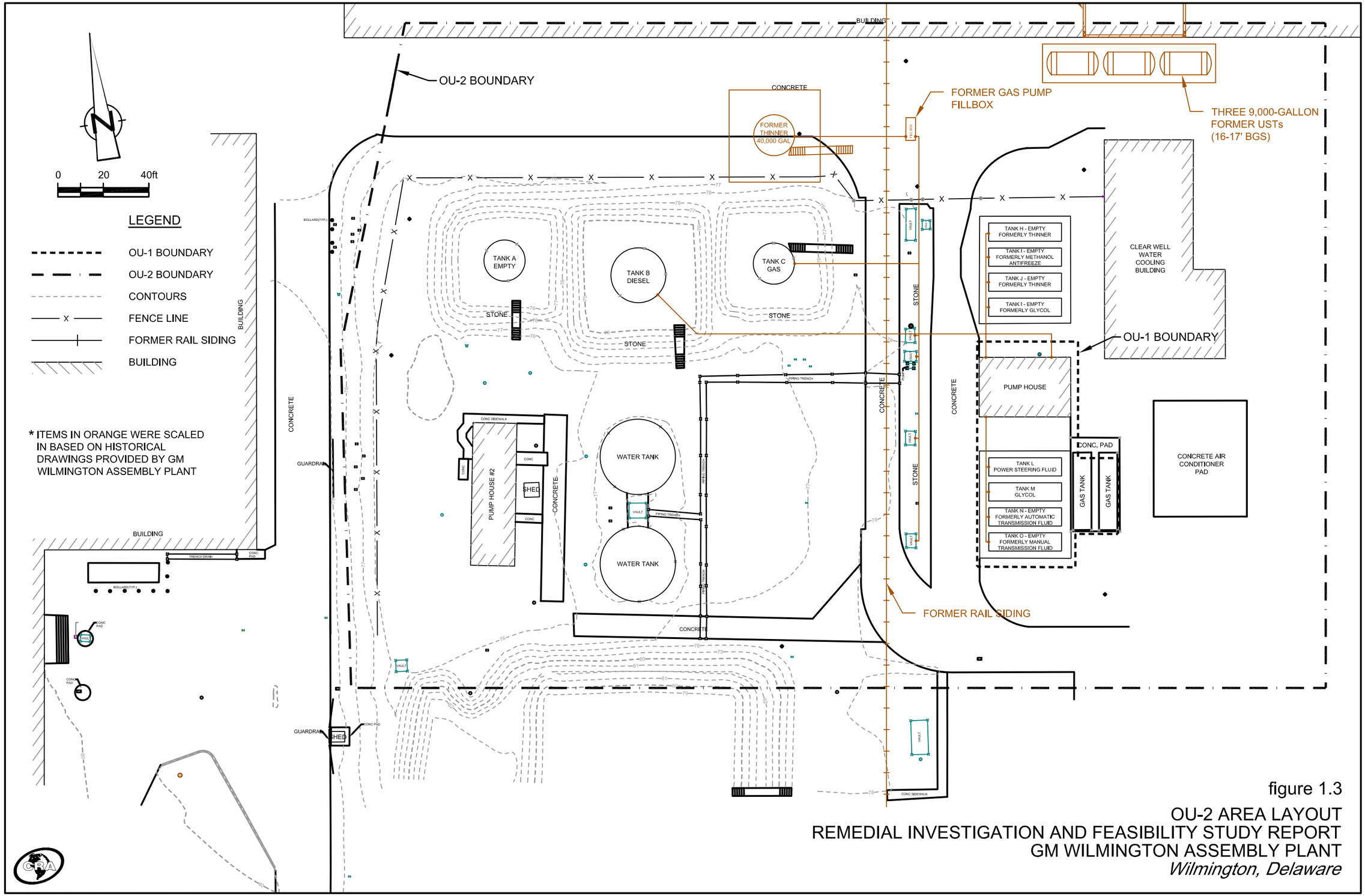


figure 1.3

OU-2 AREA LAYOUT
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
Wilmington, Delaware

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0 20 40ft

LEGEND

- OU-1 BOUNDARY
- OU-2 BOUNDARY
- CONTOURS
- FENCE LINE
- FORMER RAIL SIDING
- BUILDING
- MW-9 — MONITORING WELL LOCATION
- MW-1 — ABANDONED MONITORING WELL LOCATION

* ITEMS IN ORANGE WERE SCALED IN BASED ON HISTORICAL DRAWINGS PROVIDED BY GM WILMINGTON ASSEMBLY PLANT

MW-15
OU-2 BOUNDARY
FORMER OPEN DITCH
MW-1 (ABANDONED - 11/05)
MW-11R
MW-9
MW-14
MW-19
MW-8
MW-7
MW-10
MW-16
MW-17
MW-2
MW-11
MW-3D
MW-3
MW-6
MW-12
MW-13
MW-18
FORMER GAS PUMP FILLBOX
THREE 9,000-GALLON FORMER USTs (16-17' BGS)
FORMER THINNER 40,000 GAL
TANK A EMPTY
TANK B DIESEL
TANK C GAS
TANK H - EMPTY FORMERLY THINNER
TANK I - EMPTY FORMERLY METHANOL ANTIFREEZE
TANK J - EMPTY FORMERLY THINNER
TANK I - EMPTY FORMERLY GLYCOL
CLEAR WELL WATER COOLING BUILDING
PUMP HOUSE
CONC. PAD
TANK L POWER STEERING FLUID
TANK M GLYCOL
TANK N - EMPTY FORMERLY AUTOMATIC TRANSMISSION FLUID
TANK O - EMPTY FORMERLY MANUAL TRANSMISSION FLUID
GAS TANK
GAS TANK
CONCRETE AIR CONDITIONER PAD
PUMP HOUSE #2
SHED
WATER TANK
WATER TANK
STONE
CONCRETE
BUILDING
GUARDRAIL
FORMER RAIL SIDING
OU-1 BOUNDARY

figure 1.4

MONITORING WELL LOCATIONS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
Wilmington, Delaware

17338-30(011)GN-SC010 DEC 04/2007

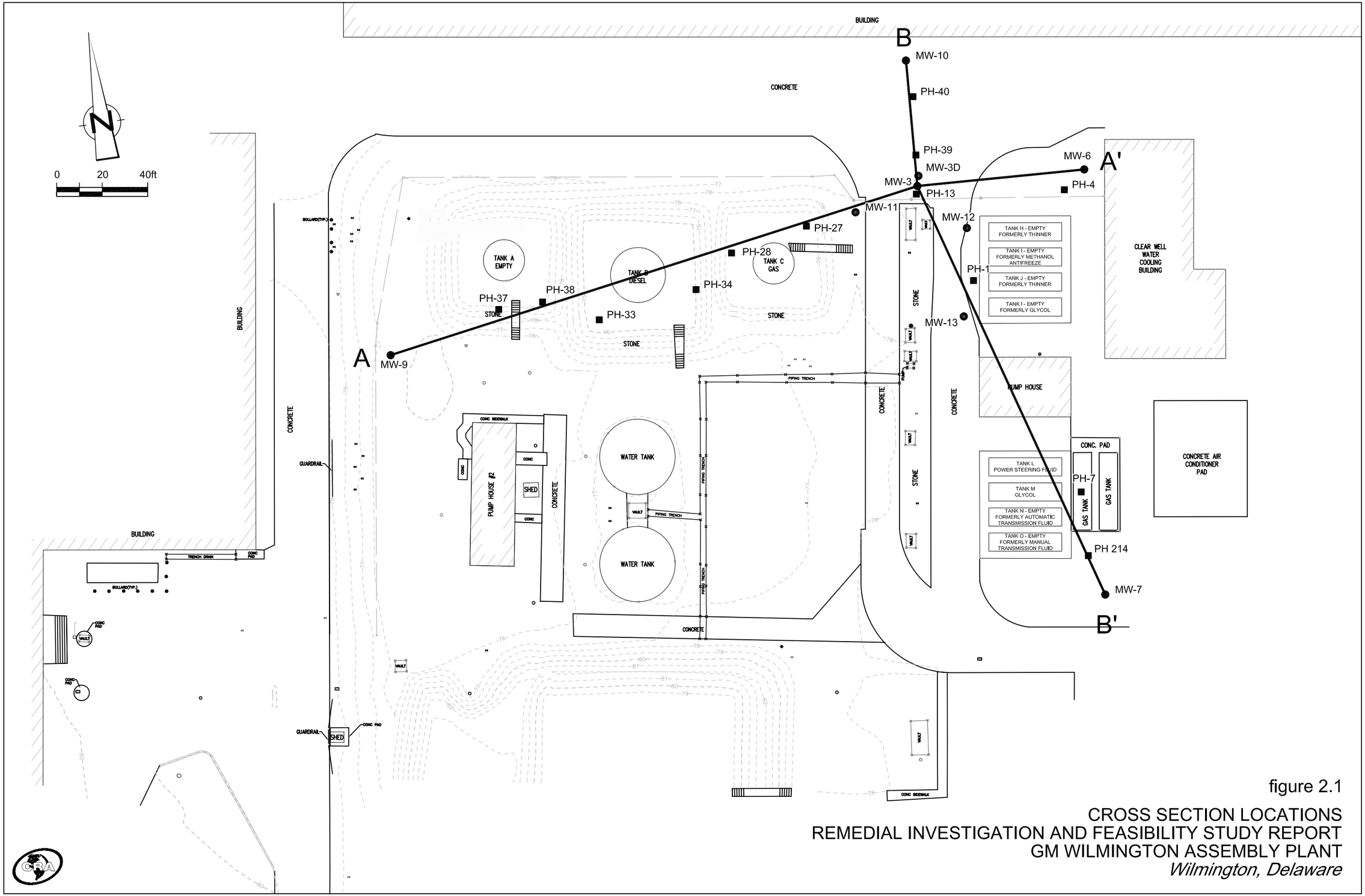
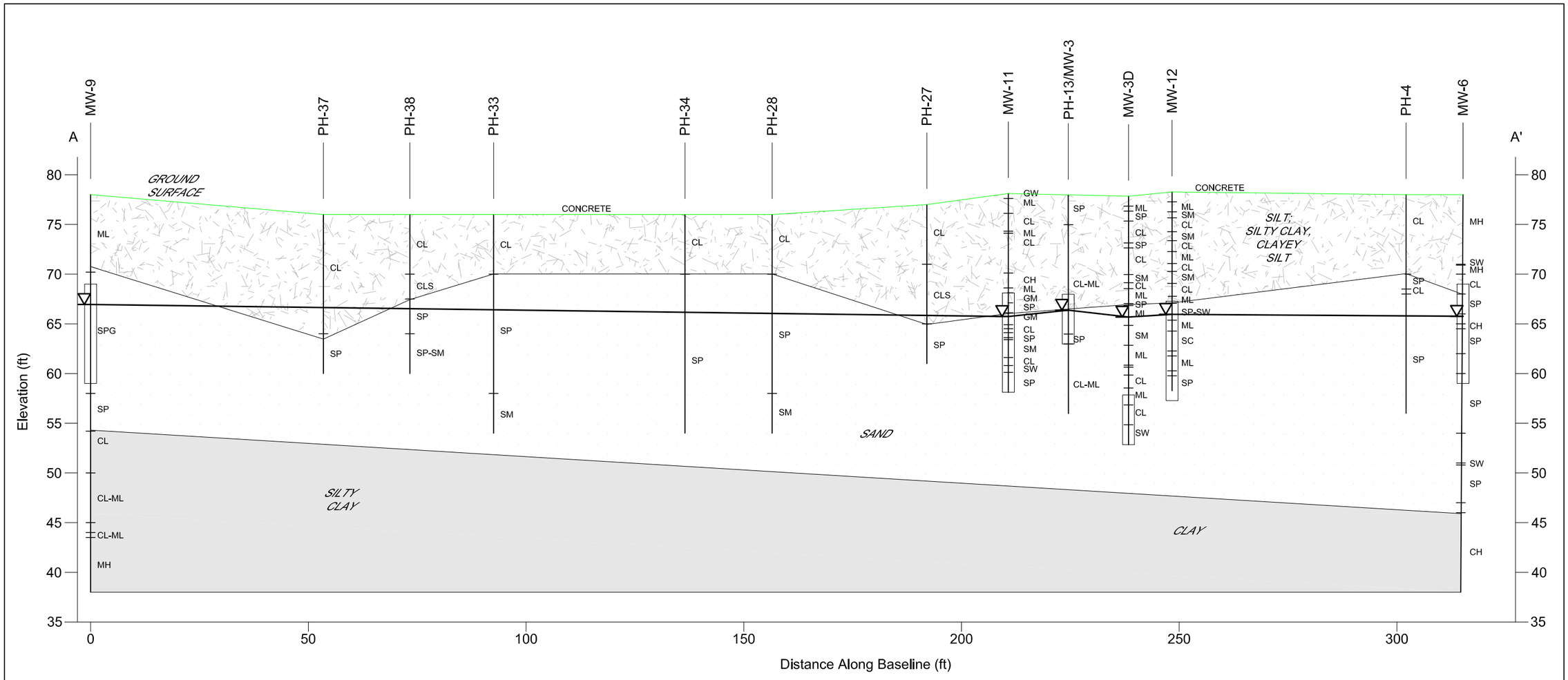


figure 2.1

CROSS SECTION LOCATIONS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
Wilmington, Delaware

17338-30(011)GN-SC003 SEP 25/2007



LEGEND

CH INORGANIC CLAYS OF HIGH PLASTICITY (FATTY CLAYS)
CI INORGANIC CLAYS OF MEDIUM PLASTICITY (SILTY CLAYS)
CL INORGANIC CLAYS OF LOW PLASTICITY (GRAVELLY, SANDY, SILTY CLAYS)
CLS SANDY CLAY, GRAY-BROWN, SLIGHTLY MOIST
GC CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
GM SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
GP POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
GW WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES
MH CLAYEY SILT
ML INORGANIC SILTS AND VERY FINE SANDS OF SLIGHT PLASTICITY
OH ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY
OL ORGANIC SILTS OF SILTY CLAYS OF LOW PLASTICITY
SC CLAYEY SANDS, SAND-CLAY MIXTURES
SM SILTY SANDS, SAND-SILT MIXTURES
SP POORLY GRADED SANDS, GRAVELLY SANDS
SPG SAND, MEDIUM TO COARSE GRAINED, WITH GRAVEL
SW WELL-GRADED SANDS, GRAVELLY SANDS
SWG SAND, COARSE GRAINED, WITH GRAVEL

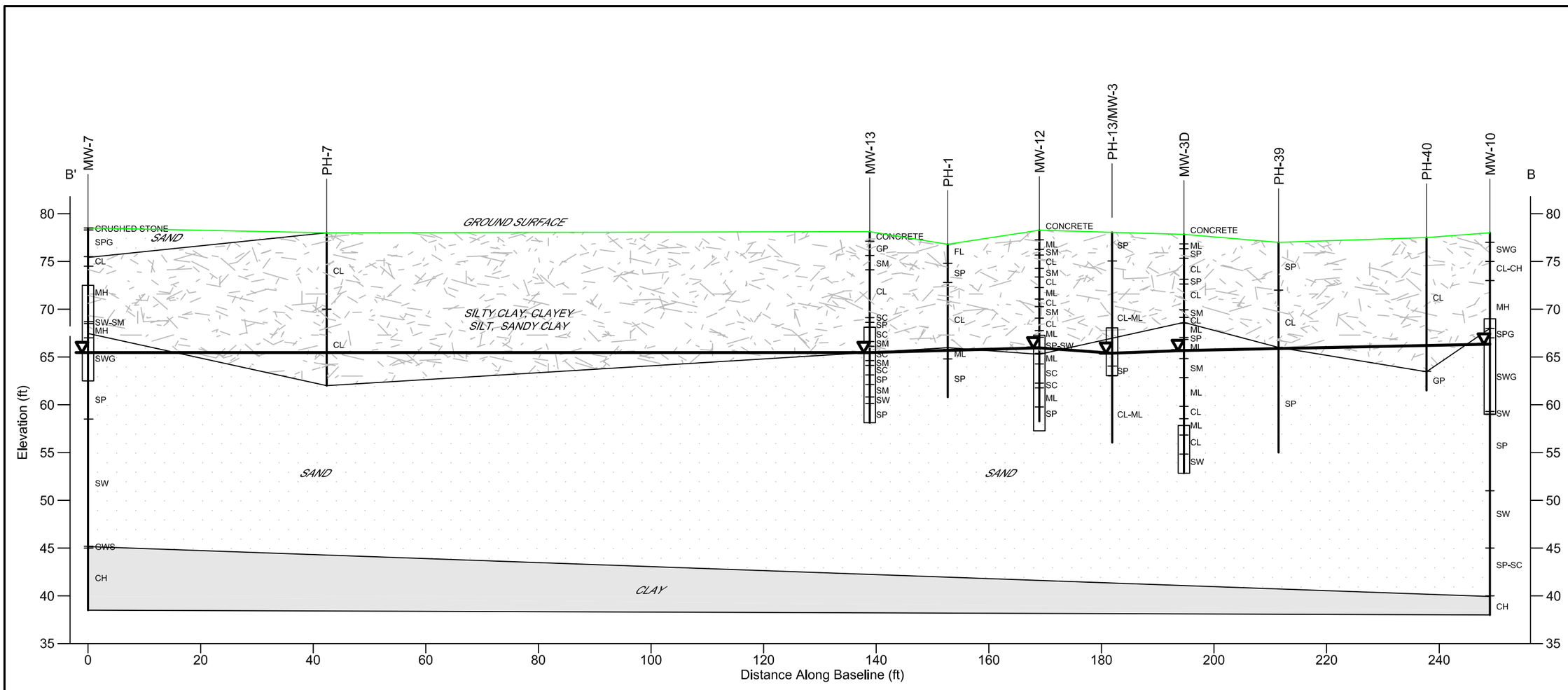
∇ WATER LEVEL (NOVEMBER 2005)

NOTE:
PH LOCATIONS BASED ON BORING LOGS BY ENECOTECH MIDWEST, INC. 1998

figure 2.2

CROSS SECTION A-A'
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
Willmington, Deleware

17338-30(011)GN-SC004 SEP 25/2007



LEGEND

CH INORGANIC CLAYS OF HIGH PLASTICITY (FATTY CLAYS)
CI INORGANIC CLAYS OF MEDIUM PLASTICITY (SILTY CLAYS)
CL INORGANIC CLAYS OF LOW PLASTICITY (GRAVELLY, SANDY, SILTY CLAYS)
CLS SANDY CLAY, GRAY-BROWN, SLIGHTLY MOIST
GC CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
GM SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
GP POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
GW WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES
MH CLAYEY SILT
ML INORGANIC SILTS AND VERY FINE SANDS OF SLIGHT PLASTICITY
OH ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY
OL ORGANIC SILTS OF SILTY CLAYS OF LOW PLASTICITY
SC CLAYEY SANDS, SAND-CLAY MIXTURES
SM SILTY SANDS, SAND-SILT MIXTURES
SP POORLY GRADED SANDS, GRAVELLY SANDS
SPG SAND, MEDIUM TO COARSE GRAINED, WITH GRAVEL
SW WELL-GRADED SANDS, GRAVELLY SANDS
SWG SAND, COARSE GRAINED, WITH GRAVEL

▽ WATER LEVEL (NOVEMBER 2005)

NOTE:
PH LOCATIONS BASED ON BORING LOGS BY ENECOTECH MIDWEST, INC. 1998

figure 2.3

CROSS SECTION B-B'
REMEDIAL INVESTIGIATION AND FEASIBILITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
Willmington, Deleware

17338-30(011)GN-SC005 SEP 25/2007

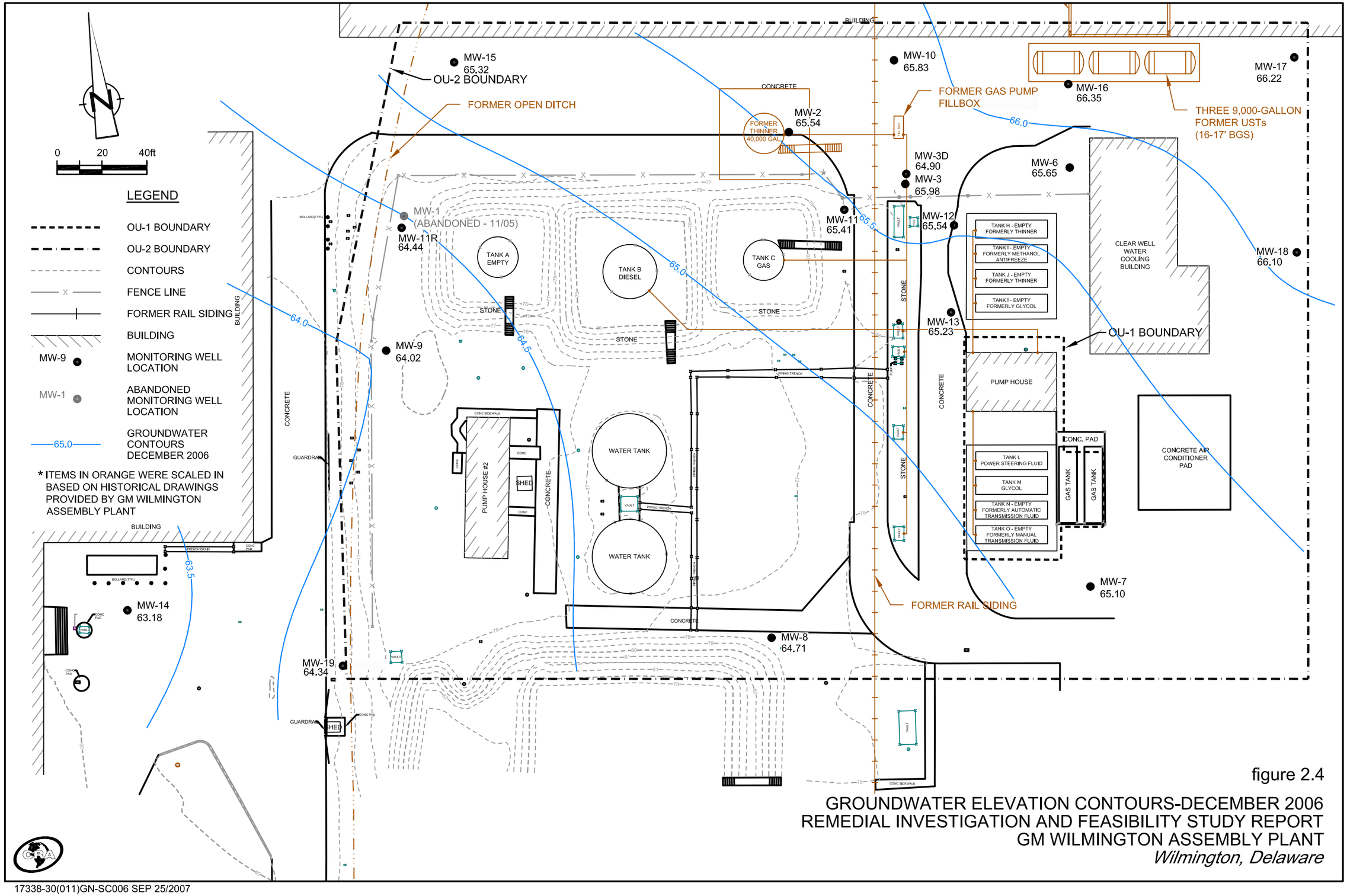
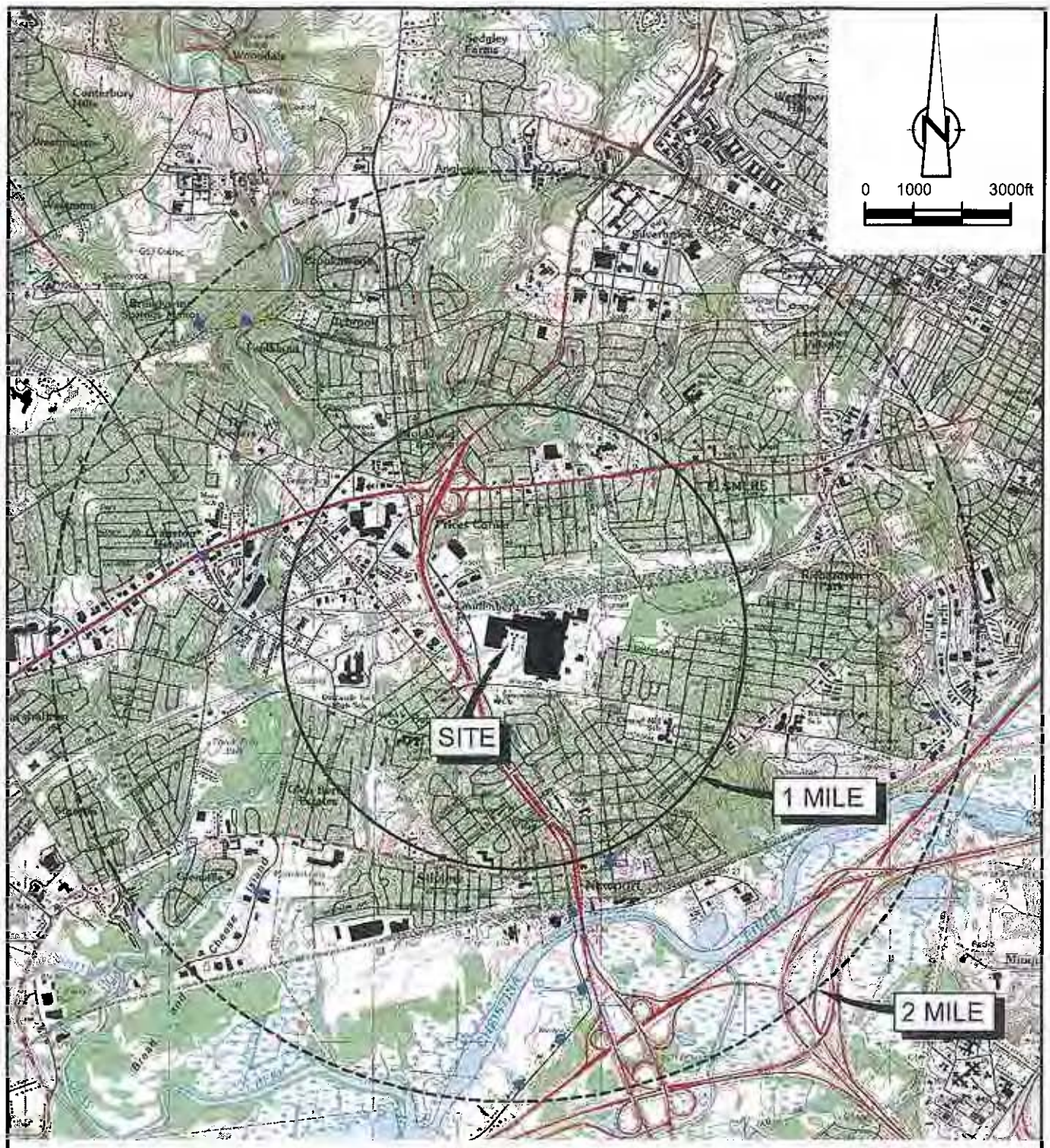


figure 2.4

GROUNDWATER ELEVATION CONTOURS-DECEMBER 2006
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
Wilmington, Delaware

17338-30(011)GN-SC006 SEP 25/2007



LEGEND

1 MILE RADIUS FROM SITE

2 MILE RADIUS FROM SITE

WATER WELL

figure 2.5

WATER WELL LOCATIONS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
Wilmington, Delaware

SOURCE:
USGS 1:24,000 DIGITAL RASTER QUADS 1997 WILMINGTON NORTH, WILMINGTON SOUTH,NEWARK EAST, KENNETT SQUARE

17338-30(011)GN-SC009 SEP 25/2007

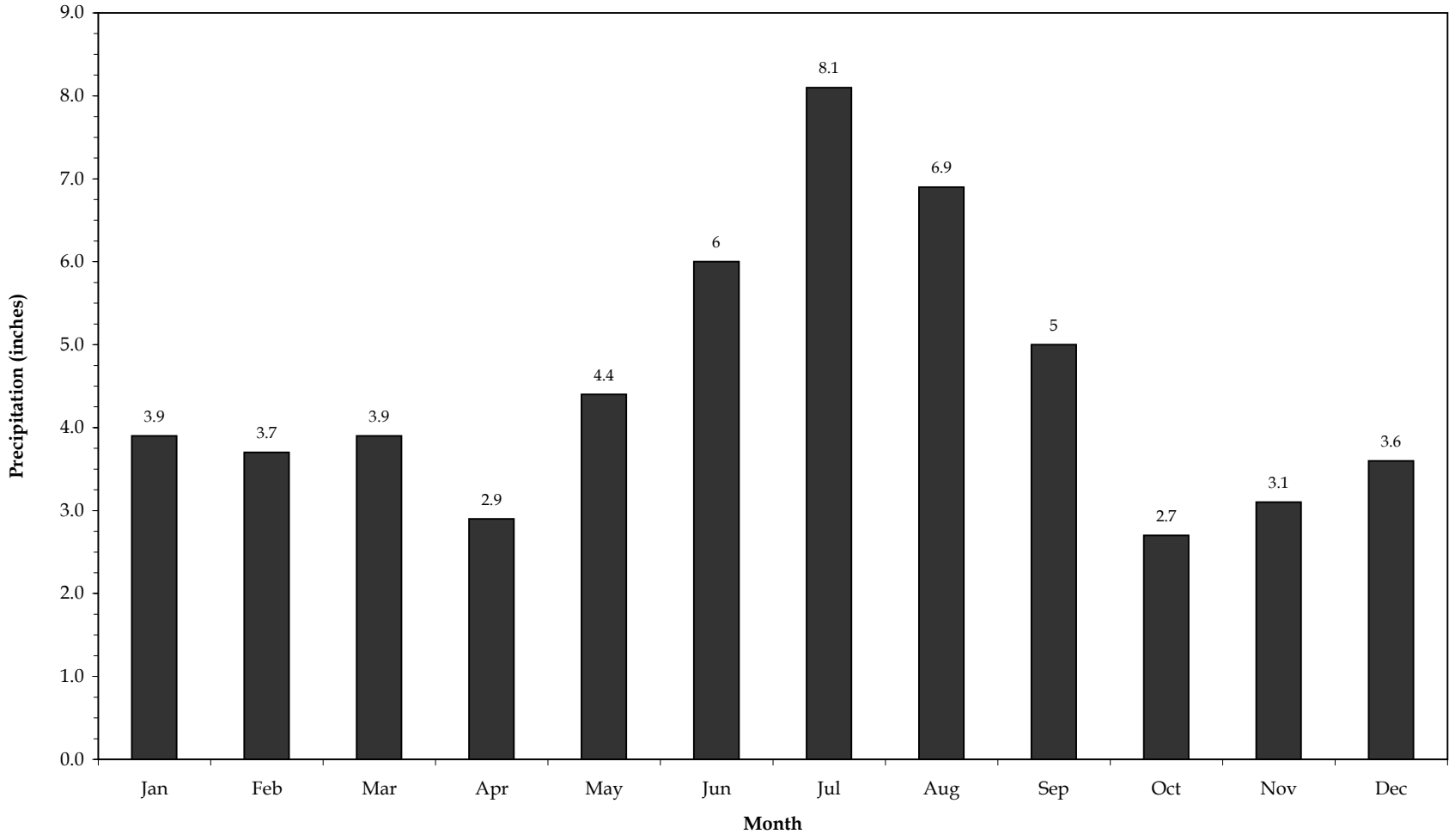


figure 2.6
WILMINGTON, DELAWARE AVERAGE MONTHLY PRECIPITATION
REMEDIAL INVESTIGATION/FEASIBLITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
Wilmington, Delaware

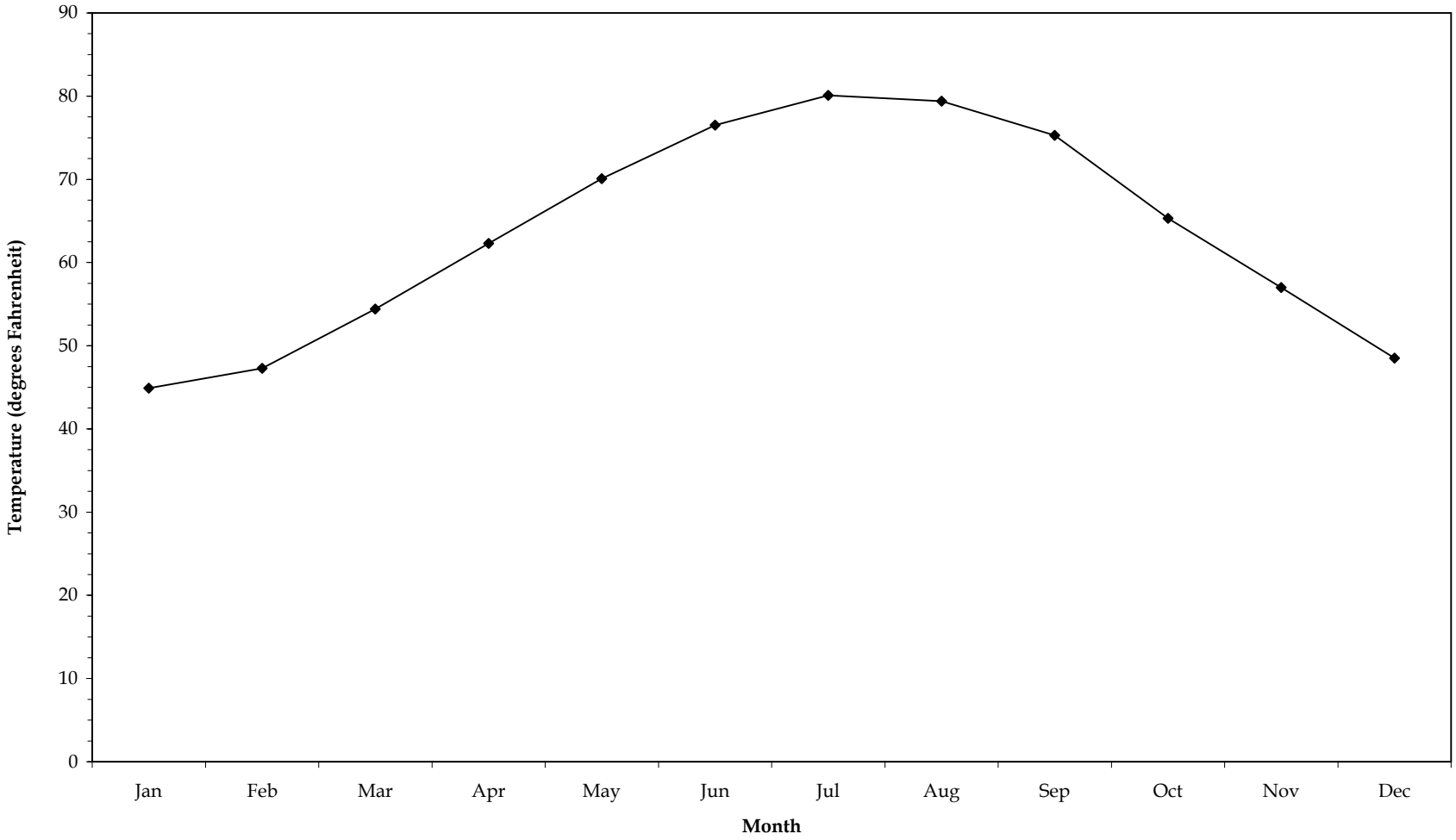


figure 2.7
WILMINGTON, DELAWARE AVERAGE MONTHLY TEMPERATURE
REMEDIAL INVESTIGATION/FEASIBLITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
Wilmington, Delaware

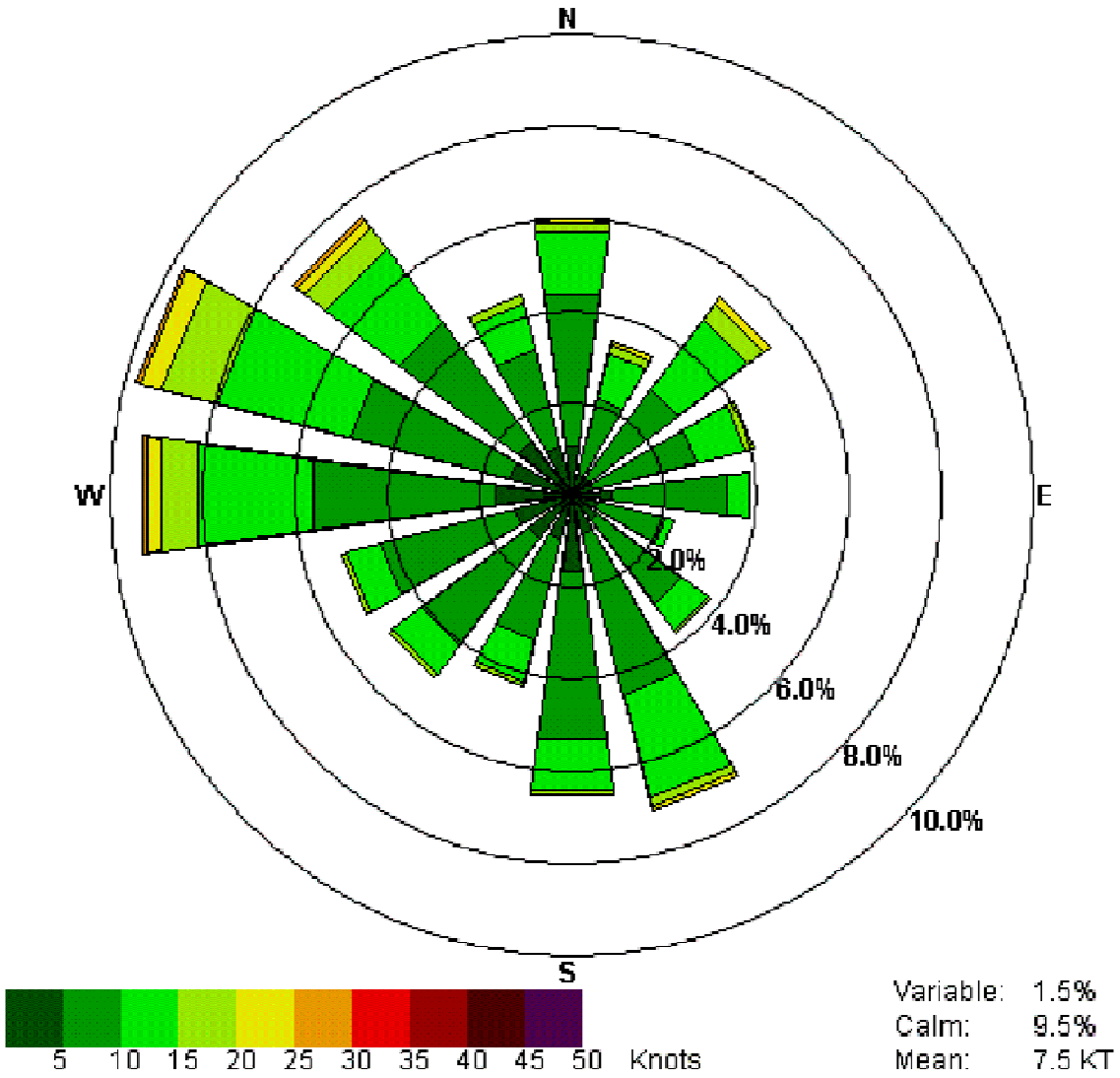


FIGURE 2.8

WILMINGTON, DELAWARE WIND ROSE
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
Wilmington, Delaware

MW15	9/6/06	12/14/06
VOAs		
Acetone	R/R	R
Benzene	0,001 U/0,001 U	0,001 U
Chlorobenzene	0,005 U/0,005 U	0,005 U
Ethylbenzene	0.01/0.0098	0,004 U
Methyl Tert Butyl Ether	0,005 U/0,005 U	0,005 U
Toluene	0.029/0.025	0,005 U
Xylene (total)	0.016/0.019	0,005 U
SVOAs		
bis(2-Ethylhexyl)phthalate	0,01 U/0,01 U	0,01 U
Methylphenol (Cresol)	0,01 U/0,01 U	0,01 U
Naphthalene	0,01 U/0,01 U	0,01 U
Metals		
Arsenic	0,005 U/0,005 U	0,0042 U
Arsenic (Dissolved)	0,005 U/0,005 U	0,0042 U
Chromium Total	0,01 U/0,01 U	0,01 U
Lead	0,003 U/0,003 U	0,003 U
Manganese	0.191/0.192	0.0758
Manganese (Dissolved)	0.167/0.174	0.0755
Vanadium	0,0047 J/0,0052 J	0,05 U

MW11	11/10/05	8/22/06	12/15/06
VOAs			
Acetone	0,3	0,53 J	R
Benzene	0,3 (A)	0,48 (A)	0,48 (A)
Chlorobenzene	0,025 U	0,05 U	0,5 U
Ethylbenzene	3,8 (A)	9,7 (A)	8,1 (A)
Methyl Tert Butyl Ether	0,48 (A)	0,65 (A)	0,64 (A)
Toluene	3,1 (A)	6,5 (A)	3,8 (A)
Xylene (total)	4,1	10	9,1
SVOAs			
bis(2-Ethylhexyl)phthalate	0,1 U	0,21 U	0,1 U
Methylphenol (Cresol)	0,0207 J	0,0765 J	0,0458 J
Naphthalene	0,1 U	0,21 U	0,1 U
Metals			
Arsenic	-	0,0421 (A)	0,04 (A)
Arsenic (Dissolved)	-	0,0437 (A)	0,0474 (A)
Chromium Total	-	0,0035 J	0,01 U
Lead	-	0,0037 U	0,0053
Manganese	-	1,93 (A)	1,26 (A)
Manganese (Dissolved)	-	1,8 (A)	1,29 (A)
Vanadium	-	0,0063 J	0,0096 J

MW2	6/1/05	11/14/05	8/22/06	9/6/06	12/14/06
VOAs					
Acetone	0,012	0,005 U	R	0,005 U	R
Benzene	0.015 (A)	0.028 (A)	0.038 (A)	0.036 (A)	0.022 (A)
Chlorobenzene	0.0012 J	0,005 U	0,005 U	0,0085	0,005 U
Ethylbenzene	0,004 U	0,0051	0,004 U	0,0009 J	0,0025 J
Methyl Tert Butyl Ether	0,054	0,033	0,014	0,01	0,013
Toluene	0,005 U	0,0004 J	0,005 U	0,0004 J	0,012
Xylene (total)	0,27	0,11	0,062	0,072	0,0042 J
SVOAs					
bis(2-Ethylhexyl)phthalate	0,011 U	0,011 U	0,011 U	0,01 U	0,01 U
Methylphenol (Cresol)	0,011 U	0,011 U	0,011 U	0,01 U	0,01 U
Naphthalene	0,0007 J	0,001 J	0,0004 J	0,0009 J	0,0005 J
Metals					
Arsenic	0,0195 (A)	-	0,0139 (A)	0,0131 (A)	0,0098
Arsenic (Dissolved)	-	-	0,0149 (A)	0,0128 (A)	0,0112 (A)
Chromium Total	0,01 U	-	0,0057 U	0,01 U	0,01 U
Lead	0,003 U	-	0,0037 U	0,003 U	0,003 U
Manganese	0,742	-	1,22 (A)	0,982 (A)	0,949 (A)
Manganese (Dissolved)	-	-	1,28 (A)	1,04 (A)	0,917
Vanadium	0,05 U	-	0,16 U	0,05 U	0,05 U

MW10	6/1/05	11/11/05	8/23/06	12/14/06
VOAs				
Acetone	0,1 U	0,025 U	R	R
Benzene	0,27 (A)	0,058 (A)	0,027 (A)	0,02 (A)
Chlorobenzene	0,1 U	0,025 U	0,025 U	0,025 U
Ethylbenzene	3 (A)	2,4 (A)	0,34	0,17
Methyl Tert Butyl Ether	0,1 U	0,025 U	0,025 UJ	0,025 U
Toluene	15 (A)	5,1 (A)	0,44	0,17
Xylene (total)	9,5	4	1,4	0,86
SVOAs				
bis(2-Ethylhexyl)phthalate	0,0024 J	0,024 U	0,011 U	0,011 U
Methylphenol (Cresol)	0,099	0,038 J	0,00125 J	0,0028 J
Naphthalene	0,0085 J	0,0051 J	0,0062 J	0,017
Metals				
Arsenic	0,0046	-	0,0036 U	0,0042 U
Arsenic (Dissolved)	-	-	0,0036 U	0,0042 U
Chromium Total	0,145 (A)	-	0,009 J	0,01 U
Lead	0,0302 (A)	-	0,0038 J	0,0039
Manganese	1,76 (A)	-	1,2 (A)	1,25 (A)
Manganese (Dissolved)	-	-	1,26 (A)	1,41 (A)
Vanadium	0,199 (A)	-	0,0132 J	0,0059 J

MW3D	11/10/05	8/22/06	12/14/06
VOAs			
Acetone	3	R	R
Benzene	0,012 (A)	0,0034	0,023 J (A)
Chlorobenzene	0,025 U	0,005 U	0,25 U
Ethylbenzene	0,31	0,0052	0,49
Methyl Tert Butyl Ether	0,005 J	0,002 J	0,037 J
Toluene	0,3	0,0011 J	6,2 (A)
Xylene (total)	0,57	0,0079	2,8
SVOAs			
bis(2-Ethylhexyl)phthalate	0,026 U	0,011 U	0,01 U
Methylphenol (Cresol)	0,0062 J	0,011 U	0,01 U
Naphthalene	0,0046 J	0,0002 J	0,0006 J
Metals			
Arsenic	-	0,0036 U	0,0042 U
Arsenic (Dissolved)	-	0,0036 U	0,0042 U
Chromium Total	-	0,0057 U	0,01 U
Lead	-	0,0037 U	0,003 U
Manganese	-	0,824	0,726
Manganese (Dissolved)	-	0,888	0,75
Vanadium	-	0,16 U	0,05 U

MW3	6/1/05	11/10/05	8/22/06	12/15/06
VOAs				
Acetone	350 (A)	470 J (A)	370 J (A)	370 J (A)
Benzene	1,2 (A)	0,92 (A)	0,87 (A)	5 U
Chlorobenzene	1 U	1 U	0,5 U	25 U
Ethylbenzene	18 (A)	14 (A)	10 (A)	11 J (A)
Methyl Tert Butyl Ether	0,81 J (A)	0,56 J (A)	0,5 (A)	25 U
Toluene	190 (A)	180 (A)	140 (A)	160 (A)
Xylene (total)	30 (A)	23 (A)	18 (A)	16 J (A)
SVOAs				
bis(2-Ethylhexyl)phthalate	0,054 U	0,11 U	0,22 U	0,1 U
Methylphenol (Cresol)	0,8 (A)	1,08 (A)	1 (A)	0,77 (A)
Naphthalene	0,054 U	0,11 U	0,22 U	0,0055 J
Metals				
Arsenic	0,0063	-	0,005 U	0,0084 U
Arsenic (Dissolved)	-	-	0,0071 U	0,0084 U
Chromium Total	0,01 U	-	0,0053 J	0,02 U
Lead	0,0059	-	0,0072 U	0,005 U
Manganese	21,3 (A)	-	17,8 (A)	17,8 (A)
Manganese (Dissolved)	-	-	21 (A)	18,1 (A)
Vanadium	0,004	-	0,0027 J	0,1 U

MW16	9/6/06	12/14/06
VOAs		
Acetone	R/R	R/R
Benzene	0,001 U/0,001 U	0,001 U/0,001 U
Chlorobenzene	0,0031 J/0,0066 J	0,005 U/0,005 U
Ethylbenzene	0,0098/0,0094	0,004 U/0,004 U
Methyl Tert Butyl Ether	0,005 U/0,005 U	0,005 U/0,005 U
Toluene	0,005 U/0,005 U	0,005 U/0,005 U
Xylene (total)	0,0032 J/0,0048 J	0,005 U/0,005 U
SVOAs		
bis(2-Ethylhexyl)phthalate	0,01 U/0,01 U	0,01 U/0,01 U
Methylphenol (Cresol)	0,01 U/0,01 U	0,01 U/0,01 U
Naphthalene	0,015/0,016	0,0013 J/0,001 J
Metals		
Arsenic	0,005 U/0,005 U	0,0042 U/0,0042 U
Arsenic (Dissolved)	0,005 U/0,005 U	0,0042 U/0,0042 U
Chromium Total	0,01 U/0,01 U	0,01 U/0,01 U
Lead	0,003 U/0,003 U	0,0029 J/0,003 U
Manganese	0,49/0,483	0,359/0,354
Manganese (Dissolved)	0,512/0,496	0,373/0,38
Vanadium	0,05 U/0,0016 J	0,05 U/0,05 U

MW11R	11/10/05	8/21/06	12/14/06
VOAs			
Acetone	0,005 U	R	R
Benzene	0,001 U	0,001 U	0,001 U
Chlorobenzene	0,005 U	0,0014 J	0,005 U
Ethylbenzene	0,0013 J	0,004 U	0,004 U
Methyl Tert Butyl Ether	0,005 U	0,005 U	0,005 U
Toluene	0,0063	0,005 U	0,005 U
Xylene (total)	0,0063	0,005 U	0,005 U
SVOAs			
bis(2-Ethylhexyl)phthalate	0,024 U	0,011 U	0,01 U
Methylphenol (Cresol)	0,01 U	0,011 U	0,01 U
Naphthalene	0,0052 J	0,011 U	0,01 U
Metals			
Arsenic	-	0,005 U	0,0042 U
Arsenic (Dissolved)	-	0,005 U	0,0042 U
Chromium Total	-	0,0071 J	0,01 U
Lead	-	0,003 U	0,003 U
Manganese	-	0,97 (A)	1,13 (A)
Manganese (Dissolved)	-	0,993 (A)	1,18 (A)
Vanadium	-	0,0018 J	0,0052 J

MW17	9/6/06	12/12/06
VOAs		
Acetone	R	R
Benzene	0,001 U	0,001 U
Chlorobenzene	0,012	0,005 U
Ethylbenzene	0,0012 J	0,004 U
Methyl Tert Butyl Ether	0,0006 J	0,0004 J
Toluene	0,005 U	0,005 U
Xylene (total)	0,0045 J	0,005 U
SVOAs		
bis(2-Ethylhexyl)phthalate	0,01 U	0,01 U
Methylphenol (Cresol)	0,01 U	0,01 U
Naphthalene	0,0007 J	0,01 U
Metals		
Arsenic	0,005 U	0,0042 U
Arsenic (Dissolved)	0,005 U	0,0042 U
Chromium Total	0,01 U	0,01 U
Lead	0,003 U	0,003 U
Manganese	0,189	0,161
Manganese (Dissolved)	0,123	0,105
Vanadium	0,0133 J	0,0069 J

MW14	11/11/05	12/22/05	8/23/06	12/14/06
VOAs				
Acetone	0,005 U	0,005 U	R	R
Benzene	0,001 U	0,001 U	0,001 U	0,001 U
Chlorobenzene	0,005 U	0,005 U	0,005 U	0,005 U
Ethylbenzene	0,004 U	0,004 U	0,012	0,004 U
Methyl Tert Butyl Ether	0,005 U	-	0,005 U	0,005 U
Toluene	0,005 U	0,005 U	0,059	0,005 U
Xylene (total)	0,005 U	0,005 U	0,021	0,005 U
SVOAs				
bis(2-Ethylhexyl)phthalate	0,017 U	-	0,011 U	0,01 U
Methylphenol (Cresol)	0,011 U	-	0,011 U	0,01 U
Naphthalene	0,011 U	-	0,011 U	0,0003 J
Metals				
Arsenic	-	-	0,0071 U	0,0042 U
Arsenic (Dissolved)	-	-	0,0071 U	0,0042 U
Chromium Total	-	-	0,011 U	0,0116
Lead	-	-	0,0074 U	0,003 U
Manganese	-	-	0,0509	0,0403
Manganese (Dissolved)	-	-	0,0519	0,0252
Vanadium	-	-	0,31 U	0,0148 J

MW6	8/1/05	11/11/05	8/22/06	9/6/06	12/14/06
VOAs					
Acetone	0,25 U	0,005 U	0,074 J	R	R
Benzene	0,065 (A)	0,0059 (A)	0,005 U	0,024 (A)	0,01 U
Chlorobenzene	0,25 U	0,005 U	0,025 U	0,1 U	0,05 U
Ethylbenzene	5,6 (A)	0,32	0,17	4,1 (A)	0,22
Methyl Tert Butyl Ether	0,25 U	0,005 U	0,025 U	0,1 U	0,05 U
Toluene	39 (A)	1,5 (A)	0,73	17 (A)	0,99
Xylene (total)	9,2	0,54	0,34	8	0,45
SVOAs					
bis(2-Ethylhexyl)phthalate	0,016 J (A)	0,024 U	0,01 U	0,01 U	0,011 U
Methylphenol (Cresol)	0,143	0,0243 J	0,0416 J	0,131	0,045
Naphthalene	0,0016 J	0,0054 J	0,0024 J	0,0009 J	0,0027 J
Metals					
Arsenic	0,0059	-	0,0036 U	0,009	0,0042 U
Arsenic (Dissolved)	-	-	0,0036 U	0,005 U	0,0042 U
Chromium Total	0,0573	-	0,0026 J	0,0148 U	0,01 U
Lead	0,0204 (A)	-	0,0037 U	0,0069	0,003 U
Manganese	1,24 (A)	-	1,05 (A)	0,307	0,93 (A)
Manganese (Dissolved)	-	-	1,14 (A)	0,291	0,946 (A)
Vanadium	0,0954 (A)	-	0,16 U	0,0187 J	0,05 U

MW18	9/7/06	12/12/06
VOAs		
Acetone	R	R
Benzene	0,001 U	0,001 U
Chlorobenzene	0,005 U	0,005 U
Ethylbenzene	0,0044	0,004 U
Methyl Tert Butyl Ether	0,005 U	0,005 U
Toluene	0,0089	0,005 U
Xylene (total)	0,0098	0,0005 J
SVOAs		
bis(2-Ethylhexyl)phthalate	0,01 U	0,01 U
Methylphenol (Cresol)	0,01 U	0,01 U
Naphthalene	0,01 U	0,01 U
Metals		
Arsenic	0,005 U	0,0042 U
Arsenic (Dissolved)	0,005 U	0,0042 U
Chromium Total	0,01 U	0,01 U
Lead	0,003 U	0,003 U
Manganese	0,667	0,544
Manganese (Dissolved)	0,711	0,571
Vanadium	0,004 J	0,0059 J

MW19	9/7/06	12/12/06
VOAs		
Acetone	R	R
Benzene	0,001 U	0,001 U
Chlorobenzene	0,0091	0,001 J
Ethylbenzene	0,0014 J	0,004 U
Methyl Tert Butyl Ether	0,005 U	0,0005 J
Toluene	0,0012 J	0,005 U
Xylene (total)	0,0045 J	0,005 U
SVOAs		
bis(2-Ethylhexyl)phthalate	0,01 U	0,01 U
Methylphenol (Cresol)	0,01 U	0,01 U
Naphthalene	0,01 U	0,01 U
Metals		
Arsenic	0,0046 J	0,0038 J
Arsenic (Dissolved)	0,005 U	0,0032 J
Chromium Total	0,0164	0,0054
Lead	0,0086	0,0112
Manganese	0,26	0,461
Manganese (Dissolved)	0,25	0,422
Vanadium	0,0298 J	0,0396 J (A)

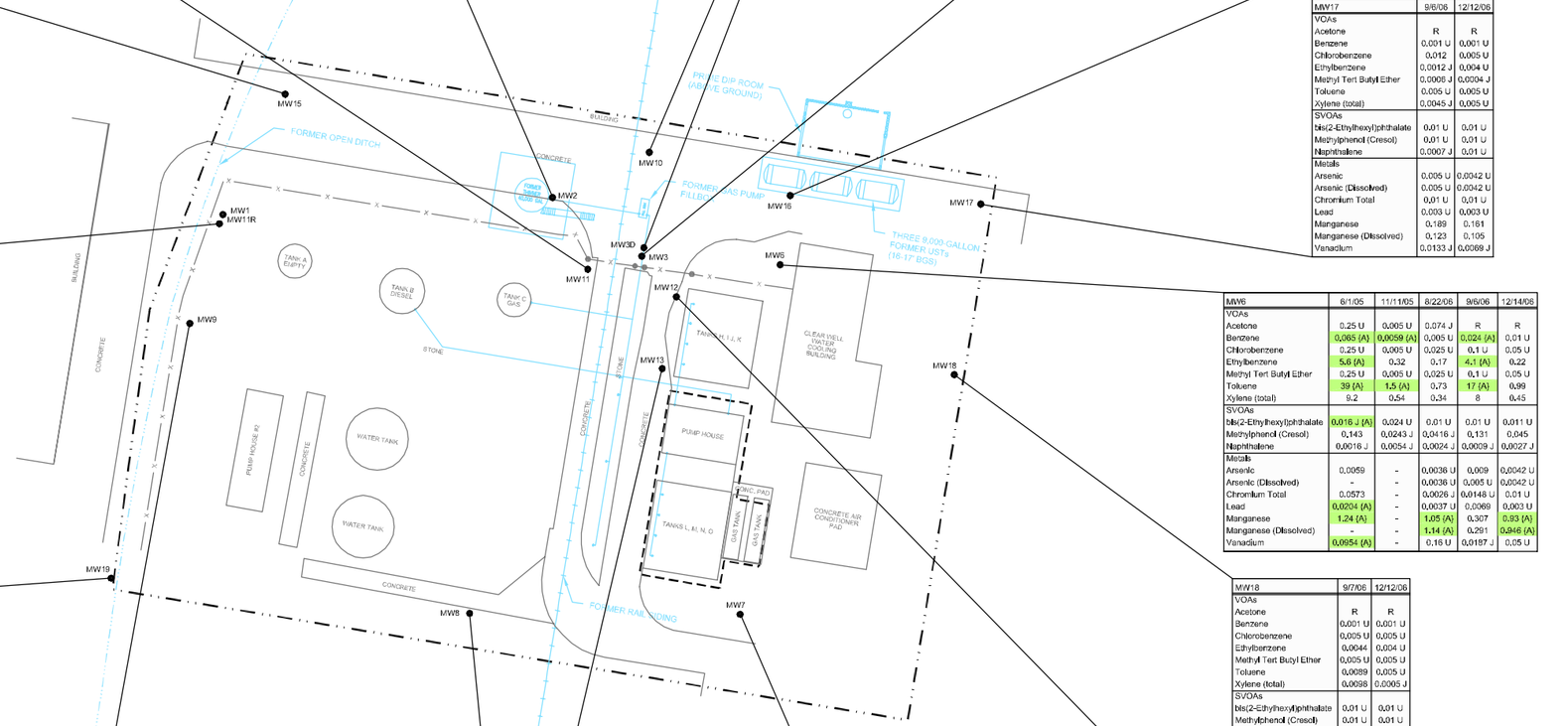
MW12	11/10/05	8/22/06	12/15/06
VOAs			
Acetone	0,005 U	R	R
Benzene	0,025 (A)	0,35 (A)	0,37 (A)
Chlorobenzene	0,005 U	0,025 U	0,1 U
Ethylbenzene	0,15	1,6 (A)	1,2 (A)
Methyl Tert Butyl Ether	0,0064	0,043	0,039 J
Toluene	0,0036 J	0,0034 J	0,014 J
Xylene (total)	0,38	8,8	4,6
SVOAs			
bis(2-Ethylhexyl)phthalate	0,019 U	0,01 U	0,01 U
Methylphenol (Cresol)	0,00165 J	0,01 U	0,01 U
Naphthalene	0,0053 J	0,037	0,11
Metals			
Arsenic	-	0,0094	0,0107 (A)
Arsenic (Dissolved)	-	0,0069	0,0066
Chromium Total	-	0,0262	0,127 (A)
Lead	-	0,0155	0,0835 (A)
Manganese	-	0,33	0,875
Manganese (Dissolved)	-	0,357	0,512
Vanadium	-	0,0266 J	0,196 (A)

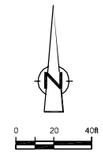
MW9	6/2/05	11/14/05	8/21/06	12/12/06
VOAs				
Acetone	0,005 U/0,005 U	0,005 U	R	R/R
Benzene	0,001 U/0,001 U	0,001 U	0,001 U	0,001 U/0,001 U
Chlorobenzene	0,0096 J/0,0013 J	0,005 U	0,005 U	0,005 U/0,005 U
Ethylbenzene	0,001 J/0,0028 J	0,008	0,004 U	0,004 U/0,004 U
Methyl Tert Butyl Ether	0,005 U/0,005 U	0,005 U	0,005 U	0,0004 J/0,0004 J
Toluene	0,0096 UJ/0,023 J	0,012	0,005 U	0,005 U/0,005 U
Xylene (total)	0,0038 J/0,0013 J	0,011	0,005 U	0,005 U/0,005 U
SVOAs				
bis(2-Ethylhexyl)phthalate	0,01 U/0,01 U	0,011 U	0,01 U	0,01 U/0,011 U
Methylphenol (Cresol)	0,01 U/0,01 U	0,011 U	0,01 U	0,01 U/0,011 U
Naphthalene	0,01 U/0,01 U	0,011 U	0,01 U	0,01 U/0,011 U
Metals				
Arsenic	0,0064 U/0,0064 U	-	0,005 U	0,0042 U/0,0042 U
Arsenic (Dissolved)	-	-	0,005 U	0,0042 U/0,0042 U
Chromium Total	0,0061/0,0061	-	0,01 U	0,01 U/0,01 U
Lead	0,003 U/0,003 U	-	0,0032 U	0,003 U/0,003 U
Manganese	0,236/0,276	-	0,222	0,227/0,238
Manganese (Dissolved)	-	-	0,211	0,285/0,258
Vanadium	0,0039/0,0065	-	0,05 U	0,05 U/0,05 U

MW8	6/2/05	11/14/05	8/21/06	8/23/06	12/14/06
VOAs					
Acetone	0,005 U/0,005 U	0,005 U	R	-	R
Benzene	0,0049/0,0047	0,0076 (A)	0,0072 (A)	-	0,0056 (A)
Chlorobenzene	0,71 (A)/0,81 (A)	0,25 (A)	0,06	-	0,049
Ethylbenzene	0,0073/0,0065	0,0009 J	0,004 U	-	0,004 U
Methyl Tert Butyl Ether	0,0014 J/0,0013 J	0,0022 J	0,016	-	0,017
Toluene	0,042/0,04	0,0009 J	0,005 U	-	0,005 U
Xylene (total)	0,0096/0,0091	0,0016 J	0,005 U	-	0,005 U
SVOAs					
bis(2-Ethylhexyl)phthalate	0,017 U/0,01 U	0,01 U	0,011 UJ	-	0,01 U
Methylphenol (Cresol)	0,007 J/0,0075 J	0,01 U	0,011 U	-	0,01 U
Naphthalene	0,0008 J/0,0008 J	0,0004 J	0,0005 J	-	0,0052 J
Metals					
Arsenic	0,0064 U/0,0064 U	-	-	0,0036 U	0,0042 U
Arsenic (Dissolved)	-	-	-	0,0036 U	0,0042 U
Chromium Total	0,003/0,0111	-	-	0,0057 U	0,01 U
Lead	0,003 U/0,004	-	-	0,0037 U	0,003 U
Manganese	2,27 (A)/2,12 (A)	-	-	1,98 (A)	1,98 (A)
Manganese (Dissolved)	-	-	-	2,05 (A)	1,99 (A)
Vanadium	0,0048/0,0181	-	-	0,16 U	0,05 U

MW13	11/9/05	8/22/06	12/14/06
VOAs			
Acetone	0,0068/0,0096	R	R
Benzene	0,02 (A)/0,02 (A)	0,05 U	0,004
Chlorobenzene	0,001 J/0,0011 J	0,25 U	0,005 U
Ethylbenzene	0,48/0,5	0,53	0,0067
Methyl Tert Butyl Ether	0,036/0,036	0,046 J	0,0022 J
Toluene	4,5 (A)/4,7 (A)	7,5 (A)	0,0074
Xylene (total)	2,6/2,7	3	0,01
SVOAs			
bis(2-Ethylhexyl)phthalate	0,21 UJ/0,2 U	0,2 U	0,1 U
Methylphenol (Cresol)	0,12 J/0,054 J	0,225 J (A)	0,0298 J
Naphthalene	2 J (A)/2,1 (A)	2,4 (A)	1,7 (A)
Metals			
Arsenic	-	0,0255 (A)	0,0238 (A)
Arsenic (Dissolved)	-	0,0236 (A)	0,0233 (A)
Chromium Total	-	0,0086 J	0,01 U
Lead	-	0,003 U	0,003 U
Manganese	-	0,694	0,566
Manganese (Dissolved)	-	0,724	0,567
Vanadium	-	0,0105 J	0,05 U

MW7	6/1/05	11/15/05	8/22/06	12/14/06
VOAs				
Acetone	0,005 U	0,005 U	R	R
Benzene	0,0008 J	0,001 U	0,0014	0,0005 J
Chlorobenzene	0,045	0,049	0,11 (A)	0,076
Ethylbenzene	0,04	0,004 U	0,048	0,004 U
Methyl Tert Butyl Ether	0,0003 J	0,005 U	0,005 UJ	0,005 U
Toluene	0,28	0,0004 J	0,023	0,005 U
Xylene (total)	0,064	0,005 U	0,056	0,005 U
SVOAs				
bis(2-Ethylhexyl)phthalate	0,012 (A)	0,01 U	0,01 U	0,01 U
Methylphenol (Cresol)	0,00265 J	0,01 U	0,01 U	0,01 U
Naphthalene	0,01 U	0,01 U	0,01 U	0,01 U
Metals				
Arsenic	0,0054 U	-	0,0083	0,0099
Arsenic (Dissolved)	-	-	0,0073	0,0101
Chromium Total	0,0109	-	0,0057 U	0,01 U
Lead	0,003 U	-	0,0037 U	0,003 U
Manganese	2,13 (A)	-	2,25 (A)	1,97 (A)
Manganese (Dissolved)	-	-	2,13 (A)	2,06 (A)
Vanadium	0,0194	-	0,16 U	0,05 U





LEGEND

- MW-5 ● MONITORING WELL
- GATE POST
- CHAIN LINK FENCE
- HISTORICAL FEATURE
- OU-1 BOUNDARY
- OU-2 BOUNDARY

MW17	5/5/05	5/9/05
VOAs		
Acetone	-	0,005 U
Benzene	-	0,001 U
Chlorobenzene	-	0,0009 J
Ethylbenzene	-	0,002 J
Methyl Tert Butyl Ether	-	0,001 J
Toluene	-	0,005 U
Xylene (total)	-	0,0041 J
SVOAs		
bis(2-Ethylhexyl)phthalate	0,01 U	-
Methylphenol (Cresol)	0,0004 J	-
Naphthalene	0,01 U	-

SAMPLE LOCATION
SAMPLE DATE
RESULT (mg/L)
PARAMETER

Parameter (mg/L)	DRINKING WATER CRITERIA (A)
VOAs	
Acetone	32,9
Benzene	0,005
Chlorobenzene	0,1
Ethylbenzene	0,7
Methyl Tert Butyl Ether	0,374
Toluene	1
Xylene (total)	10
SVOAs	
bis(2-Ethylhexyl)phthalate	0,006
Methylphenol (Cresol)	0,183
Naphthalene	0,73
METALS	
Arsenic	0,01
Arsenic (Dissolved)	0,01
Chromium Total	0,1
Lead	0,015
Manganese	0,876
Manganese (Dissolved)	0,876
Vanadium	0,0365

(A) Exceeds Drinking Water Criteria

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

OU-2 BULK PRODUCT TANKS AREA GROUNDWATER RESULTS

REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT

GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
G.C.	L.W	SEPTEMBER 14, 2007	
Scale: 1"=40'	Project N°: 17338-30	Report N°: 011	Drawing N°: figure 3.1

17338-30(011)GN-SC011 OCT 05/2007

TABLE 1.1

GROUNDWATER CRITERIA
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

		Delaware URS Values		*Drinking Water Criteria* [1]	
Parameters:	***Units***	***Screening***	***Value***	***Value***	***Source***
VOCs					
Acetone	mg/L	NC	0.061	32.9	Region 9 Tap Water Ingestion - noncancer HQ
Benzene	mg/L	0.0004	0.005	0.005	Federal MCL
n-Butylbenzene	mg/L	NC	0.006	1.46	Region 9 Tap Water Ingestion - noncancer HQ
Bromobenzene	mg/L	NC	NC	0.73	Region 9 Tap Water Ingestion - noncancer HQ
Bromodichloromethane	mg/L	0.0002	0.1	0.08	Federal MCL
Bromoform	mg/L	0.008	0.1	0.08	Federal MCL
Bromomethane	mg/L	0.009	0.01	0.0511	Region 9 Tap Water Ingestion - noncancer HQ
2-Butanone	mg/L	NC	0.19	21.9	Region 9 Tap Water Ingestion - noncancer HQ
Carbon disulfide	mg/L	NC	0.1	3.65	Region 9 Tap Water Ingestion - noncancer HQ
Carbon tetrachloride	mg/L	0.002	0.005	0.005	Federal MCL
Chlorobenzene	mg/L	0.011	0.1	0.1	Federal MCL
Chlorobromomethane	mg/L	NC	NC	NC	NC
Chloroethane	mg/L	NC	0.004	14.6	Region 9 Tap Water Ingestion - noncancer HQ
2-Chloroethyl vinyl ether	mg/L	NC	NC	NC	NC
Chloroform	mg/L	0.0001	0.1	0.08	Federal MCL
Chloromethane	mg/L	0.002	0.003	0.949	Region 9 Tap Water Ingestion - noncancer HQ
2-Chlorotoluene	mg/L	NC	NC	0.73	Region 9 Tap Water Ingestion - noncancer HQ
4-Chlorotoluene	mg/L	NC	NC	NC	NC
Cyclohexane	mg/L	NC	NC	62.1	Region 9 Tap Water Ingestion - noncancer HQ
Cymene	mg/L	NC	NC	NC	NC
1,2-Dibromo-3-chloropropane	mg/L	0.00005	0.0002	0.0002	Federal MCL
Dibromochloromethane	mg/L	NC	0.0001	0.08	Federal MCL
1,2-Dibromoethane	mg/L	0.000001	0.00005	0.00005	Federal MCL
Dibromomethane	mg/L	NC	NC	0.365	Region 9 Tap Water Ingestion - noncancer HQ
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	Federal MCL
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	Region 9 Tap Water Ingestion - noncancer HQ
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	Federal MCL
Dichlorodifluoromethane	mg/L	0.35	1	7.3	Region 9 Tap Water Ingestion - noncancer HQ
1,1-Dichloroethane	mg/L	NC	0.081	3.65	Region 9 Tap Water Ingestion - noncancer HQ
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	Federal MCL
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	Federal MCL
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	Federal MCL
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	Federal MCL
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	Federal MCL
1,3-Dichloropropane	mg/L	NC	NC	0.73	Region 9 Tap Water Ingestion - noncancer HQ
2,2-Dichloropropane	mg/L	NC	NC	NC	NC
1,1-Dichloropropene	mg/L	NC	NC	NC	NC
1,3-Dichloropropene	mg/L	NC	0.00008	0.006723	Region 9 Tap Water Ingestion - cancer risk 10-5
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	NC
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	NC
Ethylbenzene	mg/L	NC	0.7	0.7	Federal MCL
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	Region 9 Tap Water Ingestion - cancer risk 10-5
2-Hexanone	mg/L	NC	0.15	NC	NC
Isopropylbenzene	mg/L	NC	0.066	3.65	Region 9 Tap Water Ingestion - noncancer HQ
Methyl acetate	mg/L	NC	0.61	36.5	Region 9 Tap Water Ingestion - noncancer HQ
Methyl cyclohexane	mg/L	NC	NC	31.4	Region 9 Tap Water Ingestion - noncancer HQ
Methyl Tert Butyl Ether	mg/L	NC	0.02	0.374	Region 9 Tap Water Ingestion - cancer risk 10-5
4-Methyl-2-Pentanone	mg/L	NC	0.014	2.92	Region 9 Tap Water Ingestion - noncancer HQ
Methylene chloride	mg/L	0.004	0.005	0.005	Federal MCL
2-Phenylbutane	mg/L	NC	NC	1.46	Region 9 Tap Water Ingestion - noncancer HQ
n-Propylbenzene	mg/L	NC	0.006	1.46	Region 9 Tap Water Ingestion - noncancer HQ
Styrene	mg/L	NC	0.1	0.1	Federal MCL
tert-Butylbenzene	mg/L	NC	0.006	1.46	Region 9 Tap Water Ingestion - noncancer HQ
1,1,1,2-Tetrachloroethane	mg/L	NC	0.004	0.0259	Region 9 Tap Water Ingestion - cancer risk 10-5
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	Region 9 Tap Water Ingestion - cancer risk 10-5

TABLE 1.1

GROUNDWATER CRITERIA
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

		Delaware URS Values		*Drinking Water Criteria* [1]	
Parameters:	***Units***	***Screening***	***Value***	***Value***	***Source***
VOCs (continued)					
Tetrachloroethene	mg/L	0.001	0.005	0.005	Federal MCL
Toluene	mg/L	0.75	1	1	Federal MCL
1,2,3-Trichlorobenzene	mg/L	NC	NC	NC	NC
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	Federal MCL
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	Federal MCL
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	Federal MCL
Trichloroethene	mg/L	0.002	0.005	0.005	Federal MCL
Trichlorofluoromethane	mg/L	1.3	2	11	Region 9 Tap Water Ingestion - noncancer HQ
1,2,3-Trichloropropane	mg/L	NC	0.000002	0.000336	Region 9 Tap Water Ingestion - cancer risk 10-5
Trifluorotrichloroethane	mg/L	NC	5.9	1100	Region 9 Tap Water Ingestion - noncancer HQ
1,2,4-Trimethylbenzene	mg/L	NC	0.001	1.83	Region 9 Tap Water Ingestion - noncancer HQ
1,3,5-Trimethylbenzene	mg/L	NC	0.001	1.83	Region 9 Tap Water Ingestion - noncancer HQ
Vinyl chloride	mg/L	0.00002	0.002	0.002	Federal MCL
Xylene (total)	mg/L	1.2	10	10	Federal MCL
SVOCs					
Acenaphthene	mg/L	NC	0.037	2.19	Region 9 Tap Water Ingestion - noncancer HQ
Acenaphthylene	mg/L	NC	NC	1.1	Region 9 Tap Water Ingestion - noncancer HQ
Acetophenone	mg/L	NC	0.000004	NC	NC
Anthracene	mg/L	NC	0.18	11	Region 9 Tap Water Ingestion - noncancer HQ
Atrazine	mg/L	0.0003	0.003	0.003	Federal MCL
Benzaldehyde	mg/L	NC	0.37	3.65	Region 9 Tap Water Ingestion - noncancer HQ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	Region 9 Tap Water Ingestion - cancer risk 10-5
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	Federal MCL
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	Region 9 Tap Water Ingestion - cancer risk 10-5
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	Region 9 Tap Water Ingestion - noncancer HQ
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	Region 9 Tap Water Ingestion - cancer risk 10-5
Biphenyl	mg/L	NC	0.03	1.83	Region 9 Tap Water Ingestion - noncancer HQ
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	NC
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	Region 9 Tap Water Ingestion - cancer risk 10-5
bis(2-Ethylhexyl)phthalate	mg/L	0.005	0.006	0.006	Federal MCL
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	NC
Butyl benzylphthalate	mg/L	NC	0.73	7.3	Region 9 Tap Water Ingestion - noncancer HQ
Caprolactam	mg/L	NC	1.8	18.3	Region 9 Tap Water Ingestion - noncancer HQ
Carbazole	mg/L	NC	0.003	0.0336	Region 9 Tap Water Ingestion - cancer risk 10-5
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	NC
4-Chloroaniline	mg/L	NC	0.015	0.146	Region 9 Tap Water Ingestion - noncancer HQ
2-Chloronaphthalene	mg/L	NC	0.049	2.92	Region 9 Tap Water Ingestion - noncancer HQ
2-Chlorophenol	mg/L	0.03	0.04	0.183	Region 9 Tap Water Ingestion - noncancer HQ
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	NC
Chrysene	mg/L	NC	0.009	0.0921	Region 9 Tap Water Ingestion - cancer risk 10-5
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.0000921	Region 9 Tap Water Ingestion - cancer risk 10-5
Dibenzofuran	mg/L	NC	0.002	0.073	Region 9 Tap Water Ingestion - noncancer HQ
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	Federal MCL
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	Region 9 Tap Water Ingestion - noncancer HQ
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	Federal MCL
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	Region 9 Tap Water Ingestion - cancer risk 10-5
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	Region 9 Tap Water Ingestion - noncancer HQ
Diethyl phthalate	mg/L	NC	5	29.2	Region 9 Tap Water Ingestion - noncancer HQ
Dimethyl phthalate	mg/L	NC	37	365	Region 9 Tap Water Ingestion - noncancer HQ
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	Region 9 Tap Water Ingestion - noncancer HQ
Di-n-butylphthalate	mg/L	NC	0.37	3.7	Region 9 Tap Water Ingestion - noncancer HQ
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	Region 9 Tap Water Ingestion - noncancer HQ
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	Region 9 Tap Water Ingestion - noncancer HQ
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	Region 9 Tap Water Ingestion - noncancer HQ

TABLE 1.1

GROUNDWATER CRITERIA
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

		Delaware URS Values		*Drinking Water Criteria* [1]	
Parameters:	***Units***	***Screening***	***Value***	***Value***	***Source***
SVOCs (continued)					
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	Region 9 Tap Water Ingestion - noncancer HQ
Di-n-octyl phthalate	mg/L	NC	0.073	1.46	Region 9 Tap Water Ingestion - noncancer HQ
Fluoranthene	mg/L	NC	0.15	1.46	Region 9 Tap Water Ingestion - noncancer HQ
Fluorene	mg/L	NC	0.024	1.46	Region 9 Tap Water Ingestion - noncancer HQ
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	Federal MCL
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	Region 9 Tap Water Ingestion - cancer risk 10-5
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	Federal MCL
Hexachloroethane	mg/L	NC	0.001	0.0365	Region 9 Tap Water Ingestion - noncancer HQ
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	Region 9 Tap Water Ingestion - cancer risk 10-5
Isophorone	mg/L	0.071	0.1	0.708	Region 9 Tap Water Ingestion - cancer risk 10-5
2-Methylnaphthalene	mg/L	NC	0.012	0.73	Region 9 Tap Water Ingestion - noncancer HQ
2-Methylphenol	mg/L	NC	0.18	1.83	Region 9 Tap Water Ingestion - noncancer HQ
3&4-Methylphenol	mg/L	NC	NC	0.183	Region 9 Tap Water Ingestion - noncancer HQ
4-Methylphenol	mg/L	NC	0.018	0.183	Region 9 Tap Water Ingestion - noncancer HQ
Naphthalene	mg/L	0.0007	0.02	0.73	Region 9 Tap Water Ingestion - noncancer HQ
2-Nitroaniline	mg/L	NC	0.0002	0.11	Region 9 Tap Water Ingestion - noncancer HQ
3-Nitroaniline	mg/L	NC	NC	0.011	Region 9 Tap Water Ingestion - noncancer HQ
4-Nitroaniline	mg/L	NC	NC	0.032	Region 9 Tap Water Ingestion - cancer risk 10-5
Nitrobenzene	mg/L	NC	0.0004	0.0183	Region 9 Tap Water Ingestion - noncancer HQ
2-Nitrophenol	mg/L	NC	NC	NC	NC
4-Nitrophenol	mg/L	NC	0.06	NC	NC
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	Region 9 Tap Water Ingestion - cancer risk 10-5
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	Region 9 Tap Water Ingestion - cancer risk 10-5
2,2'-oxybis(1-Chloropropane)	mg/L	NC	NC	0.0096	Region 9 Tap Water Ingestion - cancer risk 10-5
Pentachlorophenol	mg/L	0.0006	0.001	0.001	Federal MCL
Phenanthrene	mg/L	NC	0.12	1.1	Region 9 Tap Water Ingestion - noncancer HQ
Phenol	mg/L	NC	4	11	Region 9 Tap Water Ingestion - noncancer HQ
Pyrene	mg/L	NC	0.018	1.1	Region 9 Tap Water Ingestion - noncancer HQ
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	Federal MCL
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	Region 9 Tap Water Ingestion - noncancer HQ
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	Region 9 Tap Water Ingestion - noncancer HQ
Metals					
Aluminum	mg/L	NC	0.2	36.5	Region 9 Tap Water Ingestion - noncancer HQ
Aluminum (Dissolved)	mg/L	NC	0.2	36.5	Region 9 Tap Water Ingestion - noncancer HQ
Antimony	mg/L	NC	0.006	0.006	Federal MCL
Antimony (Dissolved)	mg/L	NC	0.006	0.006	Federal MCL
Arsenic	mg/L	0.0005	0.05	0.01	Federal MCL
Arsenic (Dissolved)	mg/L	0.0005	0.05	0.01	Federal MCL
Barium	mg/L	0.26	2	2	Federal MCL
Barium (Dissolved)	mg/L	0.26	2	2	Federal MCL
Beryllium	mg/L	NC	0.004	0.004	Federal MCL
Beryllium (Dissolved)	mg/L	NC	0.004	0.004	Federal MCL
Cadmium	mg/L	NC	0.005	0.005	Federal MCL
Cadmium (Dissolved)	mg/L	NC	0.005	0.005	Federal MCL
Calcium	mg/L	NC	NC	NC	NC
Calcium (Dissolved)	mg/L	NC	NC	NC	NC
Chromium Total	mg/L	NC	0.1	0.1	Federal MCL
Chromium Total (Dissolved)	mg/L	NC	0.1	0.1	Federal MCL
Chromium VI	mg/L	NC	0.011	0.1	Federal MCL
Chromium VI (Dissolved)	mg/L	NC	0.011	0.1	Federal MCL
Cobalt	mg/L	NC	0.22	0.73	Region 9 Tap Water Ingestion - noncancer HQ
Cobalt (Dissolved)	mg/L	NC	0.22	0.73	Region 9 Tap Water Ingestion - noncancer HQ
Copper	mg/L	NC	1.3	1.3	Federal MCL
Copper (Dissolved)	mg/L	NC	1.3	1.3	Federal MCL

TABLE 1.1

GROUNDWATER CRITERIA
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

		Delaware URS Values		*Drinking Water Criteria* [1]	
Parameters:	***Units***	***Screening***	***Value***	***Value***	***Source***
Metals (continued)					
Iron	mg/L	NC	0.3	11	Region 9 Tap Water Ingestion - noncancer HQ
Iron (Dissolved)	mg/L	NC	0.3	11	Region 9 Tap Water Ingestion - noncancer HQ
Lead	mg/L	NC	0.015	0.015	Federal MCL
Lead (Dissolved)	mg/L	NC	0.015	0.015	Federal MCL
Magnesium	mg/L	NC	NC	NC	NC
Magnesium (Dissolved)	mg/L	NC	NC	NC	NC
Manganese	mg/L	NC	0.05	0.876	Region 9 Tap Water Ingestion - noncancer HQ
Manganese (Dissolved)	mg/L	NC	0.05	0.876	Region 9 Tap Water Ingestion - noncancer HQ
Mercury	mg/L	NC	0.002	0.002	Federal MCL
Mercury (Dissolved)	mg/L	NC	0.002	0.002	Federal MCL
Nickel	mg/L	NC	0.1	0.73	Region 9 Tap Water Ingestion - noncancer HQ
Nickel (Dissolved)	mg/L	NC	0.1	0.73	Region 9 Tap Water Ingestion - noncancer HQ
Potassium	mg/L	NC	NC	NC	NC
Potassium (Dissolved)	mg/L	NC	NC	NC	NC
Selenium	mg/L	NC	0.05	0.05	Federal MCL
Selenium (Dissolved)	mg/L	NC	0.05	0.05	Federal MCL
Silver	mg/L	NC	0.1	0.183	Region 9 Tap Water Ingestion - noncancer HQ
Silver (Dissolved)	mg/L	NC	0.1	0.183	Region 9 Tap Water Ingestion - noncancer HQ
Sodium	mg/L	NC	NC	NC	NC
Sodium (Dissolved)	mg/L	NC	NC	NC	NC
Thallium	mg/L	NC	0.002	0.002	Federal MCL
Thallium (Dissolved)	mg/L	NC	0.002	0.002	Federal MCL
Vanadium	mg/L	NC	0.026	0.0365	Region 9 Tap Water Ingestion - noncancer HQ
Vanadium (Dissolved)	mg/L	NC	0.026	0.0365	Region 9 Tap Water Ingestion - noncancer HQ
Zinc	mg/L	NC	2	11	Region 9 Tap Water Ingestion - noncancer HQ
Zinc (Dissolved)	mg/L	NC	2	11	Region 9 Tap Water Ingestion - noncancer HQ
PCBs					
Aroclor-1016 (PCB-1016)	ug/L	NC	0.1	2.56	Region 9 Tap Water Ingestion - noncancer HQ
Aroclor-1221 (PCB-1221)	ug/L	NC	0.03	0.336	Region 9 Tap Water Ingestion - cancer risk 10-5
Aroclor-1232 (PCB-1232)	ug/L	NC	0.03	0.336	Region 9 Tap Water Ingestion - cancer risk 10-5
Aroclor-1242 (PCB-1242)	ug/L	NC	0.03	0.336	Region 9 Tap Water Ingestion - cancer risk 10-5
Aroclor-1248 (PCB-1248)	ug/L	NC	0.03	0.336	Region 9 Tap Water Ingestion - cancer risk 10-5
Aroclor-1254 (PCB-1254)	ug/L	NC	0.03	0.336	Region 9 Tap Water Ingestion - cancer risk 10-5
Aroclor-1260 (PCB-1260)	ug/L	NC	0.03	0.336	Region 9 Tap Water Ingestion - cancer risk 10-5
PCBs (total)	ug/L	0.03	0.5	0.5	Federal MCL

Notes:

[1] Drinking water criteria are based on the federal MCLs. For chemicals that lack MCLs, the drinking water criteria are based on U.S. EPA Region 9 risk-based tap water ingestion PRGs (2004) for the lower of a target cancer risk of 10^{-5} or a target hazard quotient of 1.

HQ - hazard quotient
MCL - maximum contaminant level
NC - no criteria listed
PCB - polychlorinated biphenyl
PRG - preliminary remediation goal
SVOC - semivolatile organic compound
URS - uniform risk-based screening
U.S.EPA - United States Environmental Protection Agency
VOC - volatile organic compound

References:

DNREC. Uniform Risk-Based Remediation Standards. 1999.
U.S. EPA. 40 CFR Part 141 - National Primary Drinking Water Regulations.
U.S. EPA Region 9. Preliminary Remediation Goals - Tap Water Ingestion. 2004.

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*Delaware URS Values*		*Drinking Water Criteria* [1]	*MW-1*	*MW2*	*MW2*	*MW2*	*MW2*	*MW2*
Sample ID:		*Screening Level*	*Value*	*Value*	*MW-1*	*MW-2*	*MW2-060105EAP001*	*WG-17338-111405-RR-017*	*GW17338082206009*	*GW1733809060601*
Sample Date:		*a*	*b*	*c*	*7/10/1998*	*7/10/1998*	*6/1/2005*	*11/14/2005*	*8/22/2006*	*9/6/2006*
Parameters:	***Units***									
VOCs										
Acetone	mg/L	NC	0.061	32.9	0.1 U	0.1 U	0.012	0.005 U	R	0.005 U
Benzene	mg/L	0.0004	0.005	0.005	0.02 U	**0.0725**[abc]	**0.015**[abc]	**0.028**[abc]	**0.038**[abc]	**0.036**[abc]
n-Butylbenzene	mg/L	NC	0.006	1.46	0.02 U	0.02 U	-	-	-	-
Bromobenzene	mg/L	NC	NC	0.73	0.02 U	0.02 U	-	-	-	-
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.02 U	0.02 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.02 U	0.02 U	0.004 U	0.004 U	0.004 U	0.004 U
Bromomethane	mg/L	0.009	0.01	0.0511	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Butanone	mg/L	NC	0.19	21.9	0.1 U	0.1 U	0.005 U	R	0.005 U	R
Carbon disulfide	mg/L	NC	0.1	3.65	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.02 U	0.02 U	0.0012 J	0.005 U	0.005 U	0.0085
Chlorobromomethane	mg/L	NC	NC	NC	0.02 U	0.02 U	-	-	-	-
Chloroethane	mg/L	NC	0.004	14.6	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Chloroethyl vinyl ether	mg/L	NC	NC	NC	0.02 U	0.02 U	-	-	-	-
Chloroform	mg/L	0.0001	0.1	0.08	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U
Chloromethane	mg/L	0.002	0.003	0.949	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	NC	NC	0.73	0.02 U	0.02 U	-	-	-	-
4-Chlorotoluene	mg/L	NC	NC	NC	0.02 U	0.02 U	-	-	-	-
Cyclohexane	mg/L	NC	NC	62.1	-	-	0.047	0.044	0.047	0.032
Cymene	mg/L	NC	NC	NC	0.02 U	0.02 U	-	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	0.00005	0.0002	0.0002	0.1 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dibromoethane	mg/L	0.000001	0.00005	0.00005	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U
Dibromomethane	mg/L	NC	NC	0.365	0.02 U	0.02 U	-	-	-	-
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.02 U	0.02 U	0.0012 J	0.005 U	0.005 U	0.0035 J
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.02 U	0.02 U	0.0005 J	0.005 U	0.005 U	0.0004 J
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.02 U	0.02 U	**0.0015 J**[a]	0.005 U	0.005 U	**0.0067**[a]
Dichlorodifluoromethane	mg/L	0.35	1	7.3	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.02 U	0.02 U	0.002 U	0.002 U	0.002 U	0.002 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.02 U	0.02 U	0.001 J	0.005 U	0.0006 J	0.005 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.02 U	0.02 U	0.0004 J	0.005 U	0.005 U	0.005 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.02 U	0.02 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichloropropane	mg/L	NC	NC	0.73	0.02 U	0.02 U	-	-	-	-

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*Delaware URS Values*		*Drinking Water Criteria* [1]	*MW-1*	*MW2*	*MW2*	*MW2*	*MW2*	*MW2*
Sample ID:		*Screening Level*	*Value*	*Value*	*MW-1*	*MW-2*	*MW2-060105EAP001*	*WG-17338-111405-RR-017*	*GW17338082206009*	*GW1733809060601*
Sample Date:		*a*	*b*	*c*	*7/10/1998*	*7/10/1998*	*6/1/2005*	*11/14/2005*	*8/22/2006*	*9/6/2006*
Parameters:	***Units***									
VOCs (Continued)										
2,2-Dichloropropane	mg/L	NC	NC	NC	0.02 U	0.02 U	-	-	-	-
1,1-Dichloropropene	mg/L	NC	NC	NC	0.02 U	0.02 U	-	-	-	-
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	NC	0.7	0.7	**0.906**[pc]	**1.34**[pc]	0.004 U	0.0051	0.004 U	0.0009 J
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.02 U	0.02 U	-	-	-	-
2-Hexanone	mg/L	NC	0.15	NC	0.1 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	NC	0.066	3.65	0.02 U	0.0555	0.015	0.022	0.019	0.014
Methyl acetate	mg/L	NC	0.61	36.5	-	-	0.005 U	0.005 U	0.005 U	0.005 U
Methyl cyclohexane	mg/L	NC	NC	31.4	-	-	0.032	0.024	0.0094	0.007
Methyl Tert Butyl Ether	mg/L	NC	0.02	0.374	-	-	**0.054**[p]	**0.033**[p]	0.014	0.01
4-Methyl-2-Pentanone	mg/L	NC	0.014	2.92	0.1 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.004	0.005	0.005	0.02 U	0.02 U	0.003 U	0.003 U	0.003 U	0.003 U
2-Phenylbutane	mg/L	NC	NC	1.46	0.02 U	0.02 U	-	-	-	-
n-Propylbenzene	mg/L	NC	0.006	1.46	0.02 U	0.025	-	-	-	-
Styrene	mg/L	NC	0.1	0.1	0.02 U	0.02 U	0.0003 J	0.005 U	0.005 U	0.005 U
tert-Butylbenzene	mg/L	NC	0.006	1.46	0.02 U	0.02 U	-	-	-	-
1,1,1,2-Tetrachloroethane	mg/L	NC	0.004	0.0259	0.02 U	0.02 U	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.02 U	0.02 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.02 U	0.02 U	0.0004 J	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.75	1	1	0.147	0.0249	0.005 U	0.0004 J	0.005 U	0.0004 J
1,2,3-Trichlorobenzene	mg/L	NC	NC	NC	0.02 U	0.02 U	-	-	-	-
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.02 U	0.02 U	0.003 U	0.003 U	0.003 U	0.003 U
Trichloroethene	mg/L	0.002	0.005	0.005	0.02 U	0.02 U	0.0007 J	0.001 U	0.0007 J	0.001 U
Trichlorofluoromethane	mg/L	1.3	2	11	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2,3-Trichloropropane	mg/L	NC	0.000002	0.000336	0.02 U	0.02 U	-	-	-	-
Trifluorotrichloroethane	mg/L	NC	5.9	1100	-	-	0.005 U	0.005 U	0.005 U	0.005 U
1,2,4-Trimethylbenzene	mg/L	NC	0.001	1.83	0.02 U	0.02 U	-	-	-	-
1,3,5-Trimethylbenzene	mg/L	NC	0.001	1.83	0.02 U	0.02 U	-	-	-	-
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.02 U	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U
Xylene (total)	mg/L	1.2	10	10	**5.35**[a]	**5.5**[a]	0.27	0.11	0.062	0.072

Refer to Table 1.6 for a list of notes

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW2*	*MW3*	*MW3*	*MW3*	*MW3*	*MW3*	*MW3D*	*MW3D*
Sample ID:		*GW-17338-121406-MJW-17*	*MW-3*	*MW3-060105EAP003*	*WG-17338-111005-RR-009*	*GW17338082206007*	*GW-17338-121506-MJW-21*	*WG-17338-111005-RR-008*	*GW17338082206008*
Sample Date:		*12/14/2006*	*7/10/1998*	*6/1/2005*	*11/10/2005*	*8/22/2006*	*12/15/2006*	*11/10/2005*	*8/22/2006*
Parameters:	***Units***								
VOCs									
Acetone	mg/L	R	**93[bc]**	**350[bc]**	**470 J[bc]**	**370 J[bc]**	**370 J[bc]**	**3[b]**	R
Benzene	mg/L	**0.022[abc]**	**0.942[abc]**	**1.2[abc]**	**0.92[abc]**	**0.87[abc]**	5 U	**0.012[abc]**	**0.0034[a]**
n-Butylbenzene	mg/L	-	0.2 U	-	-	-	-	-	-
Bromobenzene	mg/L	-	0.2 U	-	-	-	-	-	-
Bromodichloromethane	mg/L	0.001 U	0.2 U	0.2 U	0.2 U	0.1 U	5 U	0.005 U	0.001 U
Bromoform	mg/L	0.004 U	0.2 U	0.8 U	0.8 U	0.4 U	20 U	0.02 U	0.004 U
Bromomethane	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 UJ
2-Butanone	mg/L	R	1 U	**0.85 J[p]**	**0.57 J[p]**	R	R	R	0.005 U
Carbon disulfide	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
Carbon tetrachloride	mg/L	0.002 U	0.2 U	0.4 U	0.4 U	0.2 U	10 U	0.01 U	0.002 U
Chlorobenzene	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
Chlorobromomethane	mg/L	-	0.2 U	-	-	-	-	-	-
Chloroethane	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
2-Chloroethyl vinyl ether	mg/L	-	0.2 U	-	-	-	-	-	-
Chloroform	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
Chloromethane	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
2-Chlorotoluene	mg/L	-	0.2 U	-	-	-	-	-	-
4-Chlorotoluene	mg/L	-	0.2 U	-	-	-	-	-	-
Cyclohexane	mg/L	0.026	-	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
Cymene	mg/L	-	0.2 U	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	0.005 U	1 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
Dibromochloromethane	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
1,2-Dibromoethane	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
Dibromomethane	mg/L	-	0.2 U	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	0.0013 J	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
1,3-Dichlorobenzene	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
1,4-Dichlorobenzene	mg/L	**0.0006 J[a]**	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
Dichlorodifluoromethane	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
1,1-Dichloroethane	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
1,2-Dichloroethane	mg/L	0.002 U	0.2 U	0.4 U	0.4 U	0.2 U	10 U	0.01 U	0.002 U
1,1-Dichloroethene	mg/L	0.002 U	0.2 U	0.4 U	0.4 U	0.2 U	10 U	0.01 U	0.002 U
cis-1,2-Dichloroethene	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
trans-1,2-Dichloroethene	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
1,2-Dichloropropane	mg/L	0.001 U	0.2 U	0.2 U	0.2 U	0.1 U	5 U	0.005 U	0.001 U
1,3-Dichloropropane	mg/L	-	0.2 U	-	-	-	-	-	-

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW2***	***MW3***	***MW3***	***MW3***	***MW3***	***MW3***	***MW3D***	***MW3D***
Sample ID:		***GW-17338-121406-MJW-17***	***MW-3***	***MW3-060105EAP003***	***WG-17338-111005-RR-009***	***GW17338082206007***	***GW-17338-121506-MJW-21***	***WG-17338-111005-RR-008***	***GW17338082206008***
Sample Date:		***12/14/2006***	***7/10/1998***	***6/1/2005***	***11/10/2005***	***8/22/2006***	***12/15/2006***	***11/10/2005***	***8/22/2006***
Parameters:	***Units***								
VOCs (Continued)									
2,2-Dichloropropane	mg/L	-	0.2 U	-	-	-	-	-	-
1,1-Dichloropropene	mg/L	-	0.2 U	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
trans-1,3-Dichloropropene	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
Ethylbenzene	mg/L	0.0025 J	**12.4**[dc]	**18**[dc]	**14**[dc]	**10**[dc]	**11 J**[dc]	0.31	0.0052
Hexachlorobutadiene	mg/L	-	0.2 U	-	-	-	-	-	-
2-Hexanone	mg/L	0.005 U	1 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
Isopropylbenzene	mg/L	0.0088	0.2 U	1 U	1 U	0.5 U	25 U	0.0077 J	0.0017 J
Methyl acetate	mg/L	0.005 U	-	1 U	1 U	0.5 U	25 U	0.025 U	0.005 UJ
Methyl cyclohexane	mg/L	0.005	-	1 U	1 U	0.5 U	25 U	0.025	0.005 U
Methyl Tert Butyl Ether	mg/L	0.013	-	**0.81 Jbc**	**0.56 Jbc**	**0.8bc**	25 U	0.005 J	0.002 J
4-Methyl-2-Pentanone	mg/L	0.005 U	1 U	1 U	**0.58 J**[b]	0.5 U	25 U	0.025 U	0.005 U
Methylene chloride	mg/L	0.003 U	0.2 U	0.6 U	0.6 U	0.3 U	15 U	0.015 U	0.003 U
2-Phenylbutane	mg/L	-	0.2 U	-	-	-	-	-	-
n-Propylbenzene	mg/L	-	0.2 U	-	-	-	-	-	-
Styrene	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
tert-Butylbenzene	mg/L	-	0.2 U	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	mg/L	-	0.2 U	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.2 U	0.2 U	0.2 U	0.1 U	5 U	0.005 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.2 U	0.2 U	0.2 U	0.1 U	5 U	0.005 U	0.001 U
Toluene	mg/L	0.012	0.2 U	**190**[abc]	**180**[abc]	**140**[abc]	**160**[abc]	0.3	0.0011 J
1,2,3-Trichlorobenzene	mg/L	-	0.2 U	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
1,1,1-Trichloroethane	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.003 U	0.2 U	0.6 U	0.6 U	0.3 U	15 U	0.015 U	0.003 U
Trichloroethene	mg/L	0.0007 J	0.2 U	0.2 U	0.2 U	0.1 U	5 U	0.005 U	0.001 U
Trichlorofluoromethane	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
1,2,3-Trichloropropane	mg/L	-	0.2 U	-	-	-	-	-	-
Trifluorotrichloroethane	mg/L	0.005 U	-	1 U	1 U	0.5 U	25 U	0.025 U	0.005 UJ
1,2,4-Trimethylbenzene	mg/L	-	0.2 U	-	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/L	-	0.2 U	-	-	-	-	-	-
Vinyl chloride	mg/L	0.005 U	0.2 U	1 U	1 U	0.5 U	25 U	0.025 U	0.005 U
Xylene (total)	mg/L	0.0042 J	**20.7**[abc]	**30**[abc]	**23**[abc]	**18**[abc]	**16 J**[abc]	0.57	0.0079

Refer to Table 1.6 for a list of notes

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW3D***	***MW5***	***MW6***	***MW6***	***MW6***	***MW6***	***MW6***	***MW7***
Sample ID:		***GW-17338-121406-MJW-16***	***MW-5***	***MW6-060105EAP004***	***WG-17338-111105-RR-012***	***GW17338082206011***	***GW1733809060602***	***GW-17338-121406-MJW-14***	***MW7-060105EAP005***
Sample Date:		***12/14/2006***	***7/10/1998***	***6/1/2005***	***11/11/2005***	***8/22/2006***	***9/6/2006***	***12/14/2006***	***6/1/2005***
Parameters:	***Units***								
VOCs									
Acetone	mg/L	R	1 U	0.25 U	0.005 U	**0.074 J[b]**	R	R	0.005 U
Benzene	mg/L	**0.023 J[abc]**	0.2 U	**0.065[abc]**	**0.0059[abc]**	0.005 U	**0.024[abc]**	0.01 U	**0.0006 J[a]**
n-Butylbenzene	mg/L	-	0.2 U	-	-	-	-	-	-
Bromobenzene	mg/L	-	0.2 U	-	-	-	-	-	-
Bromodichloromethane	mg/L	0.05 U	0.2 U	0.05 U	0.001 U	0.005 U	0.02 U	0.01 U	0.001 U
Bromoform	mg/L	0.2 U	0.2 U	0.2 U	0.004 U	0.02 U	0.08 U	0.04 U	0.004 U
Bromomethane	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
2-Butanone	mg/L	R	1 U	0.25 U	R	0.025 U	R	R	R
Carbon disulfide	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
Carbon tetrachloride	mg/L	0.1 U	0.2 U	0.1 U	0.002 U	0.01 U	0.04 U	0.02 U	0.002 U
Chlorobenzene	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	**0.045[a]**
Chlorobromomethane	mg/L	-	0.2 U	-	-	-	-	-	-
Chloroethane	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
2-Chloroethyl vinyl ether	mg/L	-	0.2 U	-	-	-	-	-	-
Chloroform	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
Chloromethane	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
2-Chlorotoluene	mg/L	-	0.2 U	-	-	-	-	-	-
4-Chlorotoluene	mg/L	-	0.2 U	-	-	-	-	-	-
Cyclohexane	mg/L	0.25 U	-	0.043 J	0.0023 J	0.025 U	0.079 J	0.05 U	0.005 U
Cymene	mg/L	-	0.2 U	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	0.25 U	1 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
Dibromochloromethane	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
1,2-Dibromoethane	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
Dibromomethane	mg/L	-	0.2 U	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.0006 J
1,3-Dichlorobenzene	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
1,4-Dichlorobenzene	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	**0.0005 J[a]**
Dichlorodifluoromethane	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
1,1-Dichloroethane	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
1,2-Dichloroethane	mg/L	0.1 U	0.2 U	0.1 U	0.002 U	0.01 U	0.04 U	0.02 U	0.002 U
1,1-Dichloroethene	mg/L	0.1 U	0.2 U	0.1 U	0.002 U	0.01 U	0.04 U	0.02 U	0.002 U
cis-1,2-Dichloroethene	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
trans-1,2-Dichloroethene	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
1,2-Dichloropropane	mg/L	0.05 U	0.2 U	0.05 U	0.001 U	0.005 U	0.02 U	0.01 U	0.001 U
1,3-Dichloropropane	mg/L	-	0.2 U	-	-	-	-	-	-

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW3D***	***MW5***	***MW6***	***MW6***	***MW6***	***MW6***	***MW6***	***MW7***
Sample ID:		***GW-17338-121406-MJW-16***	***MW-5***	***MW6-060105EAP004***	***WG-17338-111105-RR-012***	***GW17338082206011***	***GW1733809060602***	***GW-17338-121406-MJW-14***	***MW7-060105EAP005***
Sample Date:		***12/14/2006***	***7/10/1998***	***6/1/2005***	***11/11/2005***	***8/22/2006***	***9/6/2006***	***12/14/2006***	***6/1/2005***
Parameters:	***Units***								
VOCs (Continued)									
2,2-Dichloropropane	mg/L	-	0.2 U	-	-	-	-	-	-
1,1-Dichloropropene	mg/L	-	0.2 U	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
trans-1,3-Dichloropropene	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
Ethylbenzene	mg/L	0.49	0.2 U	**5.6**[pc]	0.32	0.17	**4.1**[pc]	0.22	0.04
Hexachlorobutadiene	mg/L	-	0.2 U	-	-	-	-	-	-
2-Hexanone	mg/L	0.25 U	1 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
Isopropylbenzene	mg/L	0.25 U	0.2 U	0.022 J	0.0025 J	0.0064 J	0.028 J	0.05 U	0.005 U
Methyl acetate	mg/L	0.25 U	-	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
Methyl cyclohexane	mg/L	0.07 J	-	0.075 J	0.004 J	0.025 U	0.2	0.05 U	0.005 U
Methyl Tert Butyl Ether	mg/L	**0.037 J**[p]	-	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.0003 J
4-Methyl-2-Pentanone	mg/L	0.25 U	1 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
Methylene chloride	mg/L	0.15 U	0.2 U	0.15 U	0.003 U	0.015 U	0.06 U	0.03 U	0.003 U
2-Phenylbutane	mg/L	-	0.2 U	-	-	-	-	-	-
n-Propylbenzene	mg/L	-	0.2 U	-	-	-	-	-	-
Styrene	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
tert-Butylbenzene	mg/L	-	0.2 U	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	mg/L	-	0.2 U	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	0.05 U	0.2 U	0.05 U	0.001 U	0.005 U	0.02 U	0.01 U	0.001 U
Tetrachloroethene	mg/L	0.05 U	0.2 U	0.05 U	0.001 U	0.005 U	0.02 U	0.01 U	0.001 U
Toluene	mg/L	**6.2**[apc]	0.237	**39**[apc]	**1.5**[apc]	0.73	**17**[apc]	**0.99**[a]	0.28
1,2,3-Trichlorobenzene	mg/L	-	0.2 U	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
1,1,1-Trichloroethane	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.15 U	0.2 U	0.15 U	0.003 U	0.015 U	0.06 U	0.03 U	0.003 U
Trichloroethene	mg/L	0.05 U	0.2 U	0.05 U	0.001 U	0.005 U	0.02 U	0.01 U	0.001 U
Trichlorofluoromethane	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 UJ	0.05 U	0.005 U
1,2,3-Trichloropropane	mg/L	-	0.2 U	-	-	-	-	-	-
Trifluorotrichloroethane	mg/L	0.25 U	-	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
1,2,4-Trimethylbenzene	mg/L	-	0.2 U	-	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/L	-	0.2 U	-	-	-	-	-	-
Vinyl chloride	mg/L	0.25 U	0.2 U	0.25 U	0.005 U	0.025 U	0.1 U	0.05 U	0.005 U
Xylene (total)	mg/L	**2.8**[a]	0.2 U	**9.2**[a]	0.54	0.34	**8**[a]	0.45	0.064

Refer to Table 1.6 for a list of notes

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW7***	***MW7***	***MW7***	***MW8***	***MW8***	***MW8***	***MW8***
Sample ID:		***WG-17338-111505-RR-023***	***GW17338082206012***	***GW-17338-121406-MJW-11***	***MW8-060205EAP001***	***MW8-060205EAP002***	***WG-17338-111405-RR-015***	***GW17338082106004***
Sample Date:		***11/15/2005***	***8/22/2006***	***12/14/2006***	***6/2/2005***	***6/2/2005 Duplicate***	***11/14/2005***	***8/21/2006***
Parameters:	***Units***							
VOCs								
Acetone	mg/L	0.005 U	R	R	0.005 U	0.005 U	0.005 U	R
Benzene	mg/L	0.001 U	**0.0014**[a]	**0.0005 J**[a]	**0.0047**[a]	**0.0049**[a]	**0.0076**[abc]	**0.0072**[abc]
n-Butylbenzene	mg/L	-	-	-	-	-	-	-
Bromobenzene	mg/L	-	-	-	-	-	-	-
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Bromomethane	mg/L	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Butanone	mg/L	R	0.005 U	R	R	R	R	0.005 U
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	**0.049**[a]	**0.11**[abc]	**0.076**[a]	**0.81**[abc]	**0.71**[abc]	**0.25**[abc]	**0.06**[a]
Chlorobromomethane	mg/L	-	-	-	-	-	-	-
Chloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Chloroethyl vinyl ether	mg/L	-	-	-	-	-	-	-
Chloroform	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chloromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	-	-	-	-	-	-	-
4-Chlorotoluene	mg/L	-	-	-	-	-	-	-
Cyclohexane	mg/L	0.005 U	0.005 U	0.005 U	0.0006 J	0.0007 J	0.0017 J	0.0011 J
Cymene	mg/L	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dibromochloromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dibromoethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dibromomethane	mg/L	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	0.005 U	0.005 U	0.005 U	0.0007 J	0.0008 J	0.005 U	0.005 U
1,3-Dichlorobenzene	mg/L	0.005 U	0.005 U	0.005 U	**0.0006 J**[a]	**0.0006 J**[a]	0.005 U	0.005 U
1,4-Dichlorobenzene	mg/L	0.005 U	0.005 U	**0.0008 J**[a]	**0.0037 J**[a]	**0.0038 J**[a]	**0.0013 J**[a]	0.005 U
Dichlorodifluoromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1-Dichloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloroethane	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
cis-1,2-Dichloroethene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
trans-1,2-Dichloroethene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichloropropane	mg/L	-	-	-	-	-	-	-

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW7***	***MW7***	***MW7***	***MW8***	***MW8***	***MW8***	***MW8***
Sample ID:		***WG-17338-111505-RR-023***	***GW17338082206012***	***GW-17338-121406-MJW-11***	***MW8-060205EAP001***	***MW8-060205EAP002***	***WG-17338-111405-RR-015***	***GW17338082106004***
Sample Date:		***11/15/2005***	***8/22/2006***	***12/14/2006***	***6/2/2005***	***6/2/2005***	***11/14/2005***	***8/21/2006***
						Duplicate		
Parameters:	***Units***							
VOCs (Continued)								
2,2-Dichloropropane	mg/L	-	-	-	-	-	-	-
1,1-Dichloropropene	mg/L	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
trans-1,3-Dichloropropene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.004 U	0.048	0.004 U	0.0065	0.0073	0.0009 J	0.004 U
Hexachlorobutadiene	mg/L	-	-	-	-	-	-	-
2-Hexanone	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.005 U	0.0004 J	0.005 U	0.0025 J	0.0027 J	0.0078	0.0028 J
Methyl acetate	mg/L	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methyl cyclohexane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0019 J	0.0008 J
Methyl Tert Butyl Ether	mg/L	0.005 U	0.005 UJ	0.005 U	0.0013 J	0.0014 J	0.0022 J	0.016
4-Methyl-2-Pentanone	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
2-Phenylbutane	mg/L	-	-	-	-	-	-	-
n-Propylbenzene	mg/L	-	-	-	-	-	-	-
Styrene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
tert-Butylbenzene	mg/L	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	mg/L	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.0004 J	0.023	0.005 U	0.04	0.042	0.0009 J	0.005 U
1,2,3-Trichlorobenzene	mg/L	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1,1-Trichloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Trichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2,3-Trichloropropane	mg/L	-	-	-	-	-	-	-
Trifluorotrichloroethane	mg/L	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2,4-Trimethylbenzene	mg/L	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/L	-	-	-	-	-	-	-
Vinyl chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Xylene (total)	mg/L	0.005 U	0.056	0.005 U	0.0091	0.0096	0.0016 J	0.005 U

Refer to Table 1.6 for a list of notes

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW8***	***MW9***	***MW9***	***MW9***	***MW9***	***MW9***	***MW9***
Sample ID:		***GW-17338-121406-MJW-10***	***MW9-060205EAP003***	***MW9A060205EAP004***	***WG-17338-111405-RR-016***	***GW17338082106003***	***GW-17338-121206-MJW-05***	***GW-17338-121206-MJW-06***
Sample Date:		***12/14/2006***	***6/2/2005***	***6/2/2005***	***11/14/2005***	***8/21/2006***	***12/12/2006***	***12/12/2006***
				Duplicate				***Duplicate***
Parameters:	***Units***							
VOCs								
Acetone	mg/L	R	0.005 U	0.005 U	0.005 U	R	R	R
Benzene	mg/L	**0.0066[abc]**	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
n-Butylbenzene	mg/L	-	-	-	-	-	-	-
Bromobenzene	mg/L	-	-	-	-	-	-	-
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Bromomethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Butanone	mg/L	R	R	R	R	0.005 U	R	R
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	**0.049[a]**	0.0013 J	0.0006 J	0.005 U	0.005 U	0.005 U	0.005 U
Chlorobromomethane	mg/L	-	-	-	-	-	-	-
Chloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Chloroethyl vinyl ether	mg/L	-	-	-	-	-	-	-
Chloroform	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chloromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	-	-	-	-	-	-	-
4-Chlorotoluene	mg/L	-	-	-	-	-	-	-
Cyclohexane	mg/L	0.0016 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cymene	mg/L	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dibromochloromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dibromoethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dibromomethane	mg/L	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	0.005 U	0.005 U	0.0002 J	0.005 U	0.005 U	0.005 U	0.005 U
1,3-Dichlorobenzene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,4-Dichlorobenzene	mg/L	0.005 U	0.005 U	**0.0005 J[a]**	0.005 U	0.005 U	0.005 U	0.005 U
Dichlorodifluoromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1-Dichloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloroethane	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
cis-1,2-Dichloroethene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
trans-1,2-Dichloroethene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichloropropane	mg/L	-	-	-	-	-	-	-

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW8***	***MW9***	***MW9***	***MW9***	***MW9***	***MW9***	***MW9***
Sample ID:		***GW-17338-121406-MJW-10***	***MW9-060205EAP003***	***MW9A060205EAP004***	***WG-17338-111405-RR-016***	***GW17338082106003***	***GW-17338-121206-MJW-05***	***GW-17338-121206-MJW-06***
Sample Date:		***12/14/2006***	***6/2/2005***	***6/2/2005***	***11/14/2005***	***8/21/2006***	***12/12/2006***	***12/12/2006***
				Duplicate				***Duplicate***
Parameters:	***Units***							
VOCs (Continued)								
2,2-Dichloropropane	mg/L	-	-	-	-	-	-	-
1,1-Dichloropropene	mg/L	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
trans-1,3-Dichloropropene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.004 U	0.0028 J	0.001 J	0.008	0.004 U	0.004 U	0.004 U
Hexachlorobutadiene	mg/L	-	-	-	-	-	-	-
2-Hexanone	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.0009 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methyl acetate	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methyl cyclohexane	mg/L	0.0018 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methyl Tert Butyl Ether	mg/L	0.017	0.005 U	0.005 U	0.005 U	0.005 U	0.0004 J	0.0004 J
4-Methyl-2-Pentanone	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
2-Phenylbutane	mg/L	-	-	-	-	-	-	-
n-Propylbenzene	mg/L	-	-	-	-	-	-	-
Styrene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
tert-Butylbenzene	mg/L	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	mg/L	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.005 U	0.023 J	0.0096 UJ	0.012	0.005 U	0.005 U	0.005 U
1,2,3-Trichlorobenzene	mg/L	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1,1-Trichloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Trichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2,3-Trichloropropane	mg/L	-	-	-	-	-	-	-
Trifluorotrichloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2,4-Trimethylbenzene	mg/L	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/L	-	-	-	-	-	-	-
Vinyl chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Xylene (total)	mg/L	0.005 U	0.0038 J	0.0013 J	0.011	0.005 U	0.005 U	0.005 U

Refer to Table 1.6 for a list of notes

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW10***	***MW10***	***MW10***	***MW10***	***MW11***	***MW11***	***MW11***
Sample ID:		***MW10060105EAP002***	***WG-17338-111105-RR-011***	***GW17338082306013***	***GW-17338-121406-MJW-18***	***WG-17338-111005-RR-006***	***GW17338082206010***	***GW-17338-121506-MJW-19***
Sample Date:		***6/1/2005***	***11/11/2005***	***8/23/2006***	***12/14/2006***	***11/10/2005***	***8/22/2006***	***12/15/2006***
Parameters:	***Units***							
VOCs								
Acetone	mg/L	0.1 U	0.025 U	R	R	**0.3**[b]	**0.53 J**[b]	R
Benzene	mg/L	**0.27**[abc]	**0.068**[abc]	**0.027**[abc]	**0.02**[abc]	**0.3**[abc]	**0.48**[abc]	**0.48**[abc]
n-Butylbenzene	mg/L	-	-	-	-	-	-	-
Bromobenzene	mg/L	-	-	-	-	-	-	-
Bromodichloromethane	mg/L	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.1 U
Bromoform	mg/L	0.08 U	0.02 U	0.02 U	0.02 U	0.02 U	0.04 U	0.4 U
Bromomethane	mg/L	0.1 U	0.025 U	0.025 UJ	0.025 U	0.025 U	0.05 U	0.5 U
2-Butanone	mg/L	0.1 U	R	0.025 U	R	0.17 J	0.18 J	R
Carbon disulfide	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
Carbon tetrachloride	mg/L	0.04 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.2 U
Chlorobenzene	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
Chlorobromomethane	mg/L	-	-	-	-	-	-	-
Chloroethane	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
2-Chloroethyl vinyl ether	mg/L	-	-	-	-	-	-	-
Chloroform	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
Chloromethane	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
2-Chlorotoluene	mg/L	-	-	-	-	-	-	-
4-Chlorotoluene	mg/L	-	-	-	-	-	-	-
Cyclohexane	mg/L	0.04 J	0.014 J	0.016 J	0.011 J	0.004 J	0.05 U	0.5 U
Cymene	mg/L	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
Dibromochloromethane	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
1,2-Dibromoethane	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
Dibromomethane	mg/L	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
1,3-Dichlorobenzene	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
1,4-Dichlorobenzene	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
Dichlorodifluoromethane	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
1,1-Dichloroethane	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
1,2-Dichloroethane	mg/L	0.04 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.2 U
1,1-Dichloroethene	mg/L	0.04 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02 U	0.2 U
cis-1,2-Dichloroethene	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
trans-1,2-Dichloroethene	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
1,2-Dichloropropane	mg/L	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.1 U
1,3-Dichloropropane	mg/L	-	-	-	-	-	-	-

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW10***	***MW10***	***MW10***	***MW10***	***MW11***	***MW11***	***MW11***
Sample ID:		***MW10060105EAP002***	***WG-17338-111105-RR-011***	***GW17338082306013***	***GW-17338-121406-MJW-18***	***WG-17338-111005-RR-006***	***GW17338082206010***	***GW-17338-121506-MJW-19***
Sample Date:		***6/1/2005***	***11/11/2005***	***8/23/2006***	***12/14/2006***	***11/10/2005***	***8/22/2006***	***12/15/2006***
Parameters:	***Units***							
VOCs (Continued)								
2,2-Dichloropropane	mg/L	-	-	-	-	-	-	-
1,1-Dichloropropene	mg/L	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
trans-1,3-Dichloropropene	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
Ethylbenzene	mg/L	**3[DC]**	**2.4[DC]**	0.34	0.17	**3.8[DC]**	**9.7[DC]**	**8.1[DC]**
Hexachlorobutadiene	mg/L	-	-	-	-	-	-	-
2-Hexanone	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
Isopropylbenzene	mg/L	**0.1[D]**	**0.079[D]**	**0.087[D]**	**0.075[D]**	0.002 J	0.05 U	0.5 U
Methyl acetate	mg/L	0.1 U	0.025 U	0.025 UJ	0.025 U	0.025 U	0.05 U	0.5 U
Methyl cyclohexane	mg/L	0.065 J	0.02 J	0.02 J	0.015 J	0.025 U	0.05 U	0.5 U
Methyl Tert Butyl Ether	mg/L	0.1 U	0.025 U	0.025 UJ	0.025 U	**0.48[DC]**	**0.65[DC]**	**0.64[DC]**
4-Methyl-2-Pentanone	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	**0.021 J[D]**	0.05 U	0.5 U
Methylene chloride	mg/L	0.06 U	0.015 U	0.015 U	0.015 U	0.015 U	0.03 U	0.3 U
2-Phenylbutane	mg/L	-	-	-	-	-	-	-
n-Propylbenzene	mg/L	-	-	-	-	-	-	-
Styrene	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
tert-Butylbenzene	mg/L	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	mg/L	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.1 U
Tetrachloroethene	mg/L	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.1 U
Toluene	mg/L	**15[ADC]**	**5.1[ADC]**	0.44	0.17	**3.1[ADC]**	**6.5[ADC]**	**3.6[ADC]**
1,2,3-Trichlorobenzene	mg/L	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
1,1,1-Trichloroethane	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
1,1,2-Trichloroethane	mg/L	0.06 U	0.015 U	0.015 U	0.015 U	0.015 U	0.03 U	0.3 U
Trichloroethene	mg/L	0.02 U	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	0.1 U
Trichlorofluoromethane	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
1,2,3-Trichloropropane	mg/L	-	-	-	-	-	-	-
Trifluorotrichloroethane	mg/L	0.1 U	0.025 U	0.025 UJ	0.025 U	0.025 U	0.05 U	0.5 U
1,2,4-Trimethylbenzene	mg/L	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/L	-	-	-	-	-	-	-
Vinyl chloride	mg/L	0.1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.05 U	0.5 U
Xylene (total)	mg/L	**9.5[A]**	**4[A]**	**1.4[A]**	0.86	**4.1[A]**	**10[A]**	**9.1[A]**

Refer to Table 1.6 for a list of notes

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW11R***	***MW11R***	***MW11R***	***MW12***	***MW12***	***MW12***	***MW13***
Sample ID:		***WG-17338-111005-RR-007***	***GW17338082106002***	***GW-17338-121406-MJW-07***	***WG-17338-111005-RR-005***	***GW17338082206006***	***GW-17338-121506-MJW-20***	***WG-17338-110905-RR-001***
Sample Date:		***11/10/2005***	***8/21/2006***	***12/14/2006***	***11/10/2005***	***8/22/2006***	***12/15/2006***	***11/9/2005***
Parameters:	***Units***							
VOCs								
Acetone	mg/L	0.005 U	R	R	0.005 U	R	R	0.0096
Benzene	mg/L	0.001 U	0.001 U	0.001 U	**0.025**[abc]	**0.35**[abc]	**0.37**[abc]	**0.02**[abc]
n-Butylbenzene	mg/L	-	-	-	-	-	-	-
Bromobenzene	mg/L	-	-	-	-	-	-	-
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.02 U	0.001 U
Bromoform	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.02 U	0.08 U	0.004 U
Bromomethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
2-Butanone	mg/L	R	0.005 U	R	R	R	R	R
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
Carbon tetrachloride	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.01 U	0.04 U	0.002 U
Chlorobenzene	mg/L	0.005 U	0.0014 J	0.005 U	0.005 U	0.025 U	0.1 U	0.0011 J
Chlorobromomethane	mg/L	-	-	-	-	-	-	-
Chloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
2-Chloroethyl vinyl ether	mg/L	-	-	-	-	-	-	-
Chloroform	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
Chloromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
2-Chlorotoluene	mg/L	-	-	-	-	-	-	-
4-Chlorotoluene	mg/L	-	-	-	-	-	-	-
Cyclohexane	mg/L	0.005 U	0.005 U	0.005 U	0.0016 J	0.016 J	0.012 J	0.017
Cymene	mg/L	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
Dibromochloromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
1,2-Dibromoethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
Dibromomethane	mg/L	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
1,3-Dichlorobenzene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
1,4-Dichlorobenzene	mg/L	0.005 U	**0.0006 J**[a]	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
Dichlorodifluoromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
1,1-Dichloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
1,2-Dichloroethane	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.01 U	0.04 U	0.002 U
1,1-Dichloroethene	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.01 U	0.04 U	0.002 U
cis-1,2-Dichloroethene	mg/L	0.005 U	0.005 U	0.005 U	0.0006 J	0.0071 J	0.1 U	0.005 U
trans-1,2-Dichloroethene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.02 U	0.001 U
1,3-Dichloropropane	mg/L	-	-	-	-	-	-	-

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW11R***	***MW11R***	***MW11R***	***MW12***	***MW12***	***MW12***	***MW13***
Sample ID:		***WG-17338-111005-RR-007***	***GW17338082106002***	***GW-17338-121406-MJW-07***	***WG-17338-111005-RR-005***	***GW17338082206006***	***GW-17338-121506-MJW-20***	***WG-17338-110905-RR-001***
Sample Date:		***11/10/2005***	***8/21/2006***	***12/14/2006***	***11/10/2005***	***8/22/2006***	***12/15/2006***	***11/9/2005***
Parameters:	***Units***							
VOCs (Continued)								
2,2-Dichloropropane	mg/L	-	-	-	-	-	-	-
1,1-Dichloropropene	mg/L	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
trans-1,3-Dichloropropene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
Ethylbenzene	mg/L	0.0013 J	0.004 U	0.004 U	0.15	**1.6**[pc]	**1.2**[pc]	0.5
Hexachlorobutadiene	mg/L	-	-	-	-	-	-	-
2-Hexanone	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
Isopropylbenzene	mg/L	0.005 U	0.005 U	0.005 U	0.0094	**0.097**[p]	0.051 J	0.021
Methyl acetate	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
Methyl cyclohexane	mg/L	0.005 U	0.005 U	0.005 U	0.0036 J	0.022 J	0.015 J	0.12
Methyl Tert Butyl Ether	mg/L	0.005 U	0.005 U	0.005 U	0.0064	**0.043**[p]	**0.039 J**[p]	**0.036**[p]
4-Methyl-2-Pentanone	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
Methylene chloride	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.015 U	0.06 U	0.003 U
2-Phenylbutane	mg/L	-	-	-	-	-	-	-
n-Propylbenzene	mg/L	-	-	-	-	-	-	-
Styrene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
tert-Butylbenzene	mg/L	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	mg/L	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.02 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.02 U	0.001 U
Toluene	mg/L	0.0063	0.005 U	0.005 U	0.0036 J	0.0034 J	0.014 J	**4.7**[apc]
1,2,3-Trichlorobenzene	mg/L	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
1,1,1-Trichloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.015 U	0.06 U	0.003 U
Trichloroethene	mg/L	0.001 U	**0.003**[a]	0.001 U	0.001 U	0.005 U	0.02 U	0.001 U
Trichlorofluoromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
1,2,3-Trichloropropane	mg/L	-	-	-	-	-	-	-
Trifluorotrichloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
1,2,4-Trimethylbenzene	mg/L	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/L	-	-	-	-	-	-	-
Vinyl chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U	0.1 U	0.005 U
Xylene (total)	mg/L	0.0063	0.005 U	0.005 U	0.38	**8.8**[a]	**4.6**[a]	**2.7**[a]

Refer to Table 1.6 for a list of notes

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW13***	***MW13***	***MW13***	***MW14***	***MW14***	***MW14***	***MW14***
Sample ID:		***WG-17338-110905-RR-002***	***GW17338082206005***	***GW-17338-121406-MJW-15***	***WG-17338-111105-RR-013***	***122205-EAP-002***	***GW17338082306014***	***GW-17338-121406-MJW-09***
Sample Date:		***11/9/2005***	***8/22/2006***	***12/14/2006***	***11/11/2005***	***12/22/2005***	***8/23/2006***	***12/14/2006***
		Duplicate						
Parameters:	***Units***							
VOCs								
Acetone	mg/L	0.008	R	R	0.005 U	0.005 U	R	R
Benzene	mg/L	**0.02**[abc]	0.05 U	**0.004**[a]	0.001 U	0.001 U	0.001 U	0.001 U
n-Butylbenzene	mg/L	-	-	-	-	-	-	-
Bromobenzene	mg/L	-	-	-	-	-	-	-
Bromodichloromethane	mg/L	0.001 U	0.05 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.004 U	0.2 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Bromomethane	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Butanone	mg/L	R	0.25 U	R	R	R	0.005 U	R
Carbon disulfide	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.002 U	0.1 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.001 J	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chlorobromomethane	mg/L	-	-	-	-	-	-	-
Chloroethane	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Chloroethyl vinyl ether	mg/L	-	-	-	-	-	-	-
Chloroform	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chloromethane	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	-	-	-	-	-	-	-
4-Chlorotoluene	mg/L	-	-	-	-	-	-	-
Cyclohexane	mg/L	0.016	0.25 U	0.005 U	0.005 U	-	0.005 U	0.005 U
Cymene	mg/L	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	-	0.005 U	0.005 U
Dibromochloromethane	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dibromoethane	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	-	0.005 U	0.005 U
Dibromomethane	mg/L	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	-	0.005 U	0.005 U
1,3-Dichlorobenzene	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	-	0.005 U	0.005 U
1,4-Dichlorobenzene	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	-	0.005 U	0.005 U
Dichlorodifluoromethane	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	-	0.005 U	0.005 U
1,1-Dichloroethane	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloroethane	mg/L	0.002 U	0.1 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.002 U	0.1 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
cis-1,2-Dichloroethene	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
trans-1,2-Dichloroethene	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloropropane	mg/L	0.001 U	0.05 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichloropropane	mg/L	-	-	-	-	-	-	-

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW13***	***MW13***	***MW13***	***MW14***	***MW14***	***MW14***	***MW14***
Sample ID:		***WG-17338-110905-RR-002***	***GW17338082206005***	***GW-17338-121406-MJW-15***	***WG-17338-111105-RR-013***	***122205-EAP-002***	***GW17338082306014***	***GW-17338-121406-MJW-09***
Sample Date:		***11/9/2005***	***8/22/2006***	***12/14/2006***	***11/11/2005***	***12/22/2005***	***8/23/2006***	***12/14/2006***
		Duplicate						
Parameters:	***Units***							
VOCs (Continued)								
2,2-Dichloropropane	mg/L	-	-	-	-	-	-	-
1,1-Dichloropropene	mg/L	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
trans-1,3-Dichloropropene	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.48	0.53	0.0067	0.004 U	0.004 U	0.012	0.004 U
Hexachlorobutadiene	mg/L	-	-	-	-	-	-	-
2-Hexanone	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.021	0.025 J	0.0013 J	0.005 U	-	0.005 U	0.005 U
Methyl acetate	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	-	0.005 U	0.005 U
Methyl cyclohexane	mg/L	0.12	0.08 J	0.0006 J	0.005 U	-	0.005 U	0.005 U
Methyl Tert Butyl Ether	mg/L	**0.036**[b]	**0.046 J**[b]	0.0022 J	0.005 U	-	0.005 U	0.005 U
4-Methyl-2-Pentanone	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.003 U	0.15 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
2-Phenylbutane	mg/L	-	-	-	-	-	-	-
n-Propylbenzene	mg/L	-	-	-	-	-	-	-
Styrene	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
tert-Butylbenzene	mg/L	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	mg/L	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.05 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.05 U	0.001 U	**0.0016**[a]	**0.0014**[a]	**0.0015**[a]	**0.0011**[a]
Toluene	mg/L	**4.5**[abc]	**7.5**[abc]	0.0074	0.005 U	0.005 U	0.059	0.005 U
1,2,3-Trichlorobenzene	mg/L	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	-	0.005 U	0.005 U
1,1,1-Trichloroethane	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.003 U	0.15 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Trichloroethene	mg/L	0.001 U	0.05 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	-	0.005 U	0.005 U
1,2,3-Trichloropropane	mg/L	-	-	-	-	-	-	-
Trifluorotrichloroethane	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	-	0.005 U	0.005 U
1,2,4-Trimethylbenzene	mg/L	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/L	-	-	-	-	-	-	-
Vinyl chloride	mg/L	0.005 U	0.25 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Xylene (total)	mg/L	**2.6**[a]	**3**[a]	0.01	0.005 U	0.005 U	0.021	0.005 U

Refer to Table 1.6 for a list of notes

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW15*	*MW15*	*MW15*	*MW16*	*MW16*	*MW16*	*MW16*	*MW17*
Sample ID:		*GW1733809060603*	*GW1733809060604*	*GW-17338-121406-MJW-08*	*GW1733809060605*	*GW1733809060606*	*GW-17338-121406-MJW-12*	*GW-17338-121406-MJW-13*	*GW1733809060607*
Sample Date:		*9/6/2006*	*9/6/2006*	*12/14/2006*	*9/6/2006*	*9/6/2006*	*12/14/2006*	*12/14/2006*	*9/6/2006*
			Duplicate			*Duplicate*		*Duplicate*	
Parameters:	*Units*								
VOCs									
Acetone	mg/L	R	R	R	R	R	R	R	R
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
n-Butylbenzene	mg/L	-	-	-	-	-	-	-	-
Bromobenzene	mg/L	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Bromomethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Butanone	mg/L	R	R	R	R	R	R	R	R
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.005 U	0.005 U	0.005 U	0.0066 J	0.0031 J	0.005 U	0.005 U	**0.012**[a]
Chlorobromomethane	mg/L	-	-	-	-	-	-	-	-
Chloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Chloroethyl vinyl ether	mg/L	-	-	-	-	-	-	-	-
Chloroform	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chloromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	-	-	-	-	-	-	-	-
4-Chlorotoluene	mg/L	-	-	-	-	-	-	-	-
Cyclohexane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cymene	mg/L	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dibromochloromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dibromoethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dibromomethane	mg/L	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	0.005 U	0.005 U	0.005 U	0.0049 J	0.0023 J	0.005 U	0.005 U	0.0068
1,3-Dichlorobenzene	mg/L	0.005 U	0.005 U	0.005 U	**0.0006 J**[a]	0.005 U	0.005 U	0.005 U	0.005 U
1,4-Dichlorobenzene	mg/L	0.005 U	0.005 U	0.005 U	**0.0096 J**[a]	**0.0044 J**[a]	0.005 U	0.005 U	**0.014**[a]
Dichlorodifluoromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1-Dichloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloroethane	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
cis-1,2-Dichloroethene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
trans-1,2-Dichloroethene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichloropropane	mg/L	-	-	-	-	-	-	-	-

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW15***	***MW15***	***MW15***	***MW16***	***MW16***	***MW16***	***MW16***	***MW17***
Sample ID:		***GW1733809060603***	***GW1733809060604***	***GW-17338-121406-MJW-08***	***GW1733809060605***	***GW1733809060606***	***GW-17338-121406-MJW-12***	***GW-17338-121406-MJW-13***	***GW1733809060607***
Sample Date:		***9/6/2006***	***9/6/2006***	***12/14/2006***	***9/6/2006***	***9/6/2006***	***12/14/2006***	***12/14/2006***	***9/6/2006***
			Duplicate			***Duplicate***		***Duplicate***	
Parameters:	***Units***								
VOCs (Continued)									
2,2-Dichloropropane	mg/L	-	-	-	-	-	-	-	-
1,1-Dichloropropene	mg/L	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
trans-1,3-Dichloropropene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.0098	0.01	0.004 U	0.0094	0.0098	0.004 U	0.004 U	0.0012 J
Hexachlorobutadiene	mg/L	-	-	-	-	-	-	-	-
2-Hexanone	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.005 U	0.005 U	0.005 U	0.032	0.032	0.0049 J	0.006	0.005 U
Methyl acetate	mg/L	0.036 J	0.005 UJ	0.005 U	0.02 J	0.0034 J	0.005 U	0.005 U	0.005 U
Methyl cyclohexane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methyl Tert Butyl Ether	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0006 J
4-Methyl-2-Pentanone	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
2-Phenylbutane	mg/L	-	-	-	-	-	-	-	-
n-Propylbenzene	mg/L	-	-	-	-	-	-	-	-
Styrene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
tert-Butylbenzene	mg/L	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	mg/L	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.0007 J	0.0007 J	0.0006 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.025	0.029	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2,3-Trichlorobenzene	mg/L	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1,1-Trichloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Trichloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane	mg/L	0.005 UJ	0.005 UJ	0.005 U	0.005 UJ	0.005 UJ	0.005 U	0.005 U	0.005 UJ
1,2,3-Trichloropropane	mg/L	-	-	-	-	-	-	-	-
Trifluorotrichloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2,4-Trimethylbenzene	mg/L	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/L	-	-	-	-	-	-	-	-
Vinyl chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Xylene (total)	mg/L	0.019	0.016	0.005 U	0.0048 J	0.0032 J	0.005 U	0.005 U	0.0045 J

Refer to Table 1.6 for a list of notes

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW17***	***MW18***	***MW18***	***MW19***	***MW19***
Sample ID:		***GW-17338-121206-MJW-01***	***GW1733809070608***	***GW-17338-121206-MJW-02***	***GW1733809070609***	***GW-17338-121206-MJW-03***
Sample Date:		***12/12/2006***	***9/7/2006***	***12/12/2006***	***9/7/2006***	***12/12/2006***
Parameters:	***Units***					
VOCs						
Acetone	mg/L	R	R	R	R	R
Benzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
n-Butylbenzene	mg/L	-	-	-	-	-
Bromobenzene	mg/L	-	-	-	-	-
Bromodichloromethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Bromomethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Butanone	mg/L	R	R	R	R	R
Carbon disulfide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.005 U	0.005 U	0.005 U	0.0091	0.001 J
Chlorobromomethane	mg/L	-	-	-	-	-
Chloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Chloroethyl vinyl ether	mg/L	-	-	-	-	-
Chloroform	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chloromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	-	-	-	-	-
4-Chlorotoluene	mg/L	-	-	-	-	-
Cyclohexane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cymene	mg/L	-	-	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dibromochloromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dibromoethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dibromomethane	mg/L	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	0.0012 J	0.005 U	0.005 U	0.0051	0.0048 J
1,3-Dichlorobenzene	mg/L	0.0003 J	0.005 U	0.005 U	**0.0006 J[a]**	**0.001 J[a]**
1,4-Dichlorobenzene	mg/L	**0.0013 J[a]**	0.005 U	0.005 U	**0.0093[a]**	**0.0041 J[a]**
Dichlorodifluoromethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1-Dichloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloroethane	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
cis-1,2-Dichloroethene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
trans-1,2-Dichloroethene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloropropane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichloropropane	mg/L	-	-	-	-	-

TABLE 1.2

GROUNDWATER DATA ANALYTICAL RESULTS - VOCs
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW17***	***MW18***	***MW18***	***MW19***	***MW19***
Sample ID:		***GW-17338-121206-MJW-01***	***GW1733809070608***	***GW-17338-121206-MJW-02***	***GW1733809070609***	***GW-17338-121206-MJW-03***
Sample Date:		***12/12/2006***	***9/7/2006***	***12/12/2006***	***9/7/2006***	***12/12/2006***
Parameters:	***Units***					
VOCs (Continued)						
2,2-Dichloropropane	mg/L	-	-	-	-	-
1,1-Dichloropropene	mg/L	-	-	-	-	-
cis-1,3-Dichloropropene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
trans-1,3-Dichloropropene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.004 U	0.0044	0.004 U	0.0014 J	0.004 U
Hexachlorobutadiene	mg/L	-	-	-	-	-
2-Hexanone	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.005 U	0.005 U	0.005 U	0.001 J	0.005 U
Methyl acetate	mg/L	0.005 U	0.045	0.005 U	0.005 U	0.005 U
Methyl cyclohexane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methyl Tert Butyl Ether	mg/L	0.0004 J	0.005 U	0.005 U	0.005 U	0.0005 J
4-Methyl-2-Pentanone	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
2-Phenylbutane	mg/L	-	-	-	-	-
n-Propylbenzene	mg/L	-	-	-	-	-
Styrene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
tert-Butylbenzene	mg/L	-	-	-	-	-
1,1,1,2-Tetrachloroethane	mg/L	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.005 U	0.0089	0.005 U	0.0012 J	0.005 U
1,2,3-Trichlorobenzene	mg/L	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.0007 J
1,1,1-Trichloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Trichloroethene	mg/L	0.0004 J	0.001 U	0.001 U	0.001 U	0.0018
Trichlorofluoromethane	mg/L	0.005 U	0.005 UJ	0.005 U	0.005 UJ	0.005 U
1,2,3-Trichloropropane	mg/L	-	-	-	-	-
Trifluorotrichloroethane	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2,4-Trimethylbenzene	mg/L	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/L	-	-	-	-	-
Vinyl chloride	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Xylene (total)	mg/L	0.005 U	0.0098	0.0005 J	0.0045 J	0.005 U

Refer to Table 1.6 for a list of notes

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*Delaware URS Values*		*Drinking Water Criteria* [1]	*MW-1*	*MW2*	*MW2*	*MW2*	*MW2*	*MW2*
Sample ID:		*Screening Level*	*Value*	*Value*	*MW-1*	*MW-2*	*MW2-060105EAP001*	*WG-17338-111405-RR-017*	*GW17338082206009*	*GW1733809060601*
Sample Date:		*a*	*b*	*c*	*7/10/1998*	*7/10/1998*	*6/1/2005*	*11/14/2005*	*8/22/2006*	*9/6/2006*
Parameters:	***Units***									
SVOCs										
Acenaphthene	mg/L	NC	0.037	2.19	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
Acenaphthylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
Acetophenone	mg/L	NC	0.000004	NC	-	-	0.011 U	0.011 U	0.011 U	0.01 U
Anthracene	mg/L	NC	0.18	11	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
Atrazine	mg/L	0.0003	0.003	0.003	-	-	0.011 UJ	0.011 UJ	0.011 U	0.01 U
Benzaldehyde	mg/L	NC	0.37	3.65	-	-	0.011 UJ	0.011 UJ	0.011 UJ	0.01 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.01 U	0.01 U	0.0011 U	0.0011 U	0.0011 U	0.001 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.01 U	0.01 U	0.0011 U	0.0011 U	0.0011 U	0.001 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.01 U	0.01 U	0.0011 U	0.0011 U	0.0011 U	0.001 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.01 U	0.01 U	0.0011 U	0.0011 U	0.0011 U	0.001 U
Biphenyl	mg/L	NC	0.03	1.83	-	-	0.011 U	0.011 U	0.011 U	0.01 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.01 U	0.01 U	0.0011 U	0.0011 U	0.0011 U	0.001 U
bis(2-Ethylhexyl)phthalate	mg/L	0.005	0.006	0.006	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
Butyl benzylphthalate	mg/L	NC	0.73	7.3	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
Caprolactam	mg/L	NC	1.8	18.3	-	-	0.011 U	0.0024 J	0.011 U	0.01 U
Carbazole	mg/L	NC	0.003	0.0336	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
Chrysene	mg/L	NC	0.009	0.0921	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.0000921	0.01 U	0.01 U	0.0011 U	0.0011 U	0.0011 U	0.001 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.01 U	0.01 U	-	-	-	-
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.01 U	0.01 U	-	-	-	-
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.01 U	0.01 U	-	-	-	-
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.025 U	0.025 U	0.023 U	0.022 U	0.022 U	0.02 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.01 U	0.018	0.011 U	0.011 U	0.011 U	0.01 U
Diethyl phthalate	mg/L	NC	5	29.2	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
Dimethyl phthalate	mg/L	NC	37	365	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.01 U	0.018	0.0044 J	0.0007 J	0.0006 J	0.0003 J
Di-n-butylphthalate	mg/L	NC	0.37	3.7	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.025 U	0.025 U	0.046 U	0.044 U	0.033 UJ	0.031 U

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*Delaware URS Values*		*Drinking Water Criteria* [1]	*MW-1*	*MW2*	*MW2*	*MW2*	*MW2*	*MW2*
Sample ID:		*Screening Level*	*Value*	*Value*	*MW-1*	*MW-2*	*MW2-060105EAP001*	*WG-17338-111405-RR-017*	*GW17338082206009*	*GW1733809060601*
Sample Date:		*a*	*b*	*c*	*7/10/1998*	*7/10/1998*	*6/1/2005*	*11/14/2005*	*8/22/2006*	*9/6/2006*
Parameters:	***Units***									
SVOCs (Continued)										
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.025 U	0.025 U	0.046 U	0.044 U	0.033 UJ	0.031 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.01 U	0.01 U	0.0023 U	0.0022 U	0.0022 U	0.002 U
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.01 U	0.01 U	0.0023 U	0.0022 U	0.0022 U	0.002 U
Di-n-octyl phthalate	mg/L	NC	0.073	1.46	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
Fluoranthene	mg/L	NC	0.15	1.46	0.01 U	0.01 U	0.011 U	0.0003 J	0.011 U	0.01 U
Fluorene	mg/L	NC	0.024	1.46	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.01 U	0.01 U	0.0011 U	0.0011 U	0.0011 U	0.001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.01 U	0.01 U	0.0023 U	0.0022 U	0.0022 U	0.002 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.01 U	0.01 U	0.011 U	0.011 U	0.011 UJ	0.01 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.01 U	0.01 U	0.0011 U	0.0011 U	0.0011 U	0.001 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.01 U	0.01 U	0.0011 U	0.0011 U	0.0011 U	0.001 U
Isophorone	mg/L	0.071	0.1	0.708	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.01 U	0.01 U	0.011 U	0.0003 J	0.011 U	0.01 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
3&4-Methylphenol	mg/L	NC	NC	0.183	0.01 U	0.01 U	-	-	-	-
4-Methylphenol	mg/L	NC	0.018	0.183	-	-	0.011 U	0.011 U	0.011 U	0.01 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.01 U	0.01 U	0.0007 J	**0.001 J**[a]	0.0004 J	**0.0009 J**[a]
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.025 U	0.025 U	0.023 U	0.022 U	0.022 U	0.02 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.025 U	0.025 U	0.023 U	0.022 U	0.022 U	0.02 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.025 U	0.025 U	0.023 U	0.022 U	0.022 U	0.02 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.01 U	0.01 U	0.0011 U	0.0011 U	0.0011 U	0.001 U
2-Nitrophenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.025 U	0.025 U	0.046 U	0.044 U	0.033 U	0.031 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.01 U	0.01 U	0.0011 U	0.0011 U	0.0011 U	0.001 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
2,2'-oxybis(1-Chloropropane)	mg/L	NC	NC	0.0096	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.025 U	0.025 U	0.046 U	0.044 U	0.033 UJ	0.031 U
Phenanthrene	mg/L	NC	0.12	1.1	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
Phenol	mg/L	NC	4	11	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U
Pyrene	mg/L	NC	0.018	1.1	0.01 U	0.01 U	0.011 U	0.0003 J	0.011 U	0.01 U
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.01 U	0.01 U	-	-	-	-
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.025 U	0.025 U	0.011 U	0.011 U	0.011 U	0.01 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.01 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U

Refer to Table 1.6 for a list of notes

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW2***	***MW3***	***MW3***	***MW3***	***MW3***	***MW3***	***MW3D***	***MW3D***
Sample ID:		***GW-17338-121406-MJW-17***	***MW-3***	***MW3-060105EAP003***	***WG-17338-111005-RR-009***	***GW17338082206007***	***GW-17338-121506-MJW-21***	***WG-17338-111005-RR-008***	***GW17338082206008***
Sample Date:		***12/14/2006***	***7/10/1998***	***6/1/2005***	***11/10/2005***	***8/22/2006***	***12/15/2006***	***11/10/2005***	***8/22/2006***
Parameters:	***Units***								
SVOCs									
Acenaphthene	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
Acenaphthylene	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
Acetophenone	mg/L	0.01 U	-	0.054 U	0.11 U	0.22 U	**0.025 J[p]**	0.011 U	0.011 U
Anthracene	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
Atrazine	mg/L	0.01 U	-	0.054 UJ	0.11 UJ	0.22 U	0.1 U	0.011 UJ	0.011 U
Benzaldehyde	mg/L	0.01 UJ	-	0.14 J	0.12	0.22 UJ	0.1 UJ	0.011 U	0.011 UJ
Benzo(a)anthracene	mg/L	0.001 U	0.5 U	0.0054 U	0.011 U	0.022 U	0.01 U	0.0011 U	0.0011 U
Benzo(a)pyrene	mg/L	0.001 U	0.5 U	0.0054 U	0.011 U	0.022 U	0.01 U	0.0011 U	0.0011 U
Benzo(b)fluoranthene	mg/L	0.001 U	0.5 U	0.0054 U	0.011 U	0.022 U	0.01 U	0.0011 U	0.0011 U
Benzo(g,h,i)perylene	mg/L	0.01 UJ	0.5 U	0.054 U	0.11 U	0.22 UJ	0.1 U	0.011 U	0.011 U
Benzo(k)fluoranthene	mg/L	0.001 U	0.5 U	0.0054 U	0.011 U	0.022 UJ	0.01 U	0.0011 U	0.0011 U
Biphenyl	mg/L	0.01 U	-	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
bis(2-Chloroethoxy)methane	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
bis(2-Chloroethyl)ether	mg/L	0.001 U	0.5 U	0.0054 U	0.011 U	0.022 U	0.01 U	0.0011 U	0.0011 U
bis(2-Ethylhexyl)phthalate	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.026 U	0.011 U
4-Bromophenyl phenyl ether	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
Butyl benzylphthalate	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
Caprolactam	mg/L	0.01 U	-	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
Carbazole	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
4-Chloro-3-methylphenol	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
4-Chloroaniline	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
2-Chloronaphthalene	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
2-Chlorophenol	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
4-Chlorophenyl phenyl ether	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
Chrysene	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
Dibenz(a,h)anthracene	mg/L	0.001 U	0.5 U	0.0054 U	0.011 U	0.022 UJ	0.01 U	0.0011 U	0.0011 U
Dibenzofuran	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
1,2-Dichlorobenzene	mg/L	-	0.5 U	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/L	-	0.5 U	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/L	-	0.5 U	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/L	0.021 U	1.25 U	0.11 U	0.22 U	0.44 U	0.2 U	0.022 U	0.022 U
2,4-Dichlorophenol	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	R	0.1 U	0.011 U	0.011 U
Diethyl phthalate	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
Dimethyl phthalate	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
2,4-Dimethylphenol	mg/L	0.01 U	0.5 U	**0.48[b]**	**0.51[b]**	**0.6[b]**	**0.4[b]**	0.0082 J	0.011 U
Di-n-butylphthalate	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
4,6-Dinitro-2-methylphenol	mg/L	0.032 U	1.25 U	0.22 U	0.44 U	0.67 UJ	0.31 U	0.044 U	0.032 UJ

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW2***	***MW3***	***MW3***	***MW3***	***MW3***	***MW3***	***MW3D***	***MW3D***
Sample ID:		***GW-17338-121406-MJW-17***	***MW-3***	***MW3-060105EAP003***	***WG-17338-111005-RR-009***	***GW17338082206007***	***GW-17338-121506-MJW-21***	***WG-17338-111005-RR-008***	***GW17338082206008***
Sample Date:		***12/14/2006***	***7/10/1998***	***6/1/2005***	***11/10/2005***	***8/22/2006***	***12/15/2006***	***11/10/2005***	***8/22/2006***
Parameters:	***Units***								
SVOCs (Continued)									
2,4-Dinitrophenol	mg/L	0.032 UJ	1.25 U	0.22 U	0.44 U	0.67 U	0.31 U	0.044 U	0.032 UJ
2,4-Dinitrotoluene	mg/L	0.0021 U	0.5 U	0.011 U	0.022 U	0.044 U	0.02 U	0.0022 U	0.0022 U
2,6-Dinitrotoluene	mg/L	0.0021 U	0.5 U	0.011 U	0.022 U	0.044 U	0.02 U	0.0022 U	0.0022 U
Di-n-octyl phthalate	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 UJ	0.1 U	0.011 U	0.011 U
Fluoranthene	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
Fluorene	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.0003 J	0.011 U
Hexachlorobenzene	mg/L	0.001 U	0.5 U	0.0054 U	0.011 U	0.022 U	0.01 U	0.0011 U	0.0011 U
Hexachlorobutadiene	mg/L	0.0021 U	0.5 U	0.011 U	0.022 U	0.044 U	0.02 U	0.0022 U	0.0022 U
Hexachlorocyclopentadiene	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	R	0.1 U	0.011 U	0.011 UJ
Hexachloroethane	mg/L	0.001 U	0.5 U	0.0054 U	0.011 U	0.022 U	0.01 U	0.0011 U	0.0011 U
Indeno(1,2,3-cd)pyrene	mg/L	0.001 U	0.5 U	0.0054 U	0.011 U	0.022 UJ	0.01 U	0.0011 U	0.0011 U
Isophorone	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
2-Methylnaphthalene	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.0026 J	0.011 U
2-Methylphenol	mg/L	0.01 U	0.5 U	**0.2bc**	**0.29bc**	**0.23bc**	0.13	0.0028 J	0.011 U
3&4-Methylphenol	mg/L	-	0.5 U	-	-	-	-	-	-
4-Methylphenol	mg/L	0.01 U	-	**0.6bc**	**0.77bc**	**0.77bc**	**0.64bc**	0.0034 J	0.011 U
Naphthalene	mg/L	0.0005 J	0.5 U	0.054 U	0.11 U	0.22 U	**0.0055 J[a]**	**0.0046 J[a]**	0.0002 J
2-Nitroaniline	mg/L	0.021 U	1.25 U	0.11 U	0.22 U	0.44 U	0.2 U	0.022 U	0.022 U
3-Nitroaniline	mg/L	0.021 U	1.25 U	0.11 U	0.22 U	0.44 U	0.2 U	0.022 U	0.022 U
4-Nitroaniline	mg/L	0.021 U	1.25 U	0.11 U	0.22 U	0.44 U	0.2 U	0.022 U	0.022 U
Nitrobenzene	mg/L	0.001 U	0.5 U	0.0054 U	0.011 U	0.022 U	0.01 U	0.0011 U	0.0011 U
2-Nitrophenol	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
4-Nitrophenol	mg/L	0.032 U	1.25 U	0.22 U	0.44 U	0.67 U	0.31 U	0.044 U	0.032 U
N-Nitrosodi-n-propylamine	mg/L	0.001 U	0.5 U	0.0054 U	0.011 U	0.022 U	0.01 U	0.0011 U	0.0011 U
N-Nitrosodiphenylamine	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
2,2'-oxybis(1-Chloropropane)	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
Pentachlorophenol	mg/L	0.032 U	1.25 U	0.22 U	0.44 U	0.67 U	0.31 U	0.044 U	0.032 UJ
Phenanthrene	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.0004 J	0.011 U
Phenol	mg/L	0.01 U	0.5 U	0.028 J	0.038 J	0.22 U	0.026 J	0.011 U	0.011 U
Pyrene	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
1,2,4-Trichlorobenzene	mg/L	-	0.5 U	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/L	0.01 U	1.25 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U
2,4,6-Trichlorophenol	mg/L	0.01 U	0.5 U	0.054 U	0.11 U	0.22 U	0.1 U	0.011 U	0.011 U

Refer to Table 1.6 for a list of notes

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW3D***	***MW5***	***MW6***	***MW6***	***MW6***	***MW6***	***MW6***	***MW7***
Sample ID:		***GW-17338-121406-MJW-16***	***MW-5***	***MW6-060105EAP004***	***WG-17338-111105-RR-012***	***GW17338082206011***	***GW1733809060602***	***GW-17338-121406-MJW-14***	***MW7-060105EAP005***
Sample Date:		***12/14/2006***	***7/10/1998***	***6/1/2005***	***11/11/2005***	***8/22/2006***	***9/6/2006***	***12/14/2006***	***6/1/2005***
Parameters:	***Units***								
SVOCs									
Acenaphthene	mg/L	0.01 U	0.01 U	0.02 U	0.0007 J	0.0006 J	0.01 U	0.0009 J	0.01 U
Acenaphthylene	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
Acetophenone	mg/L	0.01 U	-	**0.015 J[D]**	0.011 U	**0.0014 J[D]**	**0.0098 J[D]**	**0.0022 J[D]**	0.01 U
Anthracene	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
Atrazine	mg/L	0.01 U	-	0.02 UJ	0.011 UJ	0.01 U	0.01 U	0.011 U	0.01 UJ
Benzaldehyde	mg/L	0.01 UJ	-	0.02 UJ	0.0058 J	0.01 UJ	0.01 UJ	0.011 UJ	0.01 UJ
Benzo(a)anthracene	mg/L	0.001 U	0.01 U	0.002 U	0.0011 U	0.001 U	0.001 U	0.0011 U	0.001 U
Benzo(a)pyrene	mg/L	0.001 U	0.01 U	0.002 U	0.0011 U	0.001 U	0.001 U	0.0011 U	0.001 U
Benzo(b)fluoranthene	mg/L	0.001 U	0.01 U	0.002 U	0.0011 U	0.001 U	0.001 U	0.0011 U	0.001 U
Benzo(g,h,i)perylene	mg/L	0.01 UJ	0.01 U	0.02 U	0.011 U	0.01 UJ	0.01 U	0.011 UJ	0.01 U
Benzo(k)fluoranthene	mg/L	0.001 U	0.01 U	0.002 U	0.0011 U	0.001 UJ	0.001 U	0.0011 U	0.001 U
Biphenyl	mg/L	0.01 U	-	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
bis(2-Chloroethoxy)methane	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
bis(2-Chloroethyl)ether	mg/L	0.001 U	0.01 U	0.002 U	0.0011 U	0.001 U	0.001 U	0.0011 U	0.001 U
bis(2-Ethylhexyl)phthalate	mg/L	0.01 U	0.01 U	**0.016 J[abc]**	0.024 U	0.01 U	0.01 U	0.011 U	**0.012[abc]**
4-Bromophenyl phenyl ether	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
Butyl benzylphthalate	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
Caprolactam	mg/L	0.01 U	-	0.0007 J	0.011 U	0.01 U	0.0008 J	0.011 U	0.001 J
Carbazole	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.0003 J	0.011 U	0.01 U
4-Chloro-3-methylphenol	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
4-Chloroaniline	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
2-Chloronaphthalene	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
2-Chlorophenol	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.0004 J
4-Chlorophenyl phenyl ether	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
Chrysene	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
Dibenz(a,h)anthracene	mg/L	0.001 U	0.01 U	0.002 U	0.0011 U	0.001 UJ	0.001 U	0.0011 U	0.001 U
Dibenzofuran	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.0003 J	0.01 U
1,2-Dichlorobenzene	mg/L	-	0.01 U	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/L	-	0.01 U	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/L	-	0.01 U	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/L	0.021 U	0.025 U	0.04 U	0.022 U	0.02 U	0.021 U	0.022 U	0.02 U
2,4-Dichlorophenol	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	R	0.01 U	0.011 U	0.01 U
Diethyl phthalate	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
Dimethyl phthalate	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
2,4-Dimethylphenol	mg/L	0.0007 J	0.01 U	0.022	0.0025 J	0.0073 J	0.012	0.0054 J	0.0004 J
Di-n-butylphthalate	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
4,6-Dinitro-2-methylphenol	mg/L	0.032 U	0.025 U	0.08 U	0.043 U	0.031 UJ	0.032 U	0.032 U	0.04 U

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW3D***	***MW5***	***MW6***	***MW6***	***MW6***	***MW6***	***MW6***	***MW7***
Sample ID:		***GW-17338-121406-MJW-16***	***MW-5***	***MW6-060105EAP004***	***WG-17338-111105-RR-012***	***GW17338082206011***	***GW1733809060602***	***GW-17338-121406-MJW-14***	***MW7-060105EAP005***
Sample Date:		***12/14/2006***	***7/10/1998***	***6/1/2005***	***11/11/2005***	***8/22/2006***	***9/6/2006***	***12/14/2006***	***6/1/2005***
Parameters:	***Units***								
SVOCs (Continued)									
2,4-Dinitrophenol	mg/L	0.032 UJ	0.025 U	0.08 U	0.043 U	0.031 U	0.032 U	0.032 UJ	0.04 U
2,4-Dinitrotoluene	mg/L	0.0021 U	0.01 U	0.004 U	0.0022 U	0.002 U	0.0021 U	0.0022 U	0.002 U
2,6-Dinitrotoluene	mg/L	0.0021 U	0.01 U	0.004 U	0.0022 U	0.002 U	0.0021 U	0.0022 U	0.002 U
Di-n-octyl phthalate	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 UJ	0.01 U	0.011 U	0.01 U
Fluoranthene	mg/L	0.01 U	0.01 U	0.0005 J	0.0017 J	0.0011 J	0.0006 J	0.0018 J	0.0005 J
Fluorene	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
Hexachlorobenzene	mg/L	0.001 U	0.01 U	0.002 U	0.0011 U	0.001 U	0.001 U	0.0011 U	0.001 U
Hexachlorobutadiene	mg/L	0.0021 U	0.01 U	0.004 U	0.0022 U	0.002 U	0.0021 U	0.0022 U	0.002 U
Hexachlorocyclopentadiene	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	R	0.01 U	0.011 U	0.01 U
Hexachloroethane	mg/L	0.001 U	0.01 U	0.002 U	0.0011 U	0.001 U	0.001 U	0.0011 U	0.001 U
Indeno(1,2,3-cd)pyrene	mg/L	0.001 U	0.01 U	0.002 U	0.0011 U	0.001 UJ	0.001 U	0.0011 U	0.001 U
Isophorone	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
2-Methylnaphthalene	mg/L	0.01 U	**0.016**[b]	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
2-Methylphenol	mg/L	0.01 U	0.01 U	0.091	0.0093 J	0.036	0.11	0.033	0.0021 J
3&4-Methylphenol	mg/L	-	0.01 U	-	-	-	-	-	-
4-Methylphenol	mg/L	0.01 U	-	**0.052**[b]	0.015	0.0056 J	**0.021**[b]	0.012	0.01 U
Naphthalene	mg/L	0.0006 J	0.01 U	**0.0016 J**[a]	**0.0054 J**[a]	**0.0024 J**[a]	**0.0009 J**[a]	**0.0027 J**[a]	0.01 U
2-Nitroaniline	mg/L	0.021 U	0.025 U	0.04 U	0.022 U	0.02 U	0.021 U	0.022 U	0.02 U
3-Nitroaniline	mg/L	0.021 U	0.025 U	0.04 U	0.022 U	0.02 U	0.021 U	0.022 U	0.02 U
4-Nitroaniline	mg/L	0.021 U	0.025 U	0.04 U	0.022 U	0.02 U	0.021 U	0.022 U	0.02 U
Nitrobenzene	mg/L	0.001 U	0.01 U	0.002 U	0.0011 U	0.001 U	0.001 U	0.0011 U	0.001 U
2-Nitrophenol	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
4-Nitrophenol	mg/L	0.032 U	0.025 U	0.08 U	0.043 U	0.031 U	0.032 U	0.032 U	0.04 U
N-Nitrosodi-n-propylamine	mg/L	0.001 U	0.01 U	0.002 U	0.0011 U	0.001 U	0.001 U	0.0011 U	0.001 U
N-Nitrosodiphenylamine	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
2,2'-oxybis(1-Chloropropane)	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
Pentachlorophenol	mg/L	0.032 U	0.025 U	0.08 U	0.043 U	0.031 U	0.032 U	0.032 U	0.04 U
Phenanthrene	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.0009 J
Phenol	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
Pyrene	mg/L	0.01 U	0.01 U	0.02 U	0.0008 J	0.0005 J	0.0003 J	0.0008 J	0.0004 J
1,2,4-Trichlorobenzene	mg/L	-	0.01 U	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/L	0.01 U	0.025 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U
2,4,6-Trichlorophenol	mg/L	0.01 U	0.01 U	0.02 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U

Refer to Table 1.6 for a list of notes

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW7***	***MW7***	***MW7***	***MW8***	***MW8***	***MW8***	***MW8***
Sample ID:		***WG-17338-111505-RR-023***	***GW17338082206012***	***GW-17338-121406-MJW-11***	***MW8-060205EAP001***	***MW8-060205EAP002***	***WG-17338-111405-RR-015***	***GW17338082106004***
Sample Date:		***11/15/2005***	***8/22/2006***	***12/14/2006***	***6/2/2005***	***6/2/2005***	***11/14/2005***	***8/21/2006***
						Duplicate		
Parameters:	***Units***							
SVOCs								
Acenaphthene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.0004 J	0.011 UJ
Acenaphthylene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
Acetophenone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
Anthracene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
Atrazine	mg/L	0.01 UJ	0.01 U	0.01 U	0.01 UJ	0.017 UJ	0.01 UJ	0.011 UJ
Benzaldehyde	mg/L	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.017 UJ	0.01 UJ	0.011 UJ
Benzo(a)anthracene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.001 U	0.0011 UJ
Benzo(a)pyrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.001 U	0.0011 UJ
Benzo(b)fluoranthene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.001 U	0.0011 UJ
Benzo(g,h,i)perylene	mg/L	0.01 U	0.01 UJ	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
Benzo(k)fluoranthene	mg/L	0.001 U	0.001 UJ	0.001 U	0.001 U	0.0017 U	0.001 U	0.0011 UJ
Biphenyl	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
bis(2-Chloroethoxy)methane	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
bis(2-Chloroethyl)ether	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.001 U	0.0011 UJ
bis(2-Ethylhexyl)phthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
4-Bromophenyl phenyl ether	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
Butyl benzylphthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
Caprolactam	mg/L	0.0003 J	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
Carbazole	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
4-Chloro-3-methylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 U
4-Chloroaniline	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
2-Chloronaphthalene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
2-Chlorophenol	mg/L	0.01 U	0.01 U	0.01 U	0.0044 J	0.0048 J	0.001 J	0.011 U
4-Chlorophenyl phenyl ether	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
Chrysene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
Dibenz(a,h)anthracene	mg/L	0.001 U	0.001 UJ	0.001 U	0.001 U	0.0017 U	0.001 U	0.0011 UJ
Dibenzofuran	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.0003 J	0.011 UJ
1,2-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/L	0.02 U	0.021 U	0.021 U	0.021 U	0.033 U	0.021 U	0.022 UJ
2,4-Dichlorophenol	mg/L	0.01 U	R	0.01 U	0.01 U	0.017 U	0.01 U	0.011 U
Diethyl phthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
Dimethyl phthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
2,4-Dimethylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.0056 J	0.011 U
Di-n-butylphthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
4,6-Dinitro-2-methylphenol	mg/L	0.04 U	0.031 UJ	0.031 U	0.042 U	0.067 U	0.041 U	0.033 UJ

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW7***	***MW7***	***MW7***	***MW8***	***MW8***	***MW8***	***MW8***
Sample ID:		***WG-17338-111505-RR-023***	***GW17338082206012***	***GW-17338-121406-MJW-11***	***MW8-060205EAP001***	***MW8-060205EAP002***	***WG-17338-111405-RR-015***	***GW17338082106004***
Sample Date:		***11/15/2005***	***8/22/2006***	***12/14/2006***	***6/2/2005***	***6/2/2005***	***11/14/2005***	***8/21/2006***
						Duplicate		
Parameters:	***Units***							
SVOCs (Continued)								
2,4-Dinitrophenol	mg/L	0.04 U	0.031 U	0.031 U	0.042 U	0.067 U	0.041 U	0.033 UJ
2,4-Dinitrotoluene	mg/L	0.002 U	0.0021 U	0.0021 U	0.0021 U	0.0033 U	0.0021 U	0.0022 UJ
2,6-Dinitrotoluene	mg/L	0.002 U	0.0021 U	0.0021 U	0.0021 U	0.0033 U	0.0004 J	0.0022 UJ
Di-n-octyl phthalate	mg/L	0.01 U	0.01 UJ	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
Fluoranthene	mg/L	0.0004 J	0.01 U	0.01 U	0.01 U	0.017 U	0.0004 J	0.011 UJ
Fluorene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.0005 J	0.011 UJ
Hexachlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.001 U	0.0011 UJ
Hexachlorobutadiene	mg/L	0.002 U	0.0021 U	0.0021 U	0.0021 U	0.0033 U	0.0021 U	0.0022 UJ
Hexachlorocyclopentadiene	mg/L	0.01 U	R	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
Hexachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.001 U	0.0011 UJ
Indeno(1,2,3-cd)pyrene	mg/L	0.001 U	0.001 UJ	0.001 U	0.001 U	0.0017 U	0.001 U	0.0011 UJ
Isophorone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
2-Methylnaphthalene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
2-Methylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.0002 J	0.017 U	0.01 U	0.011 U
3&4-Methylphenol	mg/L	-	-	-	-	-	-	-
4-Methylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.0004 J	0.01 U	0.011 U
Naphthalene	mg/L	0.01 U	0.01 U	0.01 U	**0.0008 J[a]**	**0.0008 J[a]**	0.0004 J	0.0005 J
2-Nitroaniline	mg/L	0.02 U	0.021 U	0.021 U	0.021 U	0.033 U	0.021 U	0.022 UJ
3-Nitroaniline	mg/L	0.02 U	0.021 U	0.021 U	0.021 U	0.033 U	0.021 U	0.022 UJ
4-Nitroaniline	mg/L	0.02 U	0.021 U	0.021 U	0.021 U	0.033 U	0.021 U	0.022 UJ
Nitrobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.001 U	0.0011 UJ
2-Nitrophenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 U
4-Nitrophenol	mg/L	0.04 U	0.031 U	0.031 U	0.042 U	0.067 U	0.041 U	0.033 U
N-Nitrosodi-n-propylamine	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0017 U	0.001 U	0.0011 UJ
N-Nitrosodiphenylamine	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
2,2'-oxybis(1-Chloropropane)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
Pentachlorophenol	mg/L	0.04 U	0.031 U	0.031 U	0.042 U	0.067 U	0.041 U	0.033 UJ
Phenanthrene	mg/L	0.0003 J	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
Phenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 U
Pyrene	mg/L	0.0003 J	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 UJ
1,2,4-Trichlorobenzene	mg/L	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 U
2,4,6-Trichlorophenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.017 U	0.01 U	0.011 U

Refer to Table 1.6 for a list of notes

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW8***	***MW9***	***MW9***	***MW9***	***MW9***	***MW9***	***MW9***
Sample ID:		***GW-17338-121406-MJW-10***	***MW9-060205EAP003***	***MW9A060205EAP004***	***WG-17338-111405-RR-016***	***GW17338082106003***	***GW-17338-121206-MJW-05***	***GW-17338-121206-MJW-06***
Sample Date:		***12/14/2006***	***6/2/2005***	***6/2/2005***	***11/14/2005***	***8/21/2006***	***12/12/2006***	***12/12/2006***
				Duplicate				***Duplicate***
Parameters:	***Units***							
SVOCs								
Acenaphthene	mg/L	0.0006 J	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Acenaphthylene	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Acetophenone	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Anthracene	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Atrazine	mg/L	0.01 U	0.01 UJ	0.01 UJ	0.011 UJ	0.01 U	0.011 U	0.01 U
Benzaldehyde	mg/L	0.01 UJ	0.01 UJ	0.01 UJ	0.011 UJ	0.01 UJ	0.011 UJ	0.01 UJ
Benzo(a)anthracene	mg/L	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U
Benzo(a)pyrene	mg/L	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U
Benzo(b)fluoranthene	mg/L	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U
Benzo(g,h,i)perylene	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Benzo(k)fluoranthene	mg/L	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U
Biphenyl	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
bis(2-Chloroethoxy)methane	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
bis(2-Chloroethyl)ether	mg/L	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U
bis(2-Ethylhexyl)phthalate	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
4-Bromophenyl phenyl ether	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Butyl benzylphthalate	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Caprolactam	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Carbazole	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
4-Chloro-3-methylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
4-Chloroaniline	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
2-Chloronaphthalene	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
2-Chlorophenol	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Chrysene	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Dibenz(a,h)anthracene	mg/L	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U
Dibenzofuran	mg/L	0.0003 J	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
1,2-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/L	0.021 U	0.02 U	0.02 U	0.022 U	0.021 U	0.022 U	0.02 U
2,4-Dichlorophenol	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Diethyl phthalate	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Dimethyl phthalate	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
2,4-Dimethylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Di-n-butylphthalate	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
4,6-Dinitro-2-methylphenol	mg/L	0.031 U	0.041 U	0.04 U	0.043 U	0.032 UJ	0.032 U	0.031 U

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW8***	***MW9***	***MW9***	***MW9***	***MW9***	***MW9***	***MW9***
Sample ID:		***GW-17338-121406-MJW-10***	***MW9-060205EAP003***	***MW9A060205EAP004***	***WG-17338-111405-RR-016***	***GW17338082106003***	***GW-17338-121206-MJW-05***	***GW-17338-121206-MJW-06***
Sample Date:		***12/14/2006***	***6/2/2005***	***6/2/2005***	***11/14/2005***	***8/21/2006***	***12/12/2006***	***12/12/2006***
				Duplicate				***Duplicate***
Parameters:	***Units***							
SVOCs (Continued)								
2,4-Dinitrophenol	mg/L	0.031 U	0.041 U	0.04 U	0.043 U	0.032 UJ	0.032 U	0.031 U
2,4-Dinitrotoluene	mg/L	0.0021 U	0.002 U	0.002 U	0.0022 U	0.0021 U	0.0022 U	0.002 U
2,6-Dinitrotoluene	mg/L	0.0021 U	0.002 U	0.002 U	0.0022 U	0.0021 U	0.0022 U	0.002 U
Di-n-octyl phthalate	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Fluoranthene	mg/L	0.0003 J	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Fluorene	mg/L	0.0006 J	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Hexachlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U
Hexachlorobutadiene	mg/L	0.0021 U	0.002 U	0.002 U	0.0022 U	0.0021 U	0.0022 U	0.002 U
Hexachlorocyclopentadiene	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 UJ	0.011 U	0.01 U
Hexachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U
Indeno(1,2,3-cd)pyrene	mg/L	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U
Isophorone	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
2-Methylnaphthalene	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
2-Methylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
3&4-Methylphenol	mg/L	-	-	-	-	-	-	-
4-Methylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Naphthalene	mg/L	**0.0052 J**[a]	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
2-Nitroaniline	mg/L	0.021 U	0.02 U	0.02 U	0.022 U	0.021 U	0.022 U	0.02 U
3-Nitroaniline	mg/L	0.021 U	0.02 U	0.02 U	0.022 U	0.021 U	0.022 U	0.02 U
4-Nitroaniline	mg/L	0.021 U	0.02 U	0.02 U	0.022 U	0.021 U	0.022 U	0.02 U
Nitrobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U
2-Nitrophenol	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
4-Nitrophenol	mg/L	0.031 U	0.041 U	0.04 U	0.043 U	0.032 U	0.032 U	0.031 U
N-Nitrosodi-n-propylamine	mg/L	0.001 U	0.001 U	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U
N-Nitrosodiphenylamine	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
2,2'-oxybis(1-Chloropropane)	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Pentachlorophenol	mg/L	0.031 U	0.041 U	0.04 U	0.043 U	0.032 UJ	0.032 U	0.031 U
Phenanthrene	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Phenol	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
Pyrene	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
1,2,4-Trichlorobenzene	mg/L	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
2,4,6-Trichlorophenol	mg/L	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U

Refer to Table 1.6 for a list of notes

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW10***	***MW10***	***MW10***	***MW10***	***MW11***	***MW11***	***MW11***
Sample ID:		***MW10060105EAP002***	***WG-17338-111105-RR-011***	***GW17338082306013***	***GW-17338-121406-MJW-18***	***WG-17338-111005-RR-006***	***GW17338082206010***	***GW-17338-121506-MJW-19***
Sample Date:		***6/1/2005***	***11/11/2005***	***8/23/2006***	***12/14/2006***	***11/10/2005***	***8/22/2006***	***12/15/2006***
Parameters:	***Units***							
SVOCs								
Acenaphthene	mg/L	0.0004 J	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
Acenaphthylene	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
Acetophenone	mg/L	**0.018^{D}**	**0.0087 J^{D}**	0.011 U	**0.0026 J^{D}**	0.1 U	0.21 U	0.1 U
Anthracene	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
Atrazine	mg/L	0.011 UJ	0.021 UJ	0.011 U	0.011 U	0.1 UJ	0.21 U	0.1 U
Benzaldehyde	mg/L	0.011 UJ	0.013 J	0.011 UJ	0.011 UJ	0.1 U	0.21 UJ	0.1 UJ
Benzo(a)anthracene	mg/L	0.0011 U	0.0021 U	0.0011 U	0.0011 U	0.01 U	0.021 U	0.01 U
Benzo(a)pyrene	mg/L	0.0011 U	0.0021 U	0.0011 U	0.0011 U	0.01 U	0.021 U	0.01 U
Benzo(b)fluoranthene	mg/L	0.0011 U	0.0021 U	0.0011 U	0.0011 U	0.01 U	0.021 U	0.01 U
Benzo(g,h,i)perylene	mg/L	0.011 U	0.021 U	0.011 UJ	0.011 UJ	0.1 U	0.21 UJ	0.1 UJ
Benzo(k)fluoranthene	mg/L	0.0011 U	0.0021 U	0.0011 UJ	0.0011 U	0.01 U	0.021 UJ	0.01 U
Biphenyl	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
bis(2-Chloroethoxy)methane	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
bis(2-Chloroethyl)ether	mg/L	0.0011 U	0.0021 U	0.0011 U	0.0011 U	0.01 U	0.021 U	0.01 U
bis(2-Ethylhexyl)phthalate	mg/L	0.0024 J	0.024 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
4-Bromophenyl phenyl ether	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
Butyl benzylphthalate	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
Caprolactam	mg/L	0.0029 J	0.017 J	0.0051 J	0.011 U	0.1 U	0.21 U	0.1 U
Carbazole	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
4-Chloro-3-methylphenol	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
4-Chloroaniline	mg/L	0.011 U	0.0017 J	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
2-Chloronaphthalene	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
2-Chlorophenol	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
4-Chlorophenyl phenyl ether	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
Chrysene	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
Dibenz(a,h)anthracene	mg/L	0.0011 U	0.0021 U	0.0011 UJ	0.0011 U	0.01 U	0.021 UJ	0.01 U
Dibenzofuran	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
1,2-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/L	0.022 U	0.042 U	0.022 U	0.022 U	0.21 U	0.41 U	0.21 U
2,4-Dichlorophenol	mg/L	0.011 U	0.021 U	R	0.011 U	0.1 U	R	0.1 U
Diethyl phthalate	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
Dimethyl phthalate	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
2,4-Dimethylphenol	mg/L	0.038	0.01 J	0.0021 J	0.0049 J	0.011 J	0.061 J	0.057 J
Di-n-butylphthalate	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
4,6-Dinitro-2-methylphenol	mg/L	0.043 U	0.084 U	0.033 UJ	0.032 U	0.42 U	0.62 UJ	0.32 U

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW10***	***MW10***	***MW10***	***MW10***	***MW11***	***MW11***	***MW11***
Sample ID:		***MW10060105EAP002***	***WG-17338-111105-RR-011***	***GW17338082306013***	***GW-17338-121406-MJW-18***	***WG-17338-111005-RR-006***	***GW17338082206010***	***GW-17338-121506-MJW-19***
Sample Date:		***6/1/2005***	***11/11/2005***	***8/23/2006***	***12/14/2006***	***11/10/2005***	***8/22/2006***	***12/15/2006***
Parameters:	***Units***							
SVOCs (Continued)								
2,4-Dinitrophenol	mg/L	0.043 U	0.084 U	0.033 U	0.032 UJ	0.42 U	0.62 U	0.32 UJ
2,4-Dinitrotoluene	mg/L	0.0022 U	0.0042 U	0.0022 U	0.0022 U	0.021 U	0.041 U	0.021 U
2,6-Dinitrotoluene	mg/L	0.0022 U	0.0042 U	0.0022 U	0.0022 U	0.021 U	0.041 U	0.021 U
Di-n-octyl phthalate	mg/L	0.011 U	0.021 U	0.011 UJ	0.011 U	0.1 U	0.21 UJ	0.1 U
Fluoranthene	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
Fluorene	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
Hexachlorobenzene	mg/L	0.0011 U	0.0021 U	0.0011 U	0.0011 U	0.01 U	0.021 U	0.01 U
Hexachlorobutadiene	mg/L	0.0022 U	0.0042 U	0.0022 U	0.0022 U	0.021 U	0.041 U	0.021 U
Hexachlorocyclopentadiene	mg/L	0.011 U	0.021 U	R	0.011 U	0.1 U	R	0.1 U
Hexachloroethane	mg/L	0.0011 U	0.0021 U	0.0011 U	0.0011 U	0.01 U	0.021 U	0.01 U
Indeno(1,2,3-cd)pyrene	mg/L	0.0011 U	0.0021 U	0.0011 UJ	0.0011 U	0.01 U	0.021 UJ	0.01 U
Isophorone	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
2-Methylnaphthalene	mg/L	0.0035 J	0.0019 J	0.0026 J	0.0026 J	0.1 U	0.21 U	0.1 U
2-Methylphenol	mg/L	0.079	0.016 J	0.0006 J	0.0014 J	0.0037 J	0.21 U	0.1 U
3&4-Methylphenol	mg/L	-	-	-	-	-	-	-
4-Methylphenol	mg/L	**0.02**[b]	**0.022**[b]	0.011 U	0.0014 J	0.017 J	**0.062 J**[b]	**0.041 J**[b]
Naphthalene	mg/L	**0.0086 J**[a]	**0.0051 J**[a]	**0.0062 J**[a]	**0.017**[a]	0.1 U	0.21 U	0.1 U
2-Nitroaniline	mg/L	0.022 U	0.042 U	0.022 U	0.022 U	0.21 U	0.41 U	0.21 U
3-Nitroaniline	mg/L	0.022 U	0.042 U	0.022 U	0.022 U	0.21 U	0.41 U	0.21 U
4-Nitroaniline	mg/L	0.022 U	0.042 U	0.022 U	0.022 U	0.21 U	0.41 U	0.21 U
Nitrobenzene	mg/L	0.0011 U	0.0021 U	0.0011 U	0.0011 U	0.01 U	0.021 U	0.01 U
2-Nitrophenol	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
4-Nitrophenol	mg/L	0.043 U	0.084 U	0.033 U	0.032 U	0.42 U	0.62 U	0.32 U
N-Nitrosodi-n-propylamine	mg/L	0.0011 U	0.0021 U	0.0011 U	0.0011 U	0.01 U	0.021 U	0.01 U
N-Nitrosodiphenylamine	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
2,2'-oxybis(1-Chloropropane)	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
Pentachlorophenol	mg/L	0.043 U	0.084 U	0.033 U	0.032 U	0.42 U	0.62 U	0.32 U
Phenanthrene	mg/L	0.0005 J	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
Phenol	mg/L	0.0021 J	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
Pyrene	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
1,2,4-Trichlorobenzene	mg/L	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U
2,4,6-Trichlorophenol	mg/L	0.011 U	0.021 U	0.011 U	0.011 U	0.1 U	0.21 U	0.1 U

Refer to Table 1.6 for a list of notes

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW11R***	***MW11R***	***MW11R***	***MW12***	***MW12***	***MW12***	***MW13***
Sample ID:		***WG-17338-111005-RR-007***	***GW17338082106002***	***GW-17338-121406-MJW-07***	***WG-17338-111005-RR-005***	***GW17338082206006***	***GW-17338-121506-MJW-20***	***WG-17338-110905-RR-001***
Sample Date:		***11/10/2005***	***8/21/2006***	***12/14/2006***	***11/10/2005***	***8/22/2006***	***12/15/2006***	***11/9/2005***
Parameters:	***Units***							
SVOCs								
Acenaphthene	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
Acenaphthylene	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
Acetophenone	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	**0.0052 J[o]**	0.01 U	0.2 U
Anthracene	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
Atrazine	mg/L	0.01 UJ	0.011 U	0.01 U	0.011 UJ	0.01 U	0.01 U	0.2 UJ
Benzaldehyde	mg/L	0.01 U	0.011 UJ	0.01 UJ	0.011 U	0.01 UJ	0.01 UJ	0.2 U
Benzo(a)anthracene	mg/L	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.02 U
Benzo(a)pyrene	mg/L	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.02 U
Benzo(b)fluoranthene	mg/L	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.02 U
Benzo(g,h,i)perylene	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 UJ	0.2 U
Benzo(k)fluoranthene	mg/L	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.02 U
Biphenyl	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
bis(2-Chloroethoxy)methane	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
bis(2-Chloroethyl)ether	mg/L	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.02 U
bis(2-Ethylhexyl)phthalate	mg/L	0.024 U	0.011 U	0.01 U	0.019 U	0.01 U	0.01 U	0.2 U
4-Bromophenyl phenyl ether	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
Butyl benzylphthalate	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
Caprolactam	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
Carbazole	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
4-Chloro-3-methylphenol	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
4-Chloroaniline	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
2-Chloronaphthalene	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
2-Chlorophenol	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
4-Chlorophenyl phenyl ether	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
Chrysene	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
Dibenz(a,h)anthracene	mg/L	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.02 U
Dibenzofuran	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
1,2-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/L	0.021 U	0.022 U	0.02 U	0.022 U	0.021 U	0.02 U	0.41 U
2,4-Dichlorophenol	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
Diethyl phthalate	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
Dimethyl phthalate	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
2,4-Dimethylphenol	mg/L	0.01 U	0.011 U	0.01 U	0.021	**0.082[b]**	0.011	0.035 J
Di-n-butylphthalate	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
4,6-Dinitro-2-methylphenol	mg/L	0.042 U	0.032 UJ	0.03 U	0.044 U	0.032 UJ	0.031 U	0.82 U

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW11R***	***MW11R***	***MW11R***	***MW12***	***MW12***	***MW12***	***MW13***
Sample ID:		***WG-17338-111005-RR-007***	***GW17338082106002***	***GW-17338-121406-MJW-07***	***WG-17338-111005-RR-005***	***GW17338082206006***	***GW-17338-121506-MJW-20***	***WG-17338-110905-RR-001***
Sample Date:		***11/10/2005***	***8/21/2006***	***12/14/2006***	***11/10/2005***	***8/22/2006***	***12/15/2006***	***11/9/2005***
Parameters:	***Units***							
SVOCs (Continued)								
2,4-Dinitrophenol	mg/L	0.042 U	0.032 UJ	0.03 U	0.044 U	0.032 UJ	0.031 UJ	0.82 U
2,4-Dinitrotoluene	mg/L	0.0021 U	0.0022 U	0.002 U	0.0022 U	0.0021 U	0.002 U	0.041 U
2,6-Dinitrotoluene	mg/L	0.0021 U	0.0022 U	0.002 U	0.0022 U	0.0021 U	0.002 U	0.041 U
Di-n-octyl phthalate	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
Fluoranthene	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
Fluorene	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
Hexachlorobenzene	mg/L	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.02 U
Hexachlorobutadiene	mg/L	0.0021 U	0.0022 U	0.002 U	0.0022 U	0.0021 U	0.002 U	0.041 U
Hexachlorocyclopentadiene	mg/L	0.01 U	0.011 UJ	0.01 U	0.011 U	0.01 UJ	0.01 U	0.2 U
Hexachloroethane	mg/L	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.02 U
Indeno(1,2,3-cd)pyrene	mg/L	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.02 U
Isophorone	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
2-Methylnaphthalene	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.001 J	0.0032 J	**0.069 J[o]**
2-Methylphenol	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.024 J
3&4-Methylphenol	mg/L	-	-	-	-	-	-	-
4-Methylphenol	mg/L	0.01 U	0.011 U	0.01 U	0.0009 J	0.01 U	0.01 U	**0.03 J[b]**
Naphthalene	mg/L	**0.0052 J[a]**	0.011 U	0.01 U	**0.0053 J[a]**	**0.037[ap]**	**0.11[ap]**	**2.1abc**
2-Nitroaniline	mg/L	0.021 U	0.022 U	0.02 U	0.022 U	0.021 U	0.02 U	0.41 U
3-Nitroaniline	mg/L	0.021 U	0.022 U	0.02 U	0.022 U	0.021 U	0.02 U	0.41 U
4-Nitroaniline	mg/L	0.021 U	0.022 U	0.02 U	0.022 U	0.021 U	0.02 U	0.41 U
Nitrobenzene	mg/L	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.02 U
2-Nitrophenol	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
4-Nitrophenol	mg/L	0.042 U	0.032 U	0.03 U	0.044 U	0.032 U	0.031 U	0.82 U
N-Nitrosodi-n-propylamine	mg/L	0.001 U	0.0011 U	0.001 U	0.0011 U	0.001 U	0.001 U	0.02 U
N-Nitrosodiphenylamine	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
2,2'-oxybis(1-Chloropropane)	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
Pentachlorophenol	mg/L	0.042 U	0.032 UJ	0.03 U	0.044 U	0.032 UJ	0.031 U	0.82 U
Phenanthrene	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
Phenol	mg/L	0.01 U	0.011 U	0.01 U	0.0021 J	0.0099 J	0.0015 J	0.2 U
Pyrene	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
1,2,4-Trichlorobenzene	mg/L	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U
2,4,6-Trichlorophenol	mg/L	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.2 U

Refer to Table 1.6 for a list of notes

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW13***	***MW13***	***MW13***	***MW14***	***MW14***	***MW14***	***MW15***
Sample ID:		***WG-17338-110905-RR-002***	***GW17338082206005***	***GW-17338-121406-MJW-15***	***WG-17338-111105-RR-013***	***GW17338082306014***	***GW-17338-121406-MJW-09***	***GW1733809060603***
Sample Date:		***11/9/2005***	***8/22/2006***	***12/14/2006***	***11/11/2005***	***8/23/2006***	***12/14/2006***	***9/6/2006***
		Duplicate						
Parameters:	***Units***							
SVOCs								
Acenaphthene	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Acenaphthylene	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Acetophenone	mg/L	0.21 UJ	**0.17 J[p]**	**0.18[p]**	0.011 U	0.011 U	0.01 U	0.01 U
Anthracene	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Atrazine	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 UJ	0.011 U	0.01 U	0.01 U
Benzaldehyde	mg/L	0.21 UJ	0.2 UJ	0.1 UJ	0.011 U	0.011 UJ	0.01 UJ	0.01 UJ
Benzo(a)anthracene	mg/L	0.021 UJ	0.02 U	0.01 U	0.0011 U	0.0011 U	0.001 U	0.001 U
Benzo(a)pyrene	mg/L	0.021 UJ	0.02 U	0.01 U	0.0011 U	0.0011 U	0.001 U	0.001 U
Benzo(b)fluoranthene	mg/L	0.021 UJ	0.02 U	0.01 U	0.0011 U	0.0011 U	0.001 U	0.001 U
Benzo(g,h,i)perylene	mg/L	0.21 UJ	0.2 UJ	0.1 UJ	0.011 U	0.011 U	0.01 U	0.01 U
Benzo(k)fluoranthene	mg/L	0.021 UJ	0.02 UJ	0.01 U	0.0011 U	0.0011 U	0.001 U	0.001 U
Biphenyl	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
bis(2-Chloroethoxy)methane	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
bis(2-Chloroethyl)ether	mg/L	0.021 UJ	0.02 U	0.01 U	0.0011 U	0.0011 U	0.001 U	0.001 U
bis(2-Ethylhexyl)phthalate	mg/L	0.21 UJ	0.2 U	0.1 U	0.017 U	0.011 U	0.01 U	0.01 U
4-Bromophenyl phenyl ether	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Butyl benzylphthalate	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Caprolactam	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Carbazole	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
4-Chloro-3-methylphenol	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
4-Chloroaniline	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
2-Chloronaphthalene	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
2-Chlorophenol	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Chrysene	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Dibenz(a,h)anthracene	mg/L	0.021 UJ	0.02 UJ	0.01 U	0.0011 U	0.0011 U	0.001 U	0.001 U
Dibenzofuran	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
1,2-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/L	0.41 UJ	0.41 U	0.21 U	0.022 U	0.022 U	0.021 U	0.02 U
2,4-Dichlorophenol	mg/L	0.21 UJ	R	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Diethyl phthalate	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Dimethyl phthalate	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
2,4-Dimethylphenol	mg/L	0.062 J	0.2 U	0.018 J	0.011 U	0.011 U	0.01 U	0.01 U
Di-n-butylphthalate	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
4,6-Dinitro-2-methylphenol	mg/L	0.82 UJ	0.61 UJ	0.31 U	0.044 U	0.033 UJ	0.031 U	0.031 U

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW13***	***MW13***	***MW13***	***MW14***	***MW14***	***MW14***	***MW15***
Sample ID:		***WG-17338-110905-RR-002***	***GW17338082206005***	***GW-17338-121406-MJW-15***	***WG-17338-111105-RR-013***	***GW17338082306014***	***GW-17338-121406-MJW-09***	***GW1733809060603***
Sample Date:		***11/9/2005***	***8/22/2006***	***12/14/2006***	***11/11/2005***	***8/23/2006***	***12/14/2006***	***9/6/2006***
		Duplicate						
Parameters:	***Units***							
SVOCs (Continued)								
2,4-Dinitrophenol	mg/L	0.82 UJ	0.61 U	0.31 UJ	0.044 U	0.033 UJ	0.031 U	0.031 U
2,4-Dinitrotoluene	mg/L	0.041 UJ	0.041 U	0.021 U	0.0022 U	0.0022 U	0.0021 U	0.002 U
2,6-Dinitrotoluene	mg/L	0.041 UJ	0.041 U	0.021 U	0.0022 U	0.0022 U	0.0021 U	0.002 U
Di-n-octyl phthalate	mg/L	0.21 UJ	0.2 UJ	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Fluoranthene	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Fluorene	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Hexachlorobenzene	mg/L	0.021 UJ	0.02 U	0.01 U	0.0011 U	0.0011 U	0.001 U	0.001 U
Hexachlorobutadiene	mg/L	0.041 UJ	0.041 U	0.021 U	0.0022 U	0.0022 U	0.0021 U	0.002 U
Hexachlorocyclopentadiene	mg/L	0.21 UJ	R	0.1 U	0.011 U	0.011 UJ	0.01 U	0.01 U
Hexachloroethane	mg/L	0.021 UJ	0.02 U	0.01 U	0.0011 U	0.0011 U	0.001 U	0.001 U
Indeno(1,2,3-cd)pyrene	mg/L	0.021 UJ	0.02 UJ	0.01 U	0.0011 U	0.0011 U	0.001 U	0.001 U
Isophorone	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
2-Methylnaphthalene	mg/L	**0.069 J[p]**	**0.058 J[p]**	**0.052 J[p]**	0.011 U	0.011 U	0.01 U	0.01 U
2-Methylphenol	mg/L	0.08 J	**0.2 Jbc**	0.0078 J	0.011 U	0.011 U	0.01 U	0.01 U
3&4-Methylphenol	mg/L	-	-	-	-	-	-	-
4-Methylphenol	mg/L	**0.04 J[p]**	**0.025 J[p]**	**0.022 J[p]**	0.011 U	0.011 U	0.01 U	0.01 U
Naphthalene	mg/L	**2 Jabc**	**2.4abc**	**1.7abc**	0.011 U	0.011 U	0.0003 J	0.01 U
2-Nitroaniline	mg/L	0.41 UJ	0.41 U	0.21 U	0.022 U	0.022 U	0.021 U	0.02 U
3-Nitroaniline	mg/L	0.41 UJ	0.41 U	0.21 U	0.022 U	0.022 U	0.021 U	0.02 U
4-Nitroaniline	mg/L	0.41 UJ	0.41 U	0.21 U	0.022 U	0.022 U	0.021 U	0.02 U
Nitrobenzene	mg/L	0.021 UJ	0.02 U	0.01 U	0.0011 U	0.0011 U	0.001 U	0.001 U
2-Nitrophenol	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
4-Nitrophenol	mg/L	0.82 UJ	0.61 U	0.31 U	0.044 U	0.033 U	0.031 U	0.031 U
N-Nitrosodi-n-propylamine	mg/L	0.021 UJ	0.02 U	0.01 U	0.0011 U	0.0011 U	0.001 U	0.001 U
N-Nitrosodiphenylamine	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
2,2'-oxybis(1-Chloropropane)	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Pentachlorophenol	mg/L	0.82 UJ	0.61 U	0.31 U	0.044 U	0.033 UJ	0.031 U	0.031 U
Phenanthrene	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Phenol	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
Pyrene	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
1,2,4-Trichlorobenzene	mg/L	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U
2,4,6-Trichlorophenol	mg/L	0.21 UJ	0.2 U	0.1 U	0.011 U	0.011 U	0.01 U	0.01 U

Refer to Table 1.6 for a list of notes

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW15*	*MW15*	*MW16*	*MW16*	*MW16*	*MW16*	*MW17*
Sample ID:		*GW1733809060604*	*GW-17338-121406-MJW-08*	*GW1733809060605*	*GW1733809060606*	*GW-17338-121406-MJW-12*	*GW-17338-121406-MJW-13*	*GW1733809060607*
Sample Date:		*9/6/2006*	*12/14/2006*	*9/6/2006*	*9/6/2006*	*12/14/2006*	*12/14/2006*	*9/6/2006*
		Duplicate			*Duplicate*		*Duplicate*	
Parameters:	*Units*							
SVOCs								
Acenaphthene	mg/L	0.01 U	0.01 U	0.0021 J	0.0023 J	0.0006 J	0.0008 J	0.01 U
Acenaphthylene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetophenone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Anthracene	mg/L	0.01 U	0.01 U	0.0003 J	0.0004 J	0.01 U	0.01 U	0.01 U
Atrazine	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzaldehyde	mg/L	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ
Benzo(a)anthracene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Benzo(a)pyrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Benzo(b)fluoranthene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Benzo(g,h,i)perylene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Biphenyl	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
bis(2-Chloroethoxy)methane	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
bis(2-Chloroethyl)ether	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
bis(2-Ethylhexyl)phthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Bromophenyl phenyl ether	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Butyl benzylphthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Caprolactam	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carbazole	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Chloro-3-methylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Chloroaniline	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Chloronaphthalene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Chlorophenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chrysene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dibenz(a,h)anthracene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibenzofuran	mg/L	0.01 U	0.01 U	0.0005 J	0.0006 J	0.01 U	0.0002 J	0.01 U
1,2-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/L	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U
2,4-Dichlorophenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Diethyl phthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dimethyl phthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2,4-Dimethylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Di-n-butylphthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4,6-Dinitro-2-methylphenol	mg/L	0.03 U	0.031 U	0.031 U	0.03 U	0.03 U	0.031 U	0.032 U

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW15***	***MW15***	***MW16***	***MW16***	***MW16***	***MW16***	***MW17***
Sample ID:		***GW1733809060604***	***GW-17338-121406-MJW-08***	***GW1733809060605***	***GW1733809060606***	***GW-17338-121406-MJW-12***	***GW-17338-121406-MJW-13***	***GW1733809060607***
Sample Date:		***9/6/2006***	***12/14/2006***	***9/6/2006***	***9/6/2006***	***12/14/2006***	***12/14/2006***	***9/6/2006***
		Duplicate			***Duplicate***		***Duplicate***	
Parameters:	***Units***							
SVOCs (Continued)								
2,4-Dinitrophenol	mg/L	0.03 U	0.031 U	0.031 U	0.03 U	0.03 U	0.031 U	0.032 U
2,4-Dinitrotoluene	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0021 U
2,6-Dinitrotoluene	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0021 U
Di-n-octyl phthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluoranthene	mg/L	0.01 U	0.01 U	0.0051 J	0.0053 J	0.0016 J	0.0022 J	0.01 U
Fluorene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Hexachlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Hexachlorobutadiene	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0021 U
Hexachlorocyclopentadiene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Hexachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Indeno(1,2,3-cd)pyrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isophorone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Methylnaphthalene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Methylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
3&4-Methylphenol	mg/L	-	-	-	-	-	-	-
4-Methylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Naphthalene	mg/L	0.01 U	0.01 U	**0.016**[a]	**0.015**[a]	**0.001 J**[a]	**0.0013 J**[a]	0.0007 J
2-Nitroaniline	mg/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U
3-Nitroaniline	mg/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U
4-Nitroaniline	mg/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U
Nitrobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Nitrophenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Nitrophenol	mg/L	0.03 U	0.031 U	0.031 U	0.03 U	0.03 U	0.031 U	0.032 U
N-Nitrosodi-n-propylamine	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
N-Nitrosodiphenylamine	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2,2'-oxybis(1-Chloropropane)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Pentachlorophenol	mg/L	0.03 U	0.031 U	0.031 U	0.03 U	0.0004 J	0.0006 J	0.032 U
Phenanthrene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Phenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Pyrene	mg/L	0.01 U	0.01 U	0.0028 J	0.0028 J	0.0009 J	0.0011 J	0.01 U
1,2,4-Trichlorobenzene	mg/L	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2,4,6-Trichlorophenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U

Refer to Table 1.6 for a list of notes

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW17***	***MW18***	***MW18***	***MW19***	***MW19***
Sample ID:		***GW-17338-121206-MJW-01***	***GW1733809070608***	***GW-17338-121206-MJW-02***	***GW1733809070609***	***GW-17338-121206-MJW-03***
Sample Date:		***12/12/2006***	***9/7/2006***	***12/12/2006***	***9/7/2006***	***12/12/2006***
Parameters:	***Units***					
SVOCs						
Acenaphthene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acenaphthylene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetophenone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Anthracene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Atrazine	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzaldehyde	mg/L	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ
Benzo(a)anthracene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Benzo(a)pyrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Benzo(b)fluoranthene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Benzo(g,h,i)perylene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Biphenyl	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
bis(2-Chloroethoxy)methane	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
bis(2-Chloroethyl)ether	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
bis(2-Ethylhexyl)phthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Bromophenyl phenyl ether	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Butyl benzylphthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Caprolactam	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carbazole	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Chloro-3-methylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Chloroaniline	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Chloronaphthalene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Chlorophenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chrysene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dibenz(a,h)anthracene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibenzofuran	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-Dichlorobenzene	mg/L	-	-	-	-	-
1,3-Dichlorobenzene	mg/L	-	-	-	-	-
1,4-Dichlorobenzene	mg/L	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/L	0.021 U	0.02 U	0.021 U	0.021 U	0.021 U
2,4-Dichlorophenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Diethyl phthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dimethyl phthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2,4-Dimethylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Di-n-butylphthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4,6-Dinitro-2-methylphenol	mg/L	0.032 U	0.03 U	0.032 U	0.031 U	0.032 U

TABLE 1.3

GROUNDWATER DATA ANALYTICAL RESULTS - SVOCs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW17***	***MW18***	***MW18***	***MW19***	***MW19***
Sample ID:		***GW-17338-121206-MJW-01***	***GW1733809070608***	***GW-17338-121206-MJW-02***	***GW1733809070609***	***GW-17338-121206-MJW-03***
Sample Date:		***12/12/2006***	***9/7/2006***	***12/12/2006***	***9/7/2006***	***12/12/2006***
Parameters:	***Units***					
SVOCs (Continued)						
2,4-Dinitrophenol	mg/L	0.032 U	0.03 U	0.032 U	0.031 U	0.032 U
2,4-Dinitrotoluene	mg/L	0.0021 U	0.002 U	0.0021 U	0.0021 U	0.0021 U
2,6-Dinitrotoluene	mg/L	0.0021 U	0.002 U	0.0021 U	0.0021 U	0.0021 U
Di-n-octyl phthalate	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluoranthene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluorene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Hexachlorobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Hexachlorobutadiene	mg/L	0.0021 U	0.002 U	0.0021 U	0.0021 U	0.0021 U
Hexachlorocyclopentadiene	mg/L	0.01 U	0.01 UJ	0.01 U	0.01 UJ	0.01 U
Hexachloroethane	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Indeno(1,2,3-cd)pyrene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isophorone	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Methylnaphthalene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Methylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
3&4-Methylphenol	mg/L	-	-	-	-	-
4-Methylphenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Naphthalene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Nitroaniline	mg/L	0.021 U	0.02 U	0.021 U	0.021 U	0.021 U
3-Nitroaniline	mg/L	0.021 U	0.02 U	0.021 U	0.021 U	0.021 U
4-Nitroaniline	mg/L	0.021 U	0.02 U	0.021 U	0.021 U	0.021 U
Nitrobenzene	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Nitrophenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Nitrophenol	mg/L	0.032 U	0.03 U	0.032 U	0.031 U	0.032 U
N-Nitrosodi-n-propylamine	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
N-Nitrosodiphenylamine	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2,2'-oxybis(1-Chloropropane)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Pentachlorophenol	mg/L	0.032 U	0.03 U	0.032 U	0.031 U	0.032 U
Phenanthrene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Phenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Pyrene	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2,4-Trichlorobenzene	mg/L	-	-	-	-	-
2,4,5-Trichlorophenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2,4,6-Trichlorophenol	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U

Refer to Table 1.6 for a list of notes

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*Delaware URS Values*		*Drinking Water Criteria* [1]	*MW-1*	*MW2*	*MW2*	*MW2*	*MW2*	*MW2*	*MW2*
Sample ID:		*Screening Level*	*Value*	*Value*	*MW-1*	*MW-2*	*MW2-060105EAP001*	*WG-17338-111405-RR-017*	*GW17338082206009*	*GW1733809060601*	*GW-17338-121406-MJW-17*
Sample Date:		*a*	*b*	*c*	*7/10/1998*	*7/10/1998*	*6/1/2005*	*11/14/2005*	*8/22/2006*	*9/6/2006*	*12/14/2006*
Parameters:	*Units*										
Metals											
Aluminum	mg/L	NC	0.2	36.5	-	-	0.2 U	-	**0.65**[b]	0.116 J	0.19 U
Aluminum (Dissolved)	mg/L	NC	0.2	36.5	-	-	-	-	0.16 U	0.2 U	0.19 U
Antimony	mg/L	NC	0.006	0.006	-	-	0.012 U	-	0.012 U	0.01 U	0.01 U
Antimony (Dissolved)	mg/L	NC	0.006	0.006	-	-	-	-	0.012 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	**0.0070**[a]	**0.0250**[ac]	**0.0195**[ac]	-	**0.0139**[ac]	**0.0131**[ac]	**0.0098**[a]
Arsenic (Dissolved)	mg/L	0.0005	0.05	0.01	-	-	-	-	**0.0149**[c]	**0.0128**[c]	**0.0112**[c]
Barium	mg/L	0.26	2	2	**0.9520**[a]	**0.9380**[a]	**0.264**[a]	-	**0.499**[a]	**0.445**[a]	**0.439**[a]
Barium (Dissolved)	mg/L	0.26	2	2	-	-	-	-	0.506	0.459	0.435
Beryllium	mg/L	NC	0.004	0.004	-	-	0.002 U	-	0.006 U	0.002 U	0.002 U
Beryllium (Dissolved)	mg/L	NC	0.004	0.004	-	-	-	-	0.006 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.0016	0.0037	0.005 U	-	0.0032 U	0.004 U	0.004 U
Cadmium (Dissolved)	mg/L	NC	0.005	0.005	-	-	-	-	0.0032 U	0.004 U	0.004 U
Calcium	mg/L	NC	NC	NC	-	-	30.2	-	43.7	38.3	37.3
Calcium (Dissolved)	mg/L	NC	NC	NC	-	-	-	-	44.2	39.6	36.6
Chromium Total	mg/L	NC	0.1	0.1	0.0920	**0.2510**[bc]	0.01 U	-	0.0057 U	0.01 U	0.01 U
Chromium Total (Dissolved)	mg/L	NC	0.1	0.1	-	-	-	-	0.0057 U	0.01 U	0.01 U
Chromium VI	mg/L	NC	0.011	0.1	-	-	-	0.01 U	0.02 U	0.01 U	-
Chromium VI (Dissolved)	mg/L	NC	0.011	0.1	-	-	-	-	0.02 U	0.01 U	-
Cobalt	mg/L	NC	0.22	0.73	-	-	0.05 U	-	0.0027 J	0.05 U	0.05 U
Cobalt (Dissolved)	mg/L	NC	0.22	0.73	-	-	-	-	0.0028 J	0.05 U	0.05 U
Copper	mg/L	NC	1.3	1.3	-	-	0.025 U	-	0.006 J	0.004 J	0.025 U
Copper (Dissolved)	mg/L	NC	1.3	1.3	-	-	-	-	0.03 U	0.025 U	0.025 U
Iron	mg/L	NC	0.3	11	-	-	**51.5**[b]	-	**72.1**[b]	**63.7**[b]	**60.8**[b]
Iron (Dissolved)	mg/L	NC	0.3	11	-	-	-	-	**73.4**[b]	**65.6**[b]	**59.9**[b]
Lead	mg/L	NC	0.015	0.015	**0.0330**[bc]	**0.1240**[bc]	0.003 U	-	0.0037 U	0.003 U	0.003 U
Lead (Dissolved)	mg/L	NC	0.015	0.015	-	-	-	-	0.0037 U	0.003 U	0.003 U
Magnesium	mg/L	NC	NC	NC	-	-	22.2	-	33.2	28.6	27.8
Magnesium (Dissolved)	mg/L	NC	NC	NC	-	-	-	-	33.8	29.6	27.5
Manganese	mg/L	NC	0.05	0.876	-	-	**0.742**[b]	-	**1.22**[ba]	**0.982**[ba]	**0.949**[ba]
Manganese (Dissolved)	mg/L	NC	0.05	0.876	-	-	-	-	**1.28**[bd]	**1.04**[bd]	**0.917**[bd]
Mercury	mg/L	NC	0.002	0.002	0.00020 U	0.00020 U	0.0002 U	-	0.0002 U	0.0002 U	0.0002 U
Mercury (Dissolved)	mg/L	NC	0.002	0.002	-	-	-	-	0.0002 U	0.00011 J	0.0002 U
Nickel	mg/L	NC	0.1	0.73	-	-	0.04 U	-	0.025 U	0.04 U	0.04 U
Nickel (Dissolved)	mg/L	NC	0.1	0.73	-	-	-	-	0.025 U	0.04 U	0.04 U
Potassium	mg/L	NC	NC	NC	-	-	3.05	-	5.92	4.96 J	5.66
Potassium (Dissolved)	mg/L	NC	NC	NC	-	-	-	-	5.92	5.11	5.65
Selenium	mg/L	NC	0.05	0.05	0.0050 U	0.0050 U	0.0051 U	-	0.0044 U	0.005 U	0.005 U
Selenium (Dissolved)	mg/L	NC	0.05	0.05	-	-	-	-	0.0044 U	0.005 U	0.005 U
Silver	mg/L	NC	0.1	0.183	0.0050 U	0.0050 U	0.015 U	-	0.012 U	0.01 U	0.01 U
Silver (Dissolved)	mg/L	NC	0.1	0.183	-	-	-	-	0.012 U	0.01 U	0.01 U
Sodium	mg/L	NC	NC	NC	-	-	100	-	151	129	122
Sodium (Dissolved)	mg/L	NC	NC	NC	-	-	-	-	155	135	120

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*Delaware URS Values*		*Drinking Water Criteria* [1]	*MW-1*	*MW2*	*MW2*	*MW2*	*MW2*	*MW2*	*MW2*
Sample ID:		*Screening Level*	*Value*	*Value*	*MW-1*	*MW-2*	*MW2-060105EAP001*	*WG-17338-111405-RR-017*	*GW17338082206009*	*GW1733809060601*	*GW-17338-121406-MJW-17*
Sample Date:		*a*	*b*	*c*	*7/10/1998*	*7/10/1998*	*6/1/2005*	*11/14/2005*	*8/22/2006*	*9/6/2006*	*12/14/2006*
Parameters:	*Units*										
Thallium	mg/L	NC	0.002	0.002	-	-	0.011 U	-	0.0098 U	0.01 U	0.0095 U
Thallium (Dissolved)	mg/L	NC	0.002	0.002	-	-	-	-	0.0098 U	0.01 U	0.0095 U
Vanadium	mg/L	NC	0.026	0.0365	-	-	0.05 U	-	0.16 U	0.05 U	0.05 U
Vanadium (Dissolved)	mg/L	NC	0.026	0.0365	-	-	-	-	0.16 U	0.05 U	0.05 U
Zinc	mg/L	NC	2	11	-	-	0.03 U	-	0.0422	0.03 U	0.0161 J
Zinc (Dissolved)	mg/L	NC	2	11	-	-	-	-	0.03 U	0.03 U	0.03 U

Refer to Table 1.6 for a list of notes

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW3*	*MW3*	*MW3*	*MW3*	*MW3*	*MW3D*	*MW3D*	*MW3D*	*MW5*
Sample ID:		*MW-3*	*MW3-060105EAP003*	*WG-17338-111005-RR-009*	*GW17338082206007*	*GW-17338-121506-MJW-21*	*WG-17338-111005-RR-008*	*GW17338082206008*	*GW-17338-121406-MJW-16*	*MW-5*
Sample Date:		*7/10/1998*	*6/1/2005*	*11/10/2005*	*8/22/2006*	*12/15/2006*	*11/10/2005*	*8/22/2006*	*12/14/2006*	*7/10/1998*
Parameters:	*Units*									
Metals										
Aluminum	mg/L	-	0.2 U	-	**0.439**[b]	**0.226 J**[b]	-	**0.602**[b]	0.19 U	-
Aluminum (Dissolved)	mg/L	-	-	-	**0.259 J**[b]	0.4 U	-	0.16 U	0.19 U	-
Antimony	mg/L	-	0.012 U	-	0.01 U	0.02 U	-	0.012 U	0.01 U	-
Antimony (Dissolved)	mg/L	-	-	-	0.024 U	0.02 U	-	0.012 U	0.01 U	-
Arsenic	mg/L	**0.0240**[ac]	**0.0063**[a]	-	0.005 U	0.0084 U	-	0.0036 U	0.0042 U	**0.0310**[ac]
Arsenic (Dissolved)	mg/L	-	-	-	0.0071 U	0.0084 U	-	0.0036 U	0.0042 U	-
Barium	mg/L	**0.8560**[a]	**0.555**[a]	-	**0.46**[a]	**0.47**[a]	-	**0.286**[a]	**0.268**[a]	**0.4130**[a]
Barium (Dissolved)	mg/L	-	-	-	0.533	0.489	-	0.296	0.276	-
Beryllium	mg/L	-	0.00045	-	0.00023 J	0.004 U	-	0.006 U	0.002 U	-
Beryllium (Dissolved)	mg/L	-	-	-	0.012 U	0.004 U	-	0.006 U	0.002 U	-
Cadmium	mg/L	**0.0055**[bc]	0.005 U	-	0.004 U	0.008 U	-	0.0032 U	0.004 U	0.0019
Cadmium (Dissolved)	mg/L	-	-	-	0.0064 U	0.008 U	-	0.0032 U	0.004 U	-
Calcium	mg/L	-	83.6	-	70.9	70.1	-	40.2	34.7	-
Calcium (Dissolved)	mg/L	-	-	-	80.9	72.1	-	42.2	36	-
Chromium Total	mg/L	**0.146**[bc]	0.01 U	-	0.0053 J	0.02 U	-	0.0057 U	0.01 U	0.0780
Chromium Total (Dissolved)	mg/L	-	-	-	0.0047 J	0.02 U	-	0.0057 U	0.01 U	-
Chromium VI	mg/L	-	-	R	0.02 U	-	R	0.01 U	-	-
Chromium VI (Dissolved)	mg/L	-	-	-	0.01 U	-	-	0.01 U	-	-
Cobalt	mg/L	-	0.05 U	-	0.05 U	0.1 U	-	0.004 J	0.05 U	-
Cobalt (Dissolved)	mg/L	-	-	-	0.048 U	0.1 U	-	0.003 J	0.05 U	-
Copper	mg/L	-	0.025 U	-	0.0039 J	0.05 U	-	0.0043 J	0.025 U	-
Copper (Dissolved)	mg/L	-	-	-	0.06 U	0.05 U	-	0.03 U	0.025 U	-
Iron	mg/L	-	**264**[b]	-	**217**[b]	**210**[b]	-	**31.8**[b]	**28.7**[b]	-
Iron (Dissolved)	mg/L	-	-	-	**245**[b]	**215**[b]	-	**32.2**[b]	**29.1**[b]	-
Lead	mg/L	**0.0450**[bc]	0.0069	-	0.0072 U	0.006 U	-	0.0037 U	0.003 U	**0.0250**[bc]
Lead (Dissolved)	mg/L	-	-	-	0.0074 U	0.006 U	-	0.0037 U	0.003 U	-
Magnesium	mg/L	-	84.1	-	70.8	73	-	22.3	19.2	-
Magnesium (Dissolved)	mg/L	-	-	-	81.9	75.2	-	23.2	19.9	-
Manganese	mg/L	-	**21.3**[ba]	-	**17.8**[ba]	**17.6**[ba]	-	**0.824**[b]	**0.726**[b]	-
Manganese (Dissolved)	mg/L	-	-	-	**21**[bd]	**18.1**[bd]	-	**0.888**[bd]	**0.75**[b]	-
Mercury	mg/L	0.00023	0.00015	-	0.00015 J	0.0002 U	-	0.0002 U	0.0002 U	0.00020 U
Mercury (Dissolved)	mg/L	-	-	-	0.00014 J	0.0002 U	-	0.0002 U	0.0002 U	-
Nickel	mg/L	-	0.04 U	-	0.04 U	0.08 U	-	0.0031 J	0.04 U	-
Nickel (Dissolved)	mg/L	-	-	-	0.049 U	0.08 U	-	0.025 U	0.04 U	-
Potassium	mg/L	-	2.78	-	2.86 J	4.79 J	-	5.56	5.34	-
Potassium (Dissolved)	mg/L	-	-	-	4 J	4.87 J	-	5.78	5.51	-
Selenium	mg/L	0.0160	0.026 U	-	0.01 U	0.01 U	-	0.0044 U	0.005 U	0.0050 U
Selenium (Dissolved)	mg/L	-	-	-	0.0087 U	0.01 U	-	0.0044 U	0.005 U	-
Silver	mg/L	0.0050 U	0.015 U	-	0.01 U	0.02 U	-	0.012 U	0.0036 J	0.0050 U
Silver (Dissolved)	mg/L	-	-	-	0.023 U	0.02 U	-	0.012 U	0.01 U	-
Sodium	mg/L	-	59	-	57	60.6	-	61	55.4	-
Sodium (Dissolved)	mg/L	-	-	-	64.5	62.2	-	63.9	57	-

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW3***	***MW3***	***MW3***	***MW3***	***MW3***	***MW3D***	***MW3D***	***MW3D***	***MW5***
Sample ID:		***MW-3***	***MW3-060105EAP003***	***WG-17338-111005-RR-009***	***GW17338082206007***	***GW-17338-121506-MJW-21***	***WG-17338-111005-RR-008***	***GW17338082206008***	***GW-17338-121406-MJW-16***	***MW-5***
Sample Date:		***7/10/1998***	***6/1/2005***	***11/10/2005***	***8/22/2006***	***12/15/2006***	***11/10/2005***	***8/22/2006***	***12/14/2006***	***7/10/1998***
Parameters:	***Units***									
Thallium	mg/L	-	0.033 U	-	0.01 U	0.019 U	-	0.0098 U	0.0095 U	-
Thallium (Dissolved)	mg/L	-	-	-	0.02 U	0.019 U	-	0.0098 U	0.0095 U	-
Vanadium	mg/L	-	0.004	-	0.0027 J	0.1 U	-	0.16 U	0.05 U	-
Vanadium (Dissolved)	mg/L	-	-	-	0.31 U	0.1 U	-	0.16 U	0.05 U	-
Zinc	mg/L	-	0.03 U	-	0.0376 U	0.06 U	-	0.03 U	0.007 J	-
Zinc (Dissolved)	mg/L	-	-	-	0.06 U	0.0126 J	-	0.03 U	0.0085 J	-

Refer to Table 1.6 for a list of notes

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW6***	***MW6***	***MW6***	***MW6***	***MW6***	***MW7***	***MW7***	***MW7***
Sample ID:		***MW6-060105EAP004***	***WG-17338-111105-RR-012***	***GW17338082206011***	***GW1733809060602***	***GW-17338-121406-MJW-14***	***MW7-060105EAP005***	***WG-17338-111505-RR-023***	***GW17338082206012***
Sample Date:		***6/1/2005***	***11/11/2005***	***8/22/2006***	***9/6/2006***	***12/14/2006***	***6/1/2005***	***11/15/2005***	***8/22/2006***
Parameters:	***Units***								
Metals									
Aluminum	mg/L	**39.3[b]**	-	**0.811[b]**	**12.4[b]**	**1.85[b]**	**5.41[b]**	-	**0.626[b]**
Aluminum (Dissolved)	mg/L	-	-	0.16 U	0.2 U	0.19 U	-	-	0.16 U
Antimony	mg/L	0.012 U	-	0.012 U	0.01 U	0.01 U	0.012 U	-	0.012 U
Antimony (Dissolved)	mg/L	-	-	0.012 U	0.01 U	0.01 U	-	-	0.012 U
Arsenic	mg/L	**0.0059[a]**	-	0.0036 U	**0.009[a]**	0.0042 U	0.0064 U	-	**0.0083[a]**
Arsenic (Dissolved)	mg/L	-	-	0.0036 U	0.005 U	0.0042 U	-	-	0.0073
Barium	mg/L	**0.515[a]**	-	**0.442[a]**	0.11 J	**0.412[a]**	0.258	-	**0.269[a]**
Barium (Dissolved)	mg/L	-	-	0.485	0.07 J	0.418	-	-	0.264
Beryllium	mg/L	0.0013	-	0.006 U	0.002 U	0.002 U	0.00016	-	0.006 U
Beryllium (Dissolved)	mg/L	-	-	0.006 U	0.002 U	0.002 U	-	-	0.006 U
Cadmium	mg/L	0.005 U	-	0.0032 U	0.004 U	0.004 U	0.005 U	-	0.0032 U
Cadmium (Dissolved)	mg/L	-	-	0.0032 U	0.004 U	0.004 U	-	-	0.0032 U
Calcium	mg/L	63.5	-	73	10	64.5	37.9	-	29
Calcium (Dissolved)	mg/L	-	-	81.1	11.1	68.2	-	-	29
Chromium Total	mg/L	0.0573	-	0.0026 J	0.0148 U	0.01 U	0.0109	-	0.0057 U
Chromium Total (Dissolved)	mg/L	-	-	0.0057 U	0.01 U	0.01 U	-	-	0.0057 U
Chromium VI	mg/L	-	R	0.01 U	0.05 U	-	-	0.5 U	0.02 U
Chromium VI (Dissolved)	mg/L	-	-	0.01 U	0.01 U	-	-	-	0.05 U
Cobalt	mg/L	0.0318	-	0.024 U	0.0075 J	0.05 U	0.0222	-	0.0208 J
Cobalt (Dissolved)	mg/L	-	-	0.024 U	0.05 U	0.05 U	-	-	0.0202 J
Copper	mg/L	0.034	-	0.03 U	0.0142 J	0.025 U	0.0444	-	0.03 U
Copper (Dissolved)	mg/L	-	-	0.03 U	0.025 U	0.025 U	-	-	0.03 U
Iron	mg/L	**38.1[b]**	-	**25.3[b]**	**23.1[b]**	**20.3[b]**	**39[b]**	-	**57.1[b]**
Iron (Dissolved)	mg/L	-	-	**26.3[b]**	**13.4[b]**	**19.4[b]**	-	-	**56.2[b]**
Lead	mg/L	**0.0204[bc]**	-	0.0037 U	0.0069	0.003 U	0.003 U	-	0.0037 U
Lead (Dissolved)	mg/L	-	-	0.0037 U	0.003 U	0.003 U	-	-	0.0037 U
Magnesium	mg/L	24.1	-	26.7	3.53 J	24.2	26.3	-	25.2
Magnesium (Dissolved)	mg/L	-	-	29.9	3.48 J	25.2	-	-	24.2
Manganese	mg/L	**1.24[ba]**	-	**1.05[ba]**	**0.307[b]**	**0.93[ba]**	**2.13[ba]**	-	**2.25[ba]**
Manganese (Dissolved)	mg/L	-	-	**1.14[bd]**	**0.291[b]**	**0.946[bd]**	-	-	**2.13[bd]**
Mercury	mg/L	0.0002 U	-	0.0002 U	0.00012 J	0.0002 U	0.0002 U	-	0.0002 U
Mercury (Dissolved)	mg/L	-	-	0.0002 U	0.0002 U	0.0002 U	-	-	0.0002 U
Nickel	mg/L	0.0305	-	0.0035 J	0.0089 J	0.04 U	0.0069	-	0.025 U
Nickel (Dissolved)	mg/L	-	-	0.025 U	0.04 U	0.04 U	-	-	0.025 U
Potassium	mg/L	12.3	-	14.1	2.85 J	13.3	2.84	-	2.73 J
Potassium (Dissolved)	mg/L	-	-	15.7	2.58 J	13.7	-	-	2.75 J
Selenium	mg/L	0.0051 U	-	0.0044 U	0.005 U	0.005 U	0.0051 U	-	0.0044 U
Selenium (Dissolved)	mg/L	-	-	0.0044 U	0.005 U	0.005 U	-	-	0.0044 U
Silver	mg/L	0.0025	-	0.012 U	0.01 U	0.01 U	0.015 U	-	0.012 U
Silver (Dissolved)	mg/L	-	-	0.012 U	0.01 U	0.01 U	-	-	0.012 U
Sodium	mg/L	64.3	-	98.8	11.6	88.7	44.5	-	52.3
Sodium (Dissolved)	mg/L	-	-	110	13.6	92.5	-	-	53.2

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW6***	***MW6***	***MW6***	***MW6***	***MW6***	***MW7***	***MW7***	***MW7***
Sample ID:		***MW6-060105EAP004***	***WG-17338-111105-RR-012***	***GW17338082206011***	***GW1733809060602***	***GW-17338-121406-MJW-14***	***MW7-060105EAP005***	***WG-17338-111505-RR-023***	***GW17338082206012***
Sample Date:		***6/1/2005***	***11/11/2005***	***8/22/2006***	***9/6/2006***	***12/14/2006***	***6/1/2005***	***11/15/2005***	***8/22/2006***
Parameters:	***Units***								
Thallium	mg/L	0.011 U	-	0.0098 U	0.01 U	0.0095 U	0.011 U	-	0.0098 U
Thallium (Dissolved)	mg/L	-	-	0.0098 U	0.01 U	0.0095 U	-	-	0.0098 U
Vanadium	mg/L	**0.0954**[aa]	-	0.16 U	0.0187 J	0.05 U	0.0194	-	0.16 U
Vanadium (Dissolved)	mg/L	-	-	0.16 U	0.05 U	0.05 U	-	-	0.16 U
Zinc	mg/L	0.0636	-	0.03 U	0.0787	0.0157 J	0.0162	-	0.03 U
Zinc (Dissolved)	mg/L	-	-	0.03 U	0.03 U	0.03 U	-	-	0.03 U

Refer to Table 1.6 for a list of notes

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW7*	*MW8*	*MW8*	*MW8*	*MW8*	*MW8*	*MW9*	*MW9*
Sample ID:		*GW-17338-121406-MJW-11*	*MW8-060205EAP001*	*MW8-060205EAP002*	*WG-17338-111405-RR-015*	*GW17338082306015*	*GW-17338-121406-MJW-10*	*MW9-060205EAP003*	*MW9A060205EAP004*
Sample Date:		*12/14/2006*	*6/2/2005*	*6/2/2005* Duplicate	*11/14/2005*	*8/23/2006*	*12/14/2006*	*6/2/2005*	*6/2/2005* Duplicate
Parameters:	*Units*								
Metals									
Aluminum	mg/L	**1.28**[b]	**7.06**[b]	**2.31**[b]	-	**0.257**[b]	**0.293**[b]	**2.86**[b]	**1.93**[b]
Aluminum (Dissolved)	mg/L	0.19 U	-	-	-	0.16 U	0.2 U	-	-
Antimony	mg/L	0.01 U	0.012 U	0.012 U	-	0.012 U	0.01 U	0.012 U	0.012 U
Antimony (Dissolved)	mg/L	0.01 U	-	-	-	0.012 U	0.01 U	-	-
Arsenic	mg/L	**0.0099**[a]	0.0064 U	0.0064 U	-	0.0036 U	0.0042 U	0.0064 U	0.0064 U
Arsenic (Dissolved)	mg/L	**0.0101**[c]	-	-	-	0.0036 U	0.0042 U	-	-
Barium	mg/L	0.23	**0.276**[a]	**0.285**[a]	-	**0.296**[a]	**0.302**[a]	0.193	0.18
Barium (Dissolved)	mg/L	0.24	-	-	-	0.305	0.305	-	-
Beryllium	mg/L	0.002 U	0.00021	0.002 U	-	0.006 U	0.002 U	0.00033	0.00023
Beryllium (Dissolved)	mg/L	0.002 U	-	-	-	0.006 U	0.002 U	-	-
Cadmium	mg/L	0.004 U	0.005 U	0.005 U	-	0.0032 U	0.004 U	0.005 U	0.005 U
Cadmium (Dissolved)	mg/L	0.004 U	-	-	-	0.0032 U	0.004 U	-	-
Calcium	mg/L	23.4	41.7	43	-	47.3	51.4	29.8	28
Calcium (Dissolved)	mg/L	24.9	-	-	-	48.7	51.1	-	-
Chromium Total	mg/L	0.01 U	0.0111	0.003	-	0.0057 U	0.01 U	0.0061	0.0051
Chromium Total (Dissolved)	mg/L	0.01 U	-	-	-	0.0057 U	0.01 U	-	-
Chromium VI	mg/L	-	-	-	0.01 U	0.04 U	-	-	-
Chromium VI (Dissolved)	mg/L	-	-	-	-	0.05 U	-	-	-
Cobalt	mg/L	0.05 U	0.0245	0.0217	-	0.0222 J	0.0216 J	0.0042	0.0036
Cobalt (Dissolved)	mg/L	0.05 U	-	-	-	0.0224 J	0.0214 J	-	-
Copper	mg/L	0.025 U	0.0093	0.025 U	-	0.03 U	0.025 U	0.0052	0.0053
Copper (Dissolved)	mg/L	0.025 U	-	-	-	0.03 U	0.025 U	-	-
Iron	mg/L	**51.4**[b]	**41.3**[b]	**43.7**[b]	-	**54.6**[b]	**56.7**[b]	**12.2**[b]	**8.17**[b]
Iron (Dissolved)	mg/L	**54.1**[b]	-	-	-	**56.6**[b]	**56.6**[b]	-	-
Lead	mg/L	0.003 U	0.004	0.003 U	-	0.0037 U	0.003 U	0.003 U	0.003 U
Lead (Dissolved)	mg/L	0.003 U	-	-	-	0.0037 U	0.003 U	-	-
Magnesium	mg/L	21.6	27.6	29.1	-	31.8	32.9	12.4	11.6
Magnesium (Dissolved)	mg/L	22.7	-	-	-	33.1	33.1	-	-
Manganese	mg/L	**1.97**[ba]	**2.12**[ba]	**2.27**[ba]	-	**1.98**[ba]	**1.98**[ba]	**0.276**[b]	**0.236**[b]
Manganese (Dissolved)	mg/L	**2.06**[bd]	-	-	-	**2.05**[bd]	**1.99**[bd]	-	-
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	-	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Mercury (Dissolved)	mg/L	0.0002 U	-	-	-	0.0002 U	0.0002 U	-	-
Nickel	mg/L	0.04 U	0.0073	0.04 U	-	0.025 U	0.04 U	0.0048	0.04 U
Nickel (Dissolved)	mg/L	0.04 U	-	-	-	0.025 U	0.0046 J	-	-
Potassium	mg/L	5 U	2.78	2.61	-	2.79 J	3.15 J	4.1	3.86
Potassium (Dissolved)	mg/L	2.73 J	-	-	-	2.85 J	3.14 J	-	-
Selenium	mg/L	0.005 U	0.0051 U	0.0051 U	-	0.0044 U	0.005 U	0.0051 U	0.0051 U
Selenium (Dissolved)	mg/L	0.005 U	-	-	-	0.0044 U	0.005 U	-	-
Silver	mg/L	0.01 U	0.015 U	0.015 U	-	0.012 U	0.01 U	0.015 U	0.015 U
Silver (Dissolved)	mg/L	0.01 U	-	-	-	0.012 U	0.01 U	-	-
Sodium	mg/L	42.4	48.9	51.9	-	60	55.1	46.2	43.6
Sodium (Dissolved)	mg/L	45.5	-	-	-	61.7	56	-	-

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW7***	***MW8***	***MW8***	***MW8***	***MW8***	***MW8***	***MW9***	***MW9***
Sample ID:		***GW-17338-121406-MJW-11***	***MW8-060205EAP001***	***MW8-060205EAP002***	***WG-17338-111405-RR-015***	***GW17338082306015***	***GW-17338-121406-MJW-10***	***MW9-060205EAP003***	***MW9A060205EAP004***
Sample Date:		***12/14/2006***	***6/2/2005***	***6/2/2005 Duplicate***	***11/14/2005***	***8/23/2006***	***12/14/2006***	***6/2/2005***	***6/2/2005 Duplicate***
Parameters:	***Units***								
Thallium	mg/L	0.0095 U	0.011 U	0.011 U	-	0.0098 U	0.0095 U	0.011 U	0.011 U
Thallium (Dissolved)	mg/L	0.0095 U	-	-	-	0.0098 U	0.0095 U	-	-
Vanadium	mg/L	0.05 U	0.0181	0.0048	-	0.16 U	0.05 U	0.0055	0.0039
Vanadium (Dissolved)	mg/L	0.05 U	-	-	-	0.16 U	0.05 U	-	-
Zinc	mg/L	0.0111 J	0.0186	0.0096	-	0.03 U	0.03 U	0.0136	0.0116
Zinc (Dissolved)	mg/L	0.03 U	-	-	-	0.03 U	0.0125 J	-	-

Refer to Table 1.6 for a list of notes

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW9*	*MW9*	*MW9*	*MW9*	*MW10*	*MW10*	*MW10*	*MW10*
Sample ID:		*WG-17338-111405-RR-016*	*GW17338082106003*	*GW-17338-121206-MJW-05*	*GW-17338-121206-MJW-06*	*MW10060105EAP002*	*WG-17338-111105-RR-011*	*GW17338082306013*	*GW-17338-121406-MJW-18*
Sample Date:		*11/14/2005*	*8/21/2006*	*12/12/2006*	*12/12/2006* Duplicate	*6/1/2005*	*11/11/2005*	*8/23/2006*	*12/14/2006*
Parameters:	*Units*								
Metals									
Aluminum	mg/L	-	**0.395**[b]	**0.541**[b]	0.328 U	**77.7**[b]	-	**5.5**[b]	**3.4**[b]
Aluminum (Dissolved)	mg/L	-	0.2 U	0.2 U	0.2 U	-	-	0.16 U	0.19 U
Antimony	mg/L	-	0.01 U	0.01 U	0.01 U	0.012 U	-	0.012 U	0.01 U
Antimony (Dissolved)	mg/L	-	0.01 U	0.01 U	0.01 U	-	-	0.012 U	0.01 U
Arsenic	mg/L	-	0.005 U	0.0042 U	0.0042 U	**0.0046**[a]	-	0.0036 U	0.0042 U
Arsenic (Dissolved)	mg/L	-	0.005 U	0.0042 U	0.0042 U	-	-	0.0036 U	0.0042 U
Barium	mg/L	-	0.172 J	0.163 J	0.158 J	**0.555**[a]	-	**0.449**[a]	**0.385**[a]
Barium (Dissolved)	mg/L	-	0.17 J	0.174 J	0.176 J	-	-	0.431	0.384
Beryllium	mg/L	-	0.002 U	0.002 U	0.002 U	0.0024	-	0.006 U	0.002 U
Beryllium (Dissolved)	mg/L	-	0.002 U	0.002 U	0.002 U	-	-	0.006 U	0.002 U
Cadmium	mg/L	-	0.004 U	0.004 U	0.004 U	0.005 U	-	0.0032 U	0.004 U
Cadmium (Dissolved)	mg/L	-	0.004 U	0.004 U	0.004 U	-	-	0.0032 U	0.004 U
Calcium	mg/L	-	30.4	30.1	29.7	46.2	-	40	34.4
Calcium (Dissolved)	mg/L	-	30.2	32.6	32	-	-	42	35.9
Chromium Total	mg/L	-	0.01 U	0.01 U	0.01 U	**0.145**[pc]	-	0.009 J	0.01 U
Chromium Total (Dissolved)	mg/L	-	0.01 U	0.01 U	0.01 U	-	-	0.0057 U	0.01 U
Chromium VI	mg/L	0.01 U	0.01 U	-	-	-	R	0.01 U	-
Chromium VI (Dissolved)	mg/L	-	0.01 U	-	-	-	-	0.01 U	-
Cobalt	mg/L	-	0.05 U	0.05 U	0.05 U	0.0701	-	0.0079 J	0.05 U
Cobalt (Dissolved)	mg/L	-	0.05 U	0.05 U	0.05 U	-	-	0.0042 J	0.05 U
Copper	mg/L	-	0.025 U	0.025 U	0.025 U	0.0567	-	0.0071 J	0.025 U
Copper (Dissolved)	mg/L	-	0.025 U	0.025 U	0.025 U	-	-	0.03 U	0.025 U
Iron	mg/L	-	**1.45**[p]	**1.25**[p]	**1.28**[p]	**59.7**[p]	-	**31.9**[p]	**24.4**[p]
Iron (Dissolved)	mg/L	-	0.15 U	0.15 U	0.15 U	-	-	**31.2**[b]	**23**[b]
Lead	mg/L	-	0.0032 U	0.003 U	0.003 U	**0.0302**[pc]	-	0.0038 J	0.0039
Lead (Dissolved)	mg/L	-	0.003 U	0.003 U	0.003 U	-	-	0.0037 U	0.003 U
Magnesium	mg/L	-	13.1	13.4	13.1	32.9	-	33.4	27.2
Magnesium (Dissolved)	mg/L	-	13.1	14.4	14.3	-	-	34.4	27.7
Manganese	mg/L	-	**0.222**[p]	**0.238**[p]	**0.227**[p]	**1.76**[pa]	-	**1.2**[pa]	**1.29**[pa]
Manganese (Dissolved)	mg/L	-	**0.211**[b]	**0.258**[b]	**0.285**[b]	-	-	**1.26**[bd]	**1.41**[bd]
Mercury	mg/L	-	0.0002 U	0.0002 U	0.0002 U	0.0002 U	-	0.0002 U	0.0002 U
Mercury (Dissolved)	mg/L	-	0.0002 U	0.0002 U	0.0002 U	-	-	0.0002 U	0.0002 U
Nickel	mg/L	-	0.04 U	0.0032 J	0.0037 J	0.0662	-	0.0065 J	0.04 U
Nickel (Dissolved)	mg/L	-	0.04 U	0.0026 J	0.04 U	-	-	0.025 U	0.04 U
Potassium	mg/L	-	4.45 J	5.38	5.18	11.7	-	5.17	4.8 J
Potassium (Dissolved)	mg/L	-	4.51 J	5.6	5.58	-	-	5.08	4.83 J
Selenium	mg/L	-	0.005 U	0.005 U	0.005 U	0.0051 U	-	0.0044 U	0.005 U
Selenium (Dissolved)	mg/L	-	0.005 U	0.005 U	0.005 U	-	-	0.0044 U	0.005 U
Silver	mg/L	-	0.01 U	0.01 U	0.01 U	0.0058	-	0.012 U	0.01 U
Silver (Dissolved)	mg/L	-	0.01 U	0.01 U	0.01 U	-	-	0.012 U	0.01 U
Sodium	mg/L	-	52.1	42.1	40.9	58.8	-	70.6	61.6
Sodium (Dissolved)	mg/L	-	52.5	44.6	44.9	-	-	72.1	65.3

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW9*	*MW9*	*MW9*	*MW9*	*MW10*	*MW10*	*MW10*	*MW10*
Sample ID:		*WG-17338-111405-RR-016*	*GW17338082106003*	*GW-17338-121206-MJW-05*	*GW-17338-121206-MJW-06*	*MW10060105EAP002*	*WG-17338-111105-RR-011*	*GW17338082306013*	*GW-17338-121406-MJW-18*
Sample Date:		*11/14/2005*	*8/21/2006*	*12/12/2006*	*12/12/2006* Duplicate	*6/1/2005*	*11/11/2005*	*8/23/2006*	*12/14/2006*
Parameters:	*Units*								
Thallium	mg/L	-	0.01 U	0.0095 U	0.0095 U	0.011 U	-	0.0098 U	0.0095 U
Thallium (Dissolved)	mg/L	-	0.01 U	0.0095 U	0.0095 U	-	-	0.0098 U	0.0095 U
Vanadium	mg/L	-	0.05 U	0.05 U	0.05 U	**0.199**[DQ]	-	0.0132 J	0.0059 J
Vanadium (Dissolved)	mg/L	-	0.05 U	0.05 U	0.05 U	-	-	0.16 U	0.05 U
Zinc	mg/L	-	0.03 U	0.03 U	0.03 U	0.12	-	0.03 U	0.011 J
Zinc (Dissolved)	mg/L	-	0.03 U	0.03 U	0.03 U	-	-	0.03 U	0.03 U

Refer to Table 1.6 for a list of notes

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW11*	*MW11*	*MW11R*	*MW11R*	*MW12*	*MW12*	*MW13*	*MW13*
Sample ID:		*GW17338082206010*	*GW-17338-121506-MJW-19*	*GW17338082106002*	*GW-17338-121406-MJW-07*	*GW17338082206006*	*GW-17338-121506-MJW-20*	*GW17338082206005*	*GW-17338-121406-MJW-15*
Sample Date:		*8/22/2006*	*12/15/2006*	*8/21/2006*	*12/14/2006*	*8/22/2006*	*12/15/2006*	*8/22/2006*	*12/14/2006*
Parameters:	*Units*								
Metals									
Aluminum	mg/L	**2.35[b]**	**4.73[b]**	**1[b]**	**2.61[b]**	**8.57[b]**	**63.9[b]**	**4.47[b]**	**0.524[b]**
Aluminum (Dissolved)	mg/L	0.16 U	0.19 U	0.2 U	0.2 U	0.16 U	**0.499[b]**	**0.211[b]**	0.19 U
Antimony	mg/L	0.012 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Antimony (Dissolved)	mg/L	0.012 U	0.01 U	0.01 U	0.01 U	0.012 U	0.01 U	0.012 U	0.01 U
Arsenic	mg/L	**0.0421[ac]**	**0.04[ac]**	0.005 U	0.0042 U	**0.0094[a]**	**0.0107[ac]**	**0.0255[ac]**	**0.0238[ac]**
Arsenic (Dissolved)	mg/L	**0.0437[c]**	**0.0474[c]**	0.005 U	0.0042 U	0.0069	0.0066	**0.0236[c]**	**0.0233[c]**
Barium	mg/L	**0.401[a]**	**0.355[a]**	**0.292[a]**	0.247	0.169 J	**0.518[a]**	**0.374[a]**	**0.322[a]**
Barium (Dissolved)	mg/L	0.397	0.357	0.294	0.231	0.155 J	0.192 J	0.432	0.34
Beryllium	mg/L	0.00031 J	0.002 U	0.002 U	0.002 U	0.00026 J	0.0017 J	0.00026 J	0.002 U
Beryllium (Dissolved)	mg/L	0.006 U	0.002 U	0.002 U	0.002 U	0.006 U	0.002 U	0.006 U	0.002 U
Cadmium	mg/L	0.0032 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Cadmium (Dissolved)	mg/L	0.0032 U	0.004 U	0.004 U	0.004 U	0.0032 U	0.004 U	0.0032 U	0.004 U
Calcium	mg/L	91.5	73.4	25.9	25.6	32.1	28	55.6	43.6
Calcium (Dissolved)	mg/L	92.1	77.3	27.6	27.3	34.9	27	65.4	46.3
Chromium Total	mg/L	0.0036 J	0.01 U	0.0071 J	0.01 U	0.0262	**0.127[ac]**	0.0086 J	0.01 U
Chromium Total (Dissolved)	mg/L	0.0057 U	0.01 U	0.0076 J	0.01 U	0.0057 U	0.01 U	0.0057 U	0.01 U
Chromium VI	mg/L	0.05 U	-	0.01 U	-	0.04 U	-	0.02 U	-
Chromium VI (Dissolved)	mg/L	0.02 U	-	0.01 U	-	0.02 U	-	0.02 U	-
Cobalt	mg/L	**0.234[b]**	0.176	0.0862	0.0668	0.05 U	0.0215 J	0.0047 J	0.05 U
Cobalt (Dissolved)	mg/L	0.216	0.171	0.0867	0.068	0.024 U	0.05 U	0.0022 J	0.05 U
Copper	mg/L	0.03 U	0.025 U	0.025 U	0.025 U	0.0108 J	0.0657	0.0046 J	0.025 U
Copper (Dissolved)	mg/L	0.03 U	0.025 U	0.025 U	0.025 U	0.03 U	0.025 U	0.03 U	0.025 U
Iron	mg/L	**167[b]**	**120[b]**	**13.1[b]**	**19.3[b]**	**60.9[b]**	**127[b]**	**70.2[b]**	**52.4[b]**
Iron (Dissolved)	mg/L	**159[b]**	**121[b]**	**6.89[b]**	**8.08[b]**	**59.9[b]**	**64[b]**	**65.7[b]**	**54.5[b]**
Lead	mg/L	0.0037 U	0.0053	0.003 U	0.003 U	**0.0156[bc]**	**0.0835[bc]**	0.003 U	0.003 U
Lead (Dissolved)	mg/L	0.0037 U	0.003 U	0.003 U	0.003 U	0.0037 U	0.0033	0.0037 U	0.003 U
Magnesium	mg/L	71.2	57.8	17.6	18.5	35.4	27	26.6	23.2
Magnesium (Dissolved)	mg/L	71.9	60.9	18.5	19.4	38.3	22	31.6	24.4
Manganese	mg/L	**1.93[ba]**	**1.26[ba]**	**0.97[ba]**	**1.13[ba]**	**0.33[b]**	**0.875[b]**	**0.694[b]**	**0.566[b]**
Manganese (Dissolved)	mg/L	**1.8[bd]**	**1.29[bd]**	**0.993[bd]**	**1.18[bd]**	**0.367[b]**	**0.512[b]**	**0.724[b]**	**0.587[b]**
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00012 J	0.0002 U	0.0002 U
Mercury (Dissolved)	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.0081 J	0.04 U	0.0053 J	0.006 J	0.01 J	0.0561	0.0045 J	0.04 U
Nickel (Dissolved)	mg/L	0.0053 J	0.04 U	0.004 J	0.0035 J	0.025 U	0.04 U	0.025 U	0.04 U
Potassium	mg/L	4.58 J	4.7 J	4.47 J	5.68	2.34 J	8.5	5.79 J	6.51
Potassium (Dissolved)	mg/L	4.58 J	4.59 J	4.72 J	5.78	2.6 J	2.69 J	7.75 J	6.82
Selenium	mg/L	0.0044 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Selenium (Dissolved)	mg/L	0.0044 U	0.005 U	0.005 U	0.005 U	0.0044 U	0.005 U	0.0044 U	0.005 U
Silver	mg/L	0.012 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Silver (Dissolved)	mg/L	0.012 U	0.01 U	0.01 U	0.01 U	0.012 U	0.01 U	0.012 U	0.01 U
Sodium	mg/L	85.8	82	79.6	85.7	33.5	27.8	98.2	100
Sodium (Dissolved)	mg/L	92.1	87.5	83.8	89.5	36.9	27.8	117	106

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW11***	***MW11***	***MW11R***	***MW11R***	***MW12***	***MW12***	***MW13***	***MW13***
Sample ID:		***GW17338082206010***	***GW-17338-121506-MJW-19***	***GW17338082106002***	***GW-17338-121406-MJW-07***	***GW17338082206006***	***GW-17338-121506-MJW-20***	***GW17338082206005***	***GW-17338-121406-MJW-15***
Sample Date:		***8/22/2006***	***12/15/2006***	***8/21/2006***	***12/14/2006***	***8/22/2006***	***12/15/2006***	***8/22/2006***	***12/14/2006***
Parameters:	***Units***								
Thallium	mg/L	0.0098 U	0.0095 U	0.01 U	0.0095 U	0.01 U	0.0095 U	0.01 U	0.0095 U
Thallium (Dissolved)	mg/L	0.0098 U	0.0095 U	0.01 U	0.0095 U	0.0098 U	0.0095 U	0.0098 U	0.0095 U
Vanadium	mg/L	0.0063 J	0.0096 J	0.0018 J	0.0052 J	**0.0266 J[p]**	**0.196[pa]**	0.0105 J	0.05 U
Vanadium (Dissolved)	mg/L	0.16 U	0.05 U	0.05 U	0.05 U	0.16 U	0.05 U	0.16 U	0.05 U
Zinc	mg/L	0.03 U	0.0148 J	0.067 U	0.0315	0.0792	0.237	0.03 U	0.03 U
Zinc (Dissolved)	mg/L	0.03 U	0.0094 J	0.1 U	0.021 J	0.03 U	0.0069 J	0.03 U	0.03 U

Refer to Table 1.6 for a list of notes

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW14*	*MW14*	*MW15*	*MW15*	*MW15*	*MW16*	*MW16*	*MW16*
Sample ID:		*GW17338082306014*	*GW-17338-121406-MJW-09*	*GW1733809060603*	*GW1733809060604*	*GW-17338-121406-MJW-08*	*GW1733809060605*	*GW1733809060606*	*GW-17338-121406-MJW-12*
Sample Date:		*8/23/2006*	*12/14/2006*	*9/6/2006*	*9/6/2006* Duplicate	*12/14/2006*	*9/6/2006*	*9/6/2006* Duplicate	*12/14/2006*
Parameters:	*Units*								
Metals									
Aluminum	mg/L	0.32 U	**6.71[b]**	**2.15[b]**	**2.33[b]**	**0.632[b]**	**0.837[b]**	**0.856[b]**	**0.543[b]**
Aluminum (Dissolved)	mg/L	0.32 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.19 U
Antimony	mg/L	0.024 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Antimony (Dissolved)	mg/L	0.024 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Arsenic	mg/L	0.0071 U	0.0042 U	0.005 U	0.005 U	0.0042 U	0.005 U	0.005 U	0.0042 U
Arsenic (Dissolved)	mg/L	0.0071 U	0.0042 U	0.005 U	0.005 U	0.0042 U	0.005 U	0.005 U	0.0042 U
Barium	mg/L	**0.28 J[a]**	0.255	0.136 J	0.134 J	0.141 J	**0.471[a]**	**0.469[a]**	**0.357[a]**
Barium (Dissolved)	mg/L	0.293 J	0.156 J	0.131 J	0.133 J	0.148 J	0.491	0.503	0.384
Beryllium	mg/L	0.012 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Beryllium (Dissolved)	mg/L	0.012 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cadmium	mg/L	0.0064 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Cadmium (Dissolved)	mg/L	0.0064 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Calcium	mg/L	52.6	33.4	26.8	25.8	30.2	84.7	85.9	58.2
Calcium (Dissolved)	mg/L	53.8	34.9	27.8	28.4	32.6	89.2	92.8	62.5
Chromium Total	mg/L	0.011 U	0.0116	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium Total (Dissolved)	mg/L	0.011 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium VI	mg/L	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U	-
Chromium VI (Dissolved)	mg/L	0.01 U	-	0.01 U	0.01 U	-	0.01 U	0.01 U	-
Cobalt	mg/L	0.048 U	0.05 U	0.0079 J	0.0073 J	0.05 U	0.05 U	0.05 U	0.05 U
Cobalt (Dissolved)	mg/L	0.048 U	0.05 U	0.0062 J	0.0065 J	0.05 U	0.05 U	0.05 U	0.05 U
Copper	mg/L	0.06 U	0.025 U	0.0057 J	0.025 U	0.025 U	0.025 U	0.0032 J	0.025 U
Copper (Dissolved)	mg/L	0.06 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Iron	mg/L	0.3 U	**6.85[p]**	**3.13[p]**	**3[p]**	**0.844[p]**	**7.59[p]**	**7.67[p]**	**10[p]**
Iron (Dissolved)	mg/L	0.3 U	0.15 U	0.15 U	0.15 U	0.15 U	**7.55[b]**	**7.63[b]**	**10.8[b]**
Lead	mg/L	0.0074 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Lead (Dissolved)	mg/L	0.0074 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Magnesium	mg/L	31	20.6	13.3	13	14.8	18.5	18.5	17.3
Magnesium (Dissolved)	mg/L	32.2	20.8	13.9	14.1	15.9	19.6	20	18.7
Manganese	mg/L	**0.0509[p]**	0.0403	**0.192[p]**	**0.191[p]**	**0.0758[p]**	**0.483[p]**	**0.49[p]**	**0.354[p]**
Manganese (Dissolved)	mg/L	**0.0519[b]**	0.0252	**0.174[b]**	**0.167[b]**	**0.0755[b]**	**0.496[b]**	**0.512[b]**	**0.38[b]**
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Mercury (Dissolved)	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.049 U	0.0117 J	0.0042 J	0.04 U	0.0052 J	0.04 U	0.04 U	0.04 U
Nickel (Dissolved)	mg/L	0.049 U	0.006 J	0.04 U	0.04 U	0.003 J	0.04 U	0.04 U	0.04 U
Potassium	mg/L	6.83 J	5.25	4.97 J	4.76 J	5.99	23.1	23.1	13.1
Potassium (Dissolved)	mg/L	6.94 J	5.11	5.06	5.21	6.23	23.9	24.7	13.9
Selenium	mg/L	0.0087 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Selenium (Dissolved)	mg/L	0.0087 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L	0.023 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Silver (Dissolved)	mg/L	0.023 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Sodium	mg/L	273	153	65.3	63.6	65.5	117	117	86.7
Sodium (Dissolved)	mg/L	274	162	69.1	70.9	69.3	122	126	93

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW14*	*MW14*	*MW15*	*MW15*	*MW15*	*MW16*	*MW16*	*MW16*
Sample ID:		*GW17338082306014*	*GW-17338-121406-MJW-09*	*GW1733809060603*	*GW1733809060604*	*GW-17338-121406-MJW-08*	*GW1733809060605*	*GW1733809060606*	*GW-17338-121406-MJW-12*
Sample Date:		*8/23/2006*	*12/14/2006*	*9/6/2006*	*9/6/2006* Duplicate	*12/14/2006*	*9/6/2006*	*9/6/2006* Duplicate	*12/14/2006*
Parameters:	*Units*								
Thallium	mg/L	0.02 U	0.0095 U	0.01 U	0.01 U	0.0095 U	0.01 U	0.01 U	0.0095 U
Thallium (Dissolved)	mg/L	0.02 U	0.0095 U	0.01 U	0.01 U	0.0095 U	0.01 U	0.01 U	0.0095 U
Vanadium	mg/L	0.31 U	0.0148 J	0.0052 J	0.0047 J	0.05 U	0.0016 J	0.05 U	0.05 U
Vanadium (Dissolved)	mg/L	0.31 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Zinc	mg/L	0.06 U	0.0277 J	0.0311 U	0.03 U	0.0073 J	0.03 U	0.03 U	0.03 U
Zinc (Dissolved)	mg/L	0.06 U	0.0229 J	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.0092 J

Refer to Table 1.6 for a list of notes

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		*MW16*	*MW17*	*MW17*	*MW18*	*MW18*	*MW19*	*MW19*
Sample ID:		*GW-17338-121406-MJW-13*	*GW1733809060607*	*GW-17338-121206-MJW-01*	*GW1733809070608*	*GW-17338-121206-MJW-02*	*GW1733809070609*	*GW-17338-121206-MJW-03*
Sample Date:		*12/14/2006*	*9/6/2006*	*12/12/2006*	*9/7/2006*	*12/12/2006*	*9/7/2006*	*12/12/2006*
Parameters:	*Units*							
Metals								
Aluminum	mg/L	**0.641**[b]	**4.8**[b]	**2.3**[b]	**0.898**[b]	**1.37**[b]	**13.5**[b]	**16**[b]
Aluminum (Dissolved)	mg/L	0.19 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Antimony	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Antimony (Dissolved)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Arsenic	mg/L	0.0042 U	0.005 U	0.0042 U	0.005 U	0.0042 U	**0.0046 J**[a]	**0.0038 J**[a]
Arsenic (Dissolved)	mg/L	0.0042 U	0.005 U	0.0042 U	0.005 U	0.0042 U	0.005 U	0.0032 J
Barium	mg/L	**0.359**[a]	0.137 J	0.122 J	0.0604 J	0.0471 J	0.166 J	**0.274**[a]
Barium (Dissolved)	mg/L	0.379	0.121 J	0.117 J	0.0602 J	0.0462 J	0.118 J	0.188 J
Beryllium	mg/L	0.002 U	0.00091 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Beryllium (Dissolved)	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cadmium	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Cadmium (Dissolved)	mg/L	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Calcium	mg/L	58.6	30.6	28.2	11.7	9.74	28.2	44.3
Calcium (Dissolved)	mg/L	61.5	33.8	30.4	12.3	10.2	30.2	44.6
Chromium Total	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0164	0.0254
Chromium Total (Dissolved)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chromium VI	mg/L	-	0.02 U	-	0.01 U	-	0.02 U	-
Chromium VI (Dissolved)	mg/L	-	0.01 U	-	0.01 U	-	0.01 U	-
Cobalt	mg/L	0.05 U	0.0048 J	0.05 U	0.0036 J	0.05 U	0.05 U	0.05 U
Cobalt (Dissolved)	mg/L	0.05 U	0.05 U	0.05 U	0.0036 J	0.05 U	0.05 U	0.05 U
Copper	mg/L	0.025 U	0.0051 J	0.025 U	0.025 U	0.025 U	0.0098 J	0.0175 J
Copper (Dissolved)	mg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Iron	mg/L	**10.1**[p]	**16.8**[p]	**7.59**[p]	**0.574**[p]	**0.924**[p]	**8.57**[p]	**12.5**[p]
Iron (Dissolved)	mg/L	**10.6**[b]	0.15 U	0.175	0.134 J	0.18	**0.864**[b]	**3.02**[b]
Lead	mg/L	0.0029 J	0.003 U	0.003 U	0.003 U	0.003 U	0.0086	0.0112
Lead (Dissolved)	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Magnesium	mg/L	17.4	13.6	12.9	10.5	8.88	7.62	12.3
Magnesium (Dissolved)	mg/L	18.4	14.5	13.7	11.2	9.33	7.78	11.6
Manganese	mg/L	**0.359**[p]	**0.189**[p]	**0.161**[p]	**0.667**[p]	**0.544**[p]	**0.26**[p]	**0.461**[p]
Manganese (Dissolved)	mg/L	**0.373**[b]	**0.123**[b]	**0.105**[b]	**0.711**[b]	**0.571**[b]	**0.25**[b]	**0.422**[b]
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.00011 J	0.0002 U	0.0002 U	0.0002 U
Mercury (Dissolved)	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.04 U	0.0104 J	0.0056 J	0.04 U	0.04 U	0.0094 J	0.0124 J
Nickel (Dissolved)	mg/L	0.04 U	0.04 U	0.003 J	0.04 U	0.04 U	0.04 U	0.04 U
Potassium	mg/L	13.1	4.47 J	5.05	1.8 J	5 U	4.53 J	6.02
Potassium (Dissolved)	mg/L	13.8	4.55 J	5.11	1.86 J	5 U	4.4 J	5.14
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Selenium (Dissolved)	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Silver (Dissolved)	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Sodium	mg/L	86.7	28.8	27.6	76.8	60.4	47.1	59.1
Sodium (Dissolved)	mg/L	92.1	30.7	29.1	81.8	63.1	51.2	56.8

TABLE 1.4

GROUNDWATER DATA ANALYTICAL RESULTS - METALS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW16***	***MW17***	***MW17***	***MW18***	***MW18***	***MW19***	***MW19***
Sample ID:		***GW-17338-121406-MJW-13***	***GW1733809060607***	***GW-17338-121206-MJW-01***	***GW1733809070608***	***GW-17338-121206-MJW-02***	***GW1733809070609***	***GW-17338-121206-MJW-03***
Sample Date:		***12/14/2006*** Duplicate	***9/6/2006***	***12/12/2006***	***9/7/2006***	***12/12/2006***	***9/7/2006***	***12/12/2006***
Parameters:	***Units***							
Thallium	mg/L	0.0095 U	0.01 U	0.0095 U	0.01 U	0.0095 U	0.01 U	0.0095 U
Thallium (Dissolved)	mg/L	0.0095 U	0.01 U	0.0095 U	0.01 U	0.0095 U	0.01 U	0.0095 U
Vanadium	mg/L	0.05 U	0.0133 J	0.0069 J	0.004 J	0.0059 J	**0.0298 J[o]**	**0.0396 J[oa]**
Vanadium (Dissolved)	mg/L	0.05 U	0.05 U	0.05 U	0.0019 J	0.05 U	0.05 U	0.05 U
Zinc	mg/L	0.0106 J	0.0315 U	0.03 U	0.03 U	0.03 U	0.03 U	0.0804
Zinc (Dissolved)	mg/L	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U

Refer to Table 1.6 for a list of notes

TABLE 1.5

GROUNDWATER DATA ANALYTICAL RESULTS - PCBs
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		***MW3***	***MW6***	***MW7***
Sample ID:		***MW3-060105EAP003***	***MW6-060105EAP004***	***MW7-060105EAP005***
Sample Date:		***6/1/2005***	***6/1/2005***	***6/1/2005***
Parameters:	***Units***			
PCBs				
Aroclor-1016 (PCB-1016)	mg/L	0.00053 U	0.00057 U	0.00056 U
Aroclor-1221 (PCB-1221)	mg/L	0.00053 U	0.00057 U	0.00056 U
Aroclor-1232 (PCB-1232)	mg/L	0.00053 U	0.00057 U	0.00056 U
Aroclor-1242 (PCB-1242)	mg/L	0.00053 U	0.00057 U	0.00056 U
Aroclor-1248 (PCB-1248)	mg/L	0.00053 U	0.00057 U	0.00056 U
Aroclor-1254 (PCB-1254)	mg/L	0.00053 U	0.00057 U	0.00056 U
Aroclor-1260 (PCB-1260)	mg/L	0.00053 U	0.00057 U	0.00056 U

Refer to Table 1.6 for a list of notes

TABLE 1.6

SECTION 1 NOTES
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

NOTES:

[1] Drinking water criteria are based on the federal MCLs. For chemicals that lack MCLs, the drinking water criteria are based on U.S. EPA Region 9 risk-based tap water ingestion PRGs (2004) for the lower of a target cancer risk of 10^{-5} or a target hazard quotient of 1.

- - not analyzed
> - reported value greater than associated value
a - exceeds URS Screening Level
b - exceeds URS Groundwater Value
c - drinking water criteria
J - estimated concentration
HQ - hazard quotient
MCL - maximum contaminant level
PCB - polychlorinated biphenyl
PRG - preliminary remediation goal
R - rejected
SVOC - semivolatile organic compound
U - not present at or above the associated value
UJ - estimated reporting limit
URS - uniform risk-based screening
U.S.EPA - United States Environmental Protection Agency
VOC - volatile organic compound

TABLE 2.1
GROUNDWATER ELEVATIONS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Well ID	*Reference Elevation*	*Depth to Water*						*Groundwater Elevation*					
		06/01/2005	*07/12/2005*	*11/07/2005*	*08/21/2006*	*09/06/2006 (1)*	*12/12/2006 (2)*	*06/01/2005*	*07/12/2005*	*11/07/2005*	*08/21/2006*	*09/06/2006 (1)*	*12/12/2006 (2)*
MW2	77.15	11.09	11.21	11.72	11.65	11.41	11.61	66.06	65.94	65.43	65.50	65.74	65.54
MW3	77.59	10.90	10.93	11.60	11.73	-	11.61	66.69	66.66	65.99	65.86	-	65.98
MW3D	77.60	-	-	12.16	12.24	-	12.70	-	-	65.44	65.36	-	64.90
MW6	77.84	11.48	11.62	12.24	12.32	12.01	12.19	66.36	66.23	65.60	65.52	65.83	65.65
MW7	78.07	12.20	12.40	13.03	13.08	-	12.97	65.87	65.67	65.04	64.99	-	65.10
MW8	77.46	12.22	12.30	12.86	12.86	-	12.75	65.24	65.16	64.61	64.60	-	64.71
MW9	74.92	10.86	10.68	11.05	11.02	-	10.90	64.06	64.24	63.87	63.90	-	64.02
MW10	77.48	10.92	11.03	11.65	11.64	-	11.65	66.56	66.45	65.83	65.84	-	65.83
MW11	77.71	-	-	12.37	12.44	-	12.30	-	-	65.34	65.27	-	65.41
MW11R	77.30	-	-	13.00	12.98	-	12.86	-	-	64.30	64.32	-	64.44
MW12	77.87	-	-	12.31	12.47	-	12.33	-	-	65.56	65.40	-	65.54
MW13	77.82	-	-	12.65	12.70	-	12.59	-	-	65.17	65.12	-	65.23
MW14	79.17	-	-	16.23	16.15	-	15.99	-	-	62.94	63.02	-	63.18
MW15	78.76	-	-	-	-	13.12	13.44	-	-	-	-	65.64	65.32
MW16	78.14	-	-	-	-	11.57	11.79	-	-	-	-	66.57	66.35
MW17	78.76	-	-	-	-	12.42	12.54	-	-	-	-	66.34	66.22
MW18	78.99	-	-	-	-	12.76	12.89	-	-	-	-	66.23	66.10
MW19	78.74	-	-	-	-	13.96	14.40	-	-	-	-	64.78	64.34

Notes:

- no measurement recorded

(1) - depths recorded on 09/06/06 thru 09/07/06

(2) - depths recorded on 12/12/06 thru 12/15/06

TABLE 2.2
WATER WELL DETAILS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Modified Grid No.	*Permit Number*	*Well Use*	*Local ID*	*Desired Capacity*	*Screen Bottom*	*Screen Top*	*Address*	*City*	*Casing Diameter (inches)*	*Daily Use*	*Date Completed*	*Site Location Comments*
084-356	194922	1	ORC-1*ORC-10	-	-	-	Blue Ball & Post Rd	Marcus Hook	-	-	-	3701 Kirkwood Hwy.
084-356	194923	1	ORC-11*ORC-16	-	-	-	Blue Ball & Post Rd	Marcus Hook	-	-	-	3701 Kirkwood Hwy.
086-356	50788	D	-	-	-	-	c/o Walton Corp	Newark	6	-	19820503	
086-358	99902	A	-	10	-	-	2311 Newport Gap Pike	Wilmington	6.2	1	19940614	
086-360	37136	D	-	5	-	-	N/A	Hockessin	5	1	-	N side of Faulkland Rd W side of Red Clay Creek
086-360	38893	D	Faulkland Rd	5	-	-	214 Waverley Rd	Wilmington	-	1	19770914	Faulkland Rd, Rd 270
086-360	40000	D	Rt 48	10	-	-	15 Hillside Rd	Wilmington	6	1	19771121	E of Cr 282 on the S side of Lancaster Rd (Rt 48)
086-360	182710	D	Fells	6	-	-	2325 Fells Lane	Wilmington	6	1	20020115	W/ Fells Ln. N/RT 34
088-350	171366	S	Golf Range	30	45	35	702 First State Blvd	Wilmington	4	32	20000901	2000' S/ Rt 4, 2500' E/First State Blvd
088-350	176502	A	Rt 4	25	55	40	702 First State Blvd	Wilmington	4	25	20010626	2000' S/ Rt 4, 2500' E/First State Blvd
090-346	44108	C	Cr 327	10	62.2	56	449 Old Airport Rd	New Castle	4	0.6	19791006	Cr 327 on the N side.
090-346	51509	D	Cr 327	10	36	26	495 Old Airport Rd	New Castle	4	0.6	19820909	N on Cr 327, N of Rt 95, W of Cr 141
090-346	51576	D	Cr 327	10	35	25	495 Old Airport Rd	New Castle	4	0.6	19820909	N on Cr 327, W of Cr 141, N of Interstate 95, S of river
090-346	63882	C	-	10	115	95	473 Old Airport Rd	New Castle	4	2	19870116	
092-350	10216	P	-	48	100		15 N. Augustine St.	Newport	-	91	19400101	
092-350	10217	P	-	40	63		15 N. Augustine St.	Newport	-	68.9	19440101	
092-350	10218	P	-	60	87	67	15 N. Augustine St.	Newport	8	94.8	19630101	
092-350	10219	P	-	35	-	-	15 N. Augustine St.	Newport	-	50	19600101	
092-350	180049	3	WP 101	25	15	5	Barley Mill Plaza Bldg 27	Wilmington	6	0.3	20010821	Corners of James and Water sts, E of 141
092-350	180211	3	EW-102	25	15	5	Barley Mill Plaza Bldg 27	Wilmington	6	-	20010822	Corners of James and Water sts, E of 141

TABLE 2.2
WATER WELL DETAILS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Modified Grid No.	*Permit Number*	*Well Use*	*Local ID*	*Desired Capacity*	*Screen Bottom*	*Screen Top*	*Address*	*City*	*Casing Diameter (inches)*	*Daily Use*	*Date Completed*	*Site Location Comments*
092-350	180212	3	WP-103	25	15	5	Barley Mill Plaza Bldg 27	Wilmington	6	-	20010821	Corners of James and Water sts, E of 141
092-350	180213	3	EW-104	25	15	5	Barley Mill Plaza Bldg 27	Wilmington	6	-	20010822	Corners of James and Water sts, E of 141
092-350	180214	3	WP-105	25	15	5	Barley Mill Plaza Bldg 27	Wilmington	6	-	20010822	Corners of James and Water sts, E of 141
098-352	197622	3	RW-2	1	18	3	403 Meco Drive	Wilmington	6	1.4	20040122	403-408 Meco Dr., Wayman Site
098-352	198070	3	RW-4		20	5	406 Meco Drive	Wilmington	6	-	20040120	406 Meco Dr
098-352	198150	3	RW-3	1	18	3	403 Meco Drive	Wilmington	6	1.4	20040122	403-408 Meco Dr., Wayman Site
098-352	198187	3	RW-5		19	4	406 Meco Drive	Wilmington	6	-	20040120	406 Meco Dr
098-352	198188	3	RW-6	1	18	3	404 Meco Drive	Wilmington	6	1	20040121	404 Meco Dr, Wilmington

NOTES:

Well Use: A - Agriculture
C - Miscellaneous Public
D - Domestic
P - Public
S - SB 126 - Agricultural in CPCN

- information not recorded in TEPP
CPCN - Certification of Convenience and Necessity
TEPP - Technology Enabled Permitting Process

TABLE 3.1

DATA PRESENTATION PARAMETERS
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

	Drinking Water Criteria [1]	*No. of Samples*	*No. of Detections*	*No. of Exceeding*	*Max. Value Detected*
VOCs (mg/L)					
Acetone	32.9	33	12	5	470
Benzene	0.005	70	37	30	1.2
Chlorobenzene	0.1	70	21	4	0.81
Ethylbenzene	0.7	70	49	16	18
Methyl Tert Butyl Ether	0.374	65	32	6	0.81
Toluene	1	70	46	16	190
Xylene (total)	10	70	52	5	30
SVOCs (mg/L)					
bis(2-Ethylhexyl)phthalate	0.006	69	3	2	0.016
Methylphenol (Cresol)[2]	0.183	69	69	6	1.06
Naphthalene	0.73	69	37	4	2.4
Metals (mg/L)					
Arsenic	0.01	55	22	11	0.0421
Arsenic (dissolved)	0.01	42	12	8	0.0474
Chromium Total	0.1	55	22	4	0.251
Lead	0.015	55	17	8	0.124
Manganese	0.876	51	51	23	21.3
Manganese (Dissolved)	0.876	42	42	18	21
Vanadium	0.0365	51	29	4	0.199

NOTES:

[1] Drinking water criteria are based on the federal MCLs. For chemicals that lack MCLs, the drinking water criteria are based on U.S. EPA Region 9 risk-basedtap water ingestion PRGs (2004) for the lower of a target cancer risk of 10^{-5} or a target hazard quotient of 1.

[2] The concentration of methylphenol (total) in a sample is the sum of the concentrations of the detected isomers.

MCL - maximum contaminant level
PRG - preliminary remediation goal
SVOCs - semivolatile organic compounds
U.S. EPA - United States Environmental Protection Agency
VOCs - volatile organic compounds

Table 5.1: Scenarios for Potential Human Exposure to Groundwater at OU-2 GM Wilmington Assembly Plant, Wilmington, Delaware				
Receptor Population	**Exposure Route**	**Possible Currently?**	**Possible in Future?**	**Comments**
Routine Workers	ingestion of and dermal contact with groundwater and inhalation of groundwater-derived vapors during use of groundwater for drinking water.	No	No	Water is obtained from the Artesian Water Company, Newark, Delaware. The Site is currently active, therefore routine worker exposure to groundwater, through vapor inhalation, is possible.
	incidental ingestion of and dermal contact with groundwater and inhalation of groundwater-derived vapors during use of groundwater for purposes other than drinking water.	No	No	
	inhalation of groundwater-derived vapors that migrate through the vadose zone soil to outdoor air.	Yes	Yes	
	inhalation of groundwater-derived vapors that migrate through building foundations into indoor air at the Weld Water Building and the Pump House.	Yes	Yes	
Construction/ Maintenance Workers	incidental ingestion of and dermal contact with exposed groundwater; inhalation of vapors from exposed groundwater in air.	Yes	Yes	Potential exposure to groundwater is possible in excavations where groundwater is encountered.
Trespassers	inhalation of groundwater-derived vapors that migrate through the vadose zone soil to outdoor air.	Yes	Yes	Trespassers are unlikely to be present in OU-2, since access to the Plant is controlled by security personnel and fencing. However, if trespassers were to be in OU-2, they could be exposed to constituents through vapor inhalation.

Table 5.2a: Comparison of Estimated Indoor Air Concentrations to Occupational Air Limits for Routine Worker Exposure at the Weld Water Bldg
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	Carc Class	C_{gw} [1] (mg/l)	C_{air} (mg/m^3)	Occupational Limit (mg/m^3)	Ratio of C_{air} to Occupational Limit
VOC	Acetone	67-64-1	ID	4.70E+02	1.38E-02	2.4E+03	5.8E-06
VOC	Benzene	71-43-2	A	1.20E+00	2.85E-04	3.2E+00	8.9E-05
VOC	2-Butanone	78-93-3	ID	8.50E-01	2.63E-05	5.9E+02	4.5E-08
VOC	Chlorobenzene	108-90-7	D	7.60E-01	1.23E-04	3.5E+02	3.5E-07
VOC	Cumene	98-82-8	D	1.00E-01	2.90E-05	2.5E+02	1.2E-07
VOC	Cyclohexane	110-82-7	ID	7.90E-02	9.70E-05	1.1E+03	9.2E-08
VOC	1,2-Dichlorobenzene	95-50-1	D	6.80E-03	7.20E-07	3.0E+02	2.4E-09
VOC	1,3-Dichlorobenzene	541-73-1	D	1.00E-03	1.36E-07		
VOC	1,4-Dichlorobenzene	106-46-7	C	1.40E-02	1.68E-06	4.5E+02	3.7E-09
VOC	cis-1,2-Dichloroethene	156-59-2	ID	7.10E-03	1.37E-06	7.9E+02	1.7E-09
VOC	trans-1,2-Dichloroethene	156-60-5		4.00E-04	1.24E-07	7.9E+02	1.6E-10
VOC	Ethyl Benzene	100-41-4	D	1.80E+01	4.38E-03	4.4E+02	1.0E-05
VOC	Methyl Acetate	79-20-9		4.50E-02	1.86E-06	6.1E+02	3.1E-09
VOC	Methyl tert-butyl ether	1634-04-4		8.10E-01	6.37E-05	1.8E+02	3.5E-07
VOC	4-Methyl-2-pentanone	108-10-1	ID	5.80E-01	2.18E-05	4.1E+02	5.3E-08
VOC	Methylcyclohexane	108-87-2		2.00E-01	2.73E-04	2.0E+03	1.4E-07
VOC	Styrene	100-42-5		3.00E-04	3.92E-08	4.3E+02	9.2E-11
VOC	Tetrachloroethene	127-18-4	C-B2	1.60E-03	6.41E-07	6.8E+02	9.4E-10
VOC	Toluene	108-88-3	ID	1.90E+02	4.72E-02	7.5E+02	6.3E-05
VOC	1,2,4-Trichlorobenzene	120-82-1	D	7.00E-04	4.79E-08	3.7E+01	1.3E-09
VOC	Trichloroethene	79-01-6	C-B2	3.00E-03	9.39E-07	5.4E+02	1.7E-09
VOC	Xylenes (total)	1330-20-7	ID	3.00E+01	7.11E-03	4.4E+02	1.6E-05
SVOC	Acenaphthene	83-32-9		2.20E-03	7.64E-08	2.0E-01	3.8E-07
SVOC	Acetophenone	98-86-2	D	1.80E-01	2.06E-06	4.9E+01	4.2E-08
SVOC	Anthracene	120-12-7	D	3.50E-04	8.94E-09	2.0E-01	4.5E-08
SVOC	Benzaldehyde	100-52-7		1.40E-01	2.72E-06		
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1.60E-02	2.76E-09	5.0E+00	5.5E-10
SVOC	Caprolactam	105-60-2		1.70E-02	1.49E-10	5.0E+00	3.0E-11
SVOC	Carbazole	86-74-8	B2	3.00E-04	7.97E-12		
SVOC	4-Chloroaniline	106-47-8		1.70E-03	9.49E-10		
SVOC	2-Chlorophenol	95-57-8		4.60E-03	2.56E-07		
SVOC	Dibenzofuran	132-64-9	D	5.50E-04	5.69E-09		
SVOC	2,4-Dimethylphenol	105-67-9		6.00E-01	1.80E-06		
SVOC	2,6-Dinitrotoluene	606-20-2	B2	4.00E-04	4.74E-10		
SVOC	Fluoranthene	206-44-0	D	5.20E-03	6.47E-08	2.0E-01	3.2E-07
SVOC	Fluorene	86-73-7	D	6.00E-04	1.56E-08	2.0E-01	7.8E-08
SVOC	2-Methylnaphthalene	91-57-6	ID	6.90E-02	3.76E-06	2.0E-01	1.9E-05
SVOC	Methylphenol (total)	1319-77-3		1.06E+00	1.49E-06	2.2E+01	6.8E-08
SVOC	Naphthalene	91-20-3	C	2.40E+00	1.30E-04	5.0E+01	2.6E-06
SVOC	Pentachlorophenol	87-86-5	B2	5.00E-04	2.12E-11	5.0E-01	4.2E-11
SVOC	Phenanthrene	85-01-8	D	9.00E-04	1.49E-08	2.0E-01	7.5E-08
SVOC	Phenol	108-95-2	ID	3.80E-02	2.53E-08	1.9E+01	1.3E-09
SVOC	Pyrene	129-00-0	D	2.80E-03	2.92E-08	2.0E-01	1.5E-07
INORG	Arsenic	7440-38-2	A	4.74E-02		5.0E-01	
INORG	Barium	7440-39-3	NC	5.55E-01		5.0E-01	
INORG	Beryllium	7440-41-7	B1	2.40E-03		2.0E-03	
INORG	Chromium (total)	7440-47-3		1.45E-01		1.0E+00	
INORG	Cobalt	7440-48-4	B1	2.34E-01		1.0E-01	
INORG	Copper	7440-50-8	D	6.57E-02		1.0E+00	
INORG	Manganese	7439-96-5	D	2.13E+01		5.0E+00	
INORG	Mercury	7439-97-6	D	1.50E-04	1.89E-08	2.5E-02	7.5E-07
INORG	Nickel	7440-02-0	A	6.62E-02		1.0E+00	
INORG	Silver	7440-22-4	D	5.80E-03		1.0E-02	
INORG	Vanadium	7440-62-2		1.99E-01		1.0E-01	
INORG	Zinc	7440-66-6	ID	2.37E-01			
			Sum:				**2.1E-04**

Note:

1. The highest detected concentrations in OU-2 among all groundwater sampling locations and sampling events.

Table 5.2b: Comparison of Estimated Indoor Air Concentrations to Occupational Air Limits for Routine Worker Exposure at the Pump House
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	Carc Class	C_{gw} [1] (mg/l)	C_{air} (mg/m^3)	Occupational Limit (mg/m^3)	Ratio of C_{air} to Occupational Limit
VOC	Acetone	67-64-1	ID	4.70E+02	9.22E-03	2.4E+03	3.8E-06
VOC	Benzene	71-43-2	A	1.20E+00	2.93E-04	3.2E+00	9.2E-05
VOC	2-Butanone	78-93-3	ID	8.50E-01	1.98E-05	5.9E+02	3.3E-08
VOC	Chlorobenzene	108-90-7	D	7.60E-01	1.32E-04	3.5E+02	3.8E-07
VOC	Cumene	98-82-8	D	1.00E-01	2.64E-05	2.5E+02	1.1E-07
VOC	Cyclohexane	110-82-7	ID	7.90E-02	6.23E-05	1.1E+03	5.9E-08
VOC	1,2-Dichlorobenzene	95-50-1	D	6.80E-03	7.90E-07	3.0E+02	2.6E-09
VOC	1,3-Dichlorobenzene	541-73-1	D	1.00E-03	1.47E-07		
VOC	1,4-Dichlorobenzene	106-46-7	C	1.40E-02	1.83E-06	4.5E+02	4.1E-09
VOC	cis-1,2-Dichloroethene	156-59-2	ID	7.10E-03	1.48E-06	7.9E+02	1.9E-09
VOC	trans-1,2-Dichloroethene	156-60-5		4.00E-04	1.26E-07	7.9E+02	1.6E-10
VOC	Ethyl Benzene	100-41-4	D	1.80E+01	4.28E-03	4.4E+02	9.8E-06
VOC	Methyl Acetate	79-20-9		4.50E-02	1.53E-06	6.1E+02	2.5E-09
VOC	Methyl tert-butyl ether	1634-04-4		8.10E-01	6.77E-05	1.8E+02	3.8E-07
VOC	4-Methyl-2-pentanone	108-10-1	ID	5.80E-01	2.08E-05	4.1E+02	5.1E-08
VOC	Methylcyclohexane	108-87-2		2.00E-01	1.80E-04	2.0E+03	9.0E-08
VOC	Styrene	100-42-5		3.00E-04	4.26E-08	4.3E+02	1.0E-10
VOC	Tetrachloroethene	127-18-4	C-B2	1.60E-03	5.47E-07	6.8E+02	8.1E-10
VOC	Toluene	108-88-3	ID	1.90E+02	4.69E-02	7.5E+02	6.2E-05
VOC	1,2,4-Trichlorobenzene	120-82-1	D	7.00E-04	5.50E-08	3.7E+01	1.5E-09
VOC	Trichloroethene	79-01-6	C-B2	3.00E-03	8.94E-07	5.4E+02	1.7E-09
VOC	Xylenes (total)	1330-20-7	ID	3.00E+01	7.18E-03	4.4E+02	1.7E-05
SVOC	Acenaphthene	83-32-9		2.20E-03	7.48E-08	2.0E-01	3.7E-07
SVOC	Acetophenone	98-86-2	D	1.80E-01	1.12E-06	4.9E+01	2.3E-08
SVOC	Anthracene	120-12-7	D	3.50E-04	7.16E-09	2.0E-01	3.6E-08
SVOC	Benzaldehyde	100-52-7		1.40E-01	1.69E-06		
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1.60E-02	1.19E-09	5.0E+00	2.4E-10
SVOC	Caprolactam	105-60-2		1.70E-02	6.51E-11	5.0E+00	1.3E-11
SVOC	Carbazole	86-74-8	B2	3.00E-04	3.48E-12		
SVOC	4-Chloroaniline	106-47-8		1.70E-03	4.11E-10		
SVOC	2-Chlorophenol	95-57-8		4.60E-03	2.74E-07		
SVOC	Dibenzofuran	132-64-9	D	5.50E-04	3.22E-09		
SVOC	2,4-Dimethylphenol	105-67-9		6.00E-01	8.14E-07		
SVOC	2,6-Dinitrotoluene	606-20-2	B2	4.00E-04	2.05E-10		
SVOC	Fluoranthene	206-44-0	D	5.20E-03	3.86E-08	2.0E-01	1.9E-07
SVOC	Fluorene	86-73-7	D	6.00E-04	1.24E-08	2.0E-01	6.2E-08
SVOC	2-Methylnaphthalene	91-57-6	ID	6.90E-02	4.14E-06	2.0E-01	2.1E-05
SVOC	Methylphenol (total)	1319-77-3		1.06E+00	6.54E-07	2.2E+01	3.0E-08
SVOC	Naphthalene	91-20-3	C	2.40E+00	1.42E-04	5.0E+01	2.8E-06
SVOC	Pentachlorophenol	87-86-5	B2	5.00E-04	9.22E-12	5.0E-01	1.8E-11
SVOC	Phenanthrene	85-01-8	D	9.00E-04	9.43E-09	2.0E-01	4.7E-08
SVOC	Phenol	108-95-2	ID	3.80E-02	1.10E-08	1.9E+01	5.8E-10
SVOC	Pyrene	129-00-0	D	2.80E-03	1.57E-08	2.0E-01	7.8E-08
INORG	Arsenic	7440-38-2	A	4.74E-02		5.0E-01	
INORG	Barium	7440-39-3	NC	5.55E-01		5.0E-01	
INORG	Beryllium	7440-41-7	B1	2.40E-03		2.0E-03	
INORG	Chromium (total)	7440-47-3		1.45E-01		1.0E+00	
INORG	Cobalt	7440-48-4	B1	2.34E-01		1.0E-01	
INORG	Copper	7440-50-8	D	6.57E-02		1.0E+00	
INORG	Manganese	7439-96-5	D	2.13E+01		5.0E+00	
INORG	Mercury	7439-97-6	D	1.50E-04	2.05E-08	2.5E-02	8.2E-07
INORG	Nickel	7440-02-0	A	6.62E-02		1.0E+00	
INORG	Silver	7440-22-4	D	5.80E-03		1.0E-02	
INORG	Vanadium	7440-62-2		1.99E-01		1.0E-01	
INORG	Zinc	7440-66-6	ID	2.37E-01			
			Sum:				**2.1E-04**

Note:

1. The highest detected concentrations in OU-2 among all groundwater sampling locations and sampling events.

Table 5.2c: Cancer Risk Estimates for Routine Worker Indoor Air Vapor Inhalation at the Weld Water Bldg
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	Carc Class	C_{gw} [1] (mg/l)	C_{air} (mg/m^3)	URF (m^3/mg)	Risk
VOC	Acetone	67-64-1	ID	4.70E+02	1.38E-02		
VOC	Benzene	71-43-2	A	1.20E+00	2.85E-04	7.8E-03	5.4E-07
VOC	2-Butanone	78-93-3	ID	8.50E-01	2.63E-05		
VOC	Chlorobenzene	108-90-7	D	7.60E-01	1.23E-04		
VOC	Cumene	98-82-8	D	1.00E-01	2.90E-05		
VOC	Cyclohexane	110-82-7	ID	7.90E-02	9.70E-05		
VOC	1,2-Dichlorobenzene	95-50-1	D	6.80E-03	7.20E-07		
VOC	1,3-Dichlorobenzene	541-73-1	D	1.00E-03	1.36E-07		
VOC	1,4-Dichlorobenzene	106-46-7	C	1.40E-02	1.68E-06	6.3E-03	2.6E-09
VOC	cis-1,2-Dichloroethene	156-59-2	ID	7.10E-03	1.37E-06		
VOC	trans-1,2-Dichloroethene	156-60-5		4.00E-04	1.24E-07		
VOC	Ethyl Benzene	100-41-4	D	1.80E+01	4.38E-03		
VOC	Methyl Acetate	79-20-9		4.50E-02	1.86E-06		
VOC	Methyl tert-butyl ether	1634-04-4		8.10E-01	6.37E-05		
VOC	4-Methyl-2-pentanone	108-10-1	ID	5.80E-01	2.18E-05		
VOC	Methylcyclohexane	108-87-2		2.00E-01	2.73E-04		
VOC	Styrene	100-42-5		3.00E-04	3.92E-08		
VOC	Tetrachloroethene	127-18-4	C-B2	1.60E-03	6.41E-07	3.1E-03	4.8E-10
VOC	Toluene	108-88-3	ID	1.90E+02	4.72E-02		
VOC	1,2,4-Trichlorobenzene	120-82-1	D	7.00E-04	4.79E-08		
VOC	Trichloroethene	79-01-6	C-B2	3.00E-03	9.39E-07	1.7E-03	3.9E-10
VOC	Xylenes (total)	1330-20-7	ID	3.00E+01	7.11E-03		
SVOC	Acenaphthene	83-32-9		2.20E-03	7.64E-08		
SVOC	Acetophenone	98-86-2	D	1.80E-01	2.06E-06		
SVOC	Anthracene	120-12-7	D	3.50E-04	8.94E-09		
SVOC	Benzaldehyde	100-52-7		1.40E-01	2.72E-06		
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1.60E-02	2.76E-09	4.0E-03	3E-12
SVOC	Caprolactam	105-60-2		1.70E-02	1.49E-10		
SVOC	Carbazole	86-74-8	B2	3.00E-04	7.97E-12	5.7E-03	1E-14
SVOC	4-Chloroaniline	106-47-8		1.70E-03	9.49E-10		
SVOC	2-Chlorophenol	95-57-8		4.60E-03	2.56E-07		
SVOC	Dibenzofuran	132-64-9	D	5.50E-04	5.69E-09		
SVOC	2,4-Dimethylphenol	105-67-9		6.00E-01	1.80E-06		
SVOC	2,6-Dinitrotoluene	606-20-2	B2	4.00E-04	4.74E-10	1.9E-01	2E-11
SVOC	Fluoranthene	206-44-0	D	5.20E-03	6.47E-08		
SVOC	Fluorene	86-73-7	D	6.00E-04	1.56E-08		
SVOC	2-Methylnaphthalene	91-57-6	ID	6.90E-02	3.76E-06		
SVOC	Methylphenol (total)	1319-77-3		1.06E+00	1.49E-06		
SVOC	Naphthalene	91-20-3	C	2.40E+00	1.30E-04		
SVOC	Pentachlorophenol	87-86-5	B2	5.00E-04	2.12E-11	3.4E-02	2E-13
SVOC	Phenanthrene	85-01-8	D	9.00E-04	1.49E-08		
SVOC	Phenol	108-95-2	ID	3.80E-02	2.53E-08		
SVOC	Pyrene	129-00-0	D	2.80E-03	2.92E-08		
INORG	Arsenic	7440-38-2	A	4.74E-02		4.3E+00	
INORG	Barium	7440-39-3	NC	5.55E-01			
INORG	Beryllium	7440-41-7	B1	2.40E-03		2.4E+00	
INORG	Chromium (total)	7440-47-3		1.45E-01		1.2E+01	
INORG	Cobalt	7440-48-4	B1	2.34E-01		2.8E+00	
INORG	Copper	7440-50-8	D	6.57E-02			
INORG	Manganese	7439-96-5	D	2.13E+01			
INORG	Mercury	7439-97-6	D	1.50E-04	1.89E-08		
INORG	Nickel	7440-02-0	A	6.62E-02		2.4E-01	
INORG	Silver	7440-22-4	D	5.80E-03			
INORG	Vanadium	7440-62-2		1.99E-01			
INORG	Zinc	7440-66-6	ID	2.37E-01			
		Cumulative Risk:					**5E-07**

Note:
1. The highest detected concentrations in OU-2 among all groundwater sampling locations and sampling events.

Table 5.2d: Noncancer Risk Estimates for Routine Worker Indoor Air Vapor Inhalation at the Weld Water Bldg
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	Carc Class	C_{gw}[1] (mg/l)	C_{air} (mg/m^3)	RfC (mg/m^3)	HQ
VOC	Acetone	67-64-1	ID	4.70E+02	1.38E-02	3.1E+01	3.1E-04
VOC	Benzene	71-43-2	A	1.20E+00	2.85E-04	3.0E-02	6.5E-03
VOC	2-Butanone	78-93-3	ID	8.50E-01	2.63E-05	5.0E+00	3.6E-06
VOC	Chlorobenzene	108-90-7	D	7.60E-01	1.23E-04	5.0E-02	1.7E-03
VOC	Cumene	98-82-8	D	1.00E-01	2.90E-05	4.0E-01	5.0E-05
VOC	Cyclohexane	110-82-7	ID	7.90E-02	9.70E-05	6.0E+00	1.1E-05
VOC	1,2-Dichlorobenzene	95-50-1	D	6.80E-03	7.20E-07	2.0E-01	2.5E-06
VOC	1,3-Dichlorobenzene	541-73-1	D	1.00E-03	1.36E-07	1.4E-01	6.7E-07
VOC	1,4-Dichlorobenzene	106-46-7	C	1.40E-02	1.68E-06	8.0E-01	1.4E-06
VOC	cis-1,2-Dichloroethene	156-59-2	ID	7.10E-03	1.37E-06	3.5E-02	2.7E-05
VOC	trans-1,2-Dichloroethene	156-60-5		4.00E-04	1.24E-07	6.0E-02	1.4E-06
VOC	Ethyl Benzene	100-41-4	D	1.80E+01	4.38E-03	1.0E+00	3.0E-03
VOC	Methyl Acetate	79-20-9		4.50E-02	1.86E-06	3.5E+00	3.6E-07
VOC	Methyl tert-butyl ether	1634-04-4		8.10E-01	6.37E-05	3.0E+00	1.5E-05
VOC	4-Methyl-2-pentanone	108-10-1	ID	5.80E-01	2.18E-05	3.0E+00	5.0E-06
VOC	Methylcyclohexane	108-87-2		2.00E-01	2.73E-04	3.0E+00	6.2E-05
VOC	Styrene	100-42-5		3.00E-04	3.92E-08	1.0E+00	2.7E-08
VOC	Tetrachloroethene	127-18-4	C-B2	1.60E-03	6.41E-07	4.0E-01	1.1E-06
VOC	Toluene	108-88-3	ID	1.90E+02	4.72E-02	5.0E+00	6.5E-03
VOC	1,2,4-Trichlorobenzene	120-82-1	D	7.00E-04	4.79E-08	3.5E-03	9.4E-06
VOC	Trichloroethene	79-01-6	C-B2	3.00E-03	9.39E-07		
VOC	Xylenes (total)	1330-20-7	ID	3.00E+01	7.11E-03	1.0E-01	5E-02
SVOC	Acenaphthene	83-32-9		2.20E-03	7.64E-08	2.1E-01	2E-07
SVOC	Acetophenone	98-86-2	D	1.80E-01	2.06E-06	3.5E-01	4E-06
SVOC	Anthracene	120-12-7	D	3.50E-04	8.94E-09		
SVOC	Benzaldehyde	100-52-7		1.40E-01	2.72E-06	3.5E-01	5E-06
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1.60E-02	2.76E-09	7.0E-02	3E-08
SVOC	Caprolactam	105-60-2		1.70E-02	1.49E-10	1.8E+00	6E-11
SVOC	Carbazole	86-74-8	B2	3.00E-04	7.97E-12		
SVOC	4-Chloroaniline	106-47-8		1.70E-03	9.49E-10	1.4E-02	5E-08
SVOC	2-Chlorophenol	95-57-8		4.60E-03	2.56E-07	1.8E-02	1E-05
SVOC	Dibenzofuran	132-64-9	D	5.50E-04	5.69E-09	7.0E-03	6E-07
SVOC	2,4-Dimethylphenol	105-67-9		6.00E-01	1.80E-06	7.0E-02	2E-05
SVOC	2,6-Dinitrotoluene	606-20-2	B2	4.00E-04	4.74E-10	3.5E-03	9E-08
SVOC	Fluoranthene	206-44-0	D	5.20E-03	6.47E-08	1.4E-01	3E-07
SVOC	Fluorene	86-73-7	D	6.00E-04	1.56E-08	1.4E-01	8E-08
SVOC	2-Methylnaphthalene	91-57-6	ID	6.90E-02	3.76E-06	3.0E-03	9E-04
SVOC	Methylphenol (total)	1319-77-3		1.06E+00	1.49E-06		
SVOC	Naphthalene	91-20-3	C	2.40E+00	1.30E-04	3.0E-03	3E-02
SVOC	Pentachlorophenol	87-86-5	B2	5.00E-04	2.12E-11	1.1E-01	1E-10
SVOC	Phenanthrene	85-01-8	D	9.00E-04	1.49E-08	1.1E-01	1E-07
SVOC	Phenol	108-95-2	ID	3.80E-02	2.53E-08		
SVOC	Pyrene	129-00-0	D	2.80E-03	2.92E-08	1.1E-01	2E-07
INORG	Arsenic	7440-38-2	A	4.74E-02			
INORG	Barium	7440-39-3	NC	5.55E-01			
INORG	Beryllium	7440-41-7	B1	2.40E-03		2.0E-05	
INORG	Chromium (total)	7440-47-3		1.45E-01		1.0E-04	
INORG	Cobalt	7440-48-4	B1	2.34E-01		2.0E-05	
INORG	Copper	7440-50-8	D	6.57E-02		1.4E-01	
INORG	Manganese	7439-96-5	D	2.13E+01		5.0E-05	
INORG	Mercury	7439-97-6	D	1.50E-04	1.89E-08	3.0E-04	4E-05
INORG	Nickel	7440-02-0	A	6.62E-02		9.0E-05	
INORG	Silver	7440-22-4	D	5.80E-03		1.0E-05	
INORG	Vanadium	7440-62-2		1.99E-01		3.5E-03	
INORG	Zinc	7440-66-6	ID	2.37E-01		1.1E+00	
		Hazard Index:					**1E-01**

Note:

1. The highest detected concentrations in OU-2 among all groundwater sampling locations and sampling events.

Table 5.2e: Cancer Risk Estimates for Routine Worker Indoor Air Vapor Inhalation at the Pump House
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	Carc Class	C_{gw} [1] (mg/l)	C_{air} (mg/m^3)	URF (m^3/mg)	Risk
VOC	Acetone	67-64-1	ID	4.70E+02	9.22E-03		
VOC	Benzene	71-43-2	A	1.20E+00	2.93E-04	7.8E-03	5.6E-07
VOC	2-Butanone	78-93-3	ID	8.50E-01	1.98E-05		
VOC	Chlorobenzene	108-90-7	D	7.60E-01	1.32E-04		
VOC	Cumene	98-82-8	D	1.00E-01	2.64E-05		
VOC	Cyclohexane	110-82-7	ID	7.90E-02	6.23E-05		
VOC	1,2-Dichlorobenzene	95-50-1	D	6.80E-03	7.90E-07		
VOC	1,3-Dichlorobenzene	541-73-1	D	1.00E-03	1.47E-07		
VOC	1,4-Dichlorobenzene	106-46-7	C	1.40E-02	1.83E-06	6.3E-03	2.8E-09
VOC	cis-1,2-Dichloroethene	156-59-2	ID	7.10E-03	1.48E-06		
VOC	trans-1,2-Dichloroethene	156-60-5		4.00E-04	1.26E-07		
VOC	Ethyl Benzene	100-41-4	D	1.80E+01	4.28E-03		
VOC	Methyl Acetate	79-20-9		4.50E-02	1.53E-06		
VOC	Methyl tert-butyl ether	1634-04-4		8.10E-01	6.77E-05		
VOC	4-Methyl-2-pentanone	108-10-1	ID	5.80E-01	2.08E-05		
VOC	Methylcyclohexane	108-87-2		2.00E-01	1.80E-04		
VOC	Styrene	100-42-5		3.00E-04	4.26E-08		
VOC	Tetrachloroethene	127-18-4	C-B2	1.60E-03	5.47E-07	3.1E-03	4.1E-10
VOC	Toluene	108-88-3	ID	1.90E+02	4.69E-02		
VOC	1,2,4-Trichlorobenzene	120-82-1	D	7.00E-04	5.50E-08		
VOC	Trichloroethene	79-01-6	C-B2	3.00E-03	8.94E-07	1.7E-03	3.7E-10
VOC	Xylenes (total)	1330-20-7	ID	3.00E+01	7.18E-03		
SVOC	Acenaphthene	83-32-9		2.20E-03	7.48E-08		
SVOC	Acetophenone	98-86-2	D	1.80E-01	1.12E-06		
SVOC	Anthracene	120-12-7	D	3.50E-04	7.16E-09		
SVOC	Benzaldehyde	100-52-7		1.40E-01	1.69E-06		
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1.60E-02	1.19E-09	4.0E-03	1E-12
SVOC	Caprolactam	105-60-2		1.70E-02	6.51E-11		
SVOC	Carbazole	86-74-8	B2	3.00E-04	3.48E-12	5.7E-03	5E-15
SVOC	4-Chloroaniline	106-47-8		1.70E-03	4.11E-10		
SVOC	2-Chlorophenol	95-57-8		4.60E-03	2.74E-07		
SVOC	Dibenzofuran	132-64-9	D	5.50E-04	3.22E-09		
SVOC	2,4-Dimethylphenol	105-67-9		6.00E-01	8.14E-07		
SVOC	2,6-Dinitrotoluene	606-20-2	B2	4.00E-04	2.05E-10	1.9E-01	1E-11
SVOC	Fluoranthene	206-44-0	D	5.20E-03	3.86E-08		
SVOC	Fluorene	86-73-7	D	6.00E-04	1.24E-08		
SVOC	2-Methylnaphthalene	91-57-6	ID	6.90E-02	4.14E-06		
SVOC	Methylphenol (total)	1319-77-3		1.06E+00	6.54E-07		
SVOC	Naphthalene	91-20-3	C	2.40E+00	1.42E-04		
SVOC	Pentachlorophenol	87-86-5	B2	5.00E-04	9.22E-12	3.4E-02	8E-14
SVOC	Phenanthrene	85-01-8	D	9.00E-04	9.43E-09		
SVOC	Phenol	108-95-2	ID	3.80E-02	1.10E-08		
SVOC	Pyrene	129-00-0	D	2.80E-03	1.57E-08		
INORG	Arsenic	7440-38-2	A	4.74E-02		4.3E+00	
INORG	Barium	7440-39-3	NC	5.55E-01			
INORG	Beryllium	7440-41-7	B1	2.40E-03		2.4E+00	
INORG	Chromium (total)	7440-47-3		1.45E-01		1.2E+01	
INORG	Cobalt	7440-48-4	B1	2.34E-01		2.8E+00	
INORG	Copper	7440-50-8	D	6.57E-02			
INORG	Manganese	7439-96-5	D	2.13E+01			
INORG	Mercury	7439-97-6	D	1.50E-04	2.05E-08		
INORG	Nickel	7440-02-0	A	6.62E-02		2.4E-01	
INORG	Silver	7440-22-4	D	5.80E-03			
INORG	Vanadium	7440-62-2		1.99E-01			
INORG	Zinc	7440-66-6	ID	2.37E-01			
		Cumulative Risk:					**6E-07**

Note:
1. The highest detected concentrations in OU-2 among all groundwater sampling locations and sampling events.

Table 5.2f: Noncancer Risk Estimates for Routine Worker Indoor Air Vapor Inhalation at the Pump House
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	Carc Class	C_{gw}[1] (mg/l)	C_{air} (mg/m^3)	RfC (mg/m^3)	HQ
VOC	Acetone	67-64-1	ID	4.70E+02	9.22E-03	3.1E+01	2.0E-04
VOC	Benzene	71-43-2	A	1.20E+00	2.93E-04	3.0E-02	6.7E-03
VOC	2-Butanone	78-93-3	ID	8.50E-01	1.98E-05	5.0E+00	2.7E-06
VOC	Chlorobenzene	108-90-7	D	7.60E-01	1.32E-04	5.0E-02	1.8E-03
VOC	Cumene	98-82-8	D	1.00E-01	2.64E-05	4.0E-01	4.5E-05
VOC	Cyclohexane	110-82-7	ID	7.90E-02	6.23E-05	6.0E+00	7.1E-06
VOC	1,2-Dichlorobenzene	95-50-1	D	6.80E-03	7.90E-07	2.0E-01	2.7E-06
VOC	1,3-Dichlorobenzene	541-73-1	D	1.00E-03	1.47E-07	1.4E-01	7.2E-07
VOC	1,4-Dichlorobenzene	106-46-7	C	1.40E-02	1.83E-06	8.0E-01	1.6E-06
VOC	cis-1,2-Dichloroethene	156-59-2	ID	7.10E-03	1.48E-06	3.5E-02	2.9E-05
VOC	trans-1,2-Dichloroethene	156-60-5		4.00E-04	1.26E-07	6.0E-02	1.4E-06
VOC	Ethyl Benzene	100-41-4	D	1.80E+01	4.28E-03	1.0E+00	2.9E-03
VOC	Methyl Acetate	79-20-9		4.50E-02	1.53E-06	3.5E+00	3.0E-07
VOC	Methyl tert-butyl ether	1634-04-4		8.10E-01	6.77E-05	3.0E+00	1.5E-05
VOC	4-Methyl-2-pentanone	108-10-1	ID	5.80E-01	2.08E-05	3.0E+00	4.8E-06
VOC	Methylcyclohexane	108-87-2		2.00E-01	1.80E-04	3.0E+00	4.1E-05
VOC	Styrene	100-42-5		3.00E-04	4.26E-08	1.0E+00	2.9E-08
VOC	Tetrachloroethene	127-18-4	C-B2	1.60E-03	5.47E-07	4.0E-01	9.4E-07
VOC	Toluene	108-88-3	ID	1.90E+02	4.69E-02	5.0E+00	6.4E-03
VOC	1,2,4-Trichlorobenzene	120-82-1	D	7.00E-04	5.50E-08	3.5E-03	1.1E-05
VOC	Trichloroethene	79-01-6	C-B2	3.00E-03	8.94E-07		
VOC	Xylenes (total)	1330-20-7	ID	3.00E+01	7.18E-03	1.0E-01	5E-02
SVOC	Acenaphthene	83-32-9		2.20E-03	7.48E-08	2.1E-01	2E-07
SVOC	Acetophenone	98-86-2	D	1.80E-01	1.12E-06	3.5E-01	2E-06
SVOC	Anthracene	120-12-7	D	3.50E-04	7.16E-09		
SVOC	Benzaldehyde	100-52-7		1.40E-01	1.69E-06	3.5E-01	3E-06
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1.60E-02	1.19E-09	7.0E-02	1E-08
SVOC	Caprolactam	105-60-2		1.70E-02	6.51E-11	1.8E+00	3E-11
SVOC	Carbazole	86-74-8	B2	3.00E-04	3.48E-12		
SVOC	4-Chloroaniline	106-47-8		1.70E-03	4.11E-10	1.4E-02	2E-08
SVOC	2-Chlorophenol	95-57-8		4.60E-03	2.74E-07	1.8E-02	1E-05
SVOC	Dibenzofuran	132-64-9	D	5.50E-04	3.22E-09	7.0E-03	3E-07
SVOC	2,4-Dimethylphenol	105-67-9		6.00E-01	8.14E-07	7.0E-02	8E-06
SVOC	2,6-Dinitrotoluene	606-20-2	B2	4.00E-04	2.05E-10	3.5E-03	4E-08
SVOC	Fluoranthene	206-44-0	D	5.20E-03	3.86E-08	1.4E-01	2E-07
SVOC	Fluorene	86-73-7	D	6.00E-04	1.24E-08	1.4E-01	6E-08
SVOC	2-Methylnaphthalene	91-57-6	ID	6.90E-02	4.14E-06	3.0E-03	9E-04
SVOC	Methylphenol (total)	1319-77-3		1.06E+00	6.54E-07		
SVOC	Naphthalene	91-20-3	C	2.40E+00	1.42E-04	3.0E-03	3E-02
SVOC	Pentachlorophenol	87-86-5	B2	5.00E-04	9.22E-12	1.1E-01	6E-11
SVOC	Phenanthrene	85-01-8	D	9.00E-04	9.43E-09	1.1E-01	6E-08
SVOC	Phenol	108-95-2	ID	3.80E-02	1.10E-08		
SVOC	Pyrene	129-00-0	D	2.80E-03	1.57E-08	1.1E-01	1E-07
INORG	Arsenic	7440-38-2	A	4.74E-02			
INORG	Barium	7440-39-3	NC	5.55E-01			
INORG	Beryllium	7440-41-7	B1	2.40E-03		2.0E-05	
INORG	Chromium (total)	7440-47-3		1.45E-01		1.0E-04	
INORG	Cobalt	7440-48-4	B1	2.34E-01		2.0E-05	
INORG	Copper	7440-50-8	D	6.57E-02		1.4E-01	
INORG	Manganese	7439-96-5	D	2.13E+01		5.0E-05	
INORG	Mercury	7439-97-6	D	1.50E-04	2.05E-08	3.0E-04	5E-05
INORG	Nickel	7440-02-0	A	6.62E-02		9.0E-05	
INORG	Silver	7440-22-4	D	5.80E-03		1.0E-05	
INORG	Vanadium	7440-62-2		1.99E-01		3.5E-03	
INORG	Zinc	7440-66-6	ID	2.37E-01		1.1E+00	
		Hazard Index:					**1E-01**

Note:

1. The highest detected concentrations in OU-2 among all groundwater sampling locations and sampling events.

Table 5.3a: Comparison of Estimated Outdoor Air Concentrations to Occupational Air Limits for Routine Worker Exposure at the OU-2
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	Carc Class	C_{gw} [1] (mg/l)	C_{air} (mg/m^3)	Occupational Limits (mg/m^3)	Ratio of C_{air} to Occupational Limits
VOC	Acetone	67-64-1	ID	4.70E+02	6.87E-03	2.4E+03	2.9E-06
VOC	Benzene	71-43-2	A	1.20E+00	1.78E-03	3.2E+00	5.6E-04
VOC	2-Butanone	78-93-3	ID	8.50E-01	1.16E-05	5.9E+02	2.0E-08
VOC	Chlorobenzene	108-90-7	D	7.60E-01	6.25E-04	3.5E+02	1.8E-06
VOC	Cumene	98-82-8	D	1.00E-01	2.56E-04	2.5E+02	1.0E-06
VOC	Cyclohexane	110-82-7	ID	7.90E-02	3.91E-03	1.1E+03	3.7E-06
VOC	1,2-Dichlorobenzene	95-50-1	D	6.80E-03	2.71E-06	3.0E+02	9.0E-09
VOC	1,3-Dichlorobenzene	541-73-1	D	1.00E-03	6.50E-07		
VOC	1,4-Dichlorobenzene	106-46-7	C	1.40E-02	7.13E-06	4.5E+02	1.6E-08
VOC	cis-1,2-Dichloroethene	156-59-2	ID	7.10E-03	6.47E-06	7.9E+02	8.2E-09
VOC	trans-1,2-Dichloroethene	156-60-5		4.00E-04	8.07E-07	7.9E+02	1.0E-09
VOC	Ethyl Benzene	100-41-4	D	1.80E+01	3.23E-02	4.4E+02	7.4E-05
VOC	Methyl Acetate	79-20-9		4.50E-02	1.18E-06	6.1E+02	1.9E-09
VOC	Methyl tert-butyl ether	1634-04-4		8.10E-01	1.24E-04	1.8E+02	6.9E-07
VOC	4-Methyl-2-pentanone	108-10-1	ID	5.80E-01	1.82E-05	4.1E+02	4.4E-08
VOC	Methylcyclohexane	108-87-2		2.00E-01	1.91E-02	2.0E+03	9.6E-06
VOC	Styrene	100-42-5		3.00E-04	1.78E-07	4.3E+02	4.2E-10
VOC	Tetrachloroethene	127-18-4	C-B2	1.60E-03	6.44E-06	6.8E+02	9.5E-09
VOC	Toluene	108-88-3	ID	1.90E+02	3.33E-01	7.5E+02	4.4E-04
VOC	1,2,4-Trichlorobenzene	120-82-1	D	7.00E-04	9.06E-08	3.7E+01	2.4E-09
VOC	Trichloroethene	79-01-6	C-B2	3.00E-03	7.41E-06	5.4E+02	1.4E-08
VOC	Xylenes (total)	1330-20-7	ID	3.00E+01	4.78E-02	4.4E+02	1.1E-04
SVOC	Acenaphthene	83-32-9		2.20E-03	4.36E-08	2.0E-01	2.2E-07
SVOC	Acetophenone	98-86-2	D	1.80E-01	4.67E-07	4.9E+01	9.5E-09
SVOC	Anthracene	120-12-7	D	3.50E-04	2.24E-09	2.0E-01	1.1E-08
SVOC	Benzaldehyde	100-52-7		1.40E-01	7.28E-07		
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1.60E-02	1.86E-10	5.0E+00	3.7E-11
SVOC	Caprolactam	105-60-2		1.70E-02	4.99E-11	5.0E+00	1.0E-11
SVOC	Carbazole	86-74-8	B2	3.00E-04	9.84E-13		
SVOC	4-Chloroaniline	106-47-8		1.70E-03	8.63E-11		
SVOC	2-Chlorophenol	95-57-8		4.60E-03	2.73E-07		
SVOC	Dibenzofuran	132-64-9	D	5.50E-04	5.00E-10		
SVOC	2,4-Dimethylphenol	105-67-9		6.00E-01	2.14E-07		
SVOC	2,6-Dinitrotoluene	606-20-2	B2	4.00E-04	3.03E-11		
SVOC	Fluoranthene	206-44-0	D	5.20E-03	7.69E-09	2.0E-01	3.8E-08
SVOC	Fluorene	86-73-7	D	6.00E-04	4.21E-09	2.0E-01	2.1E-08
SVOC	2-Methylnaphthalene	91-57-6	ID	6.90E-02	5.65E-06	2.0E-01	2.8E-05
SVOC	Methylphenol (total)	1319-77-3		1.06E+00	2.08E-07	2.2E+01	9.4E-09
SVOC	Naphthalene	91-20-3	C	2.40E+00	2.08E-04	5.0E+01	4.2E-06
SVOC	Pentachlorophenol	87-86-5	B2	5.00E-04	2.71E-12	5.0E-01	5.4E-12
SVOC	Phenanthrene	85-01-8	D	9.00E-04	2.38E-09	2.0E-01	1.2E-08
SVOC	Phenol	108-95-2	ID	3.80E-02	3.84E-09	1.9E+01	2.0E-10
SVOC	Pyrene	129-00-0	D	2.80E-03	2.55E-09	2.0E-01	1.3E-08
INORG	Arsenic	7440-38-2	A	4.74E-02		5.0E-01	
INORG	Barium	7440-39-3	NC	5.55E-01		5.0E-01	
INORG	Beryllium	7440-41-7	B1	2.40E-03		2.0E-03	
INORG	Chromium (total)	7440-47-3		1.45E-01		1.0E+00	
INORG	Cobalt	7440-48-4	B1	2.34E-01		1.0E-01	
INORG	Copper	7440-50-8	D	6.57E-02		1.0E+00	
INORG	Manganese	7439-96-5	D	2.13E+01		5.0E+00	
INORG	Mercury	7439-97-6	D	1.50E-04	9.90E-08	2.5E-02	4.0E-06
INORG	Nickel	7440-02-0	A	6.62E-02		1.0E+00	
INORG	Silver	7440-22-4	D	5.80E-03		1.0E-02	
INORG	Vanadium	7440-62-2		1.99E-01		1.0E-01	
INORG	Zinc	7440-66-6	ID	2.37E-01			
			Sum:				**1.2E-03**

Note:

1. The highest detected concentrations in OU-2 among all groundwater sampling locations and sampling events.
2. C/Q based on the annual maximum exposure for a 3 acre site-specific source area = 15.6 kg/m3 per (kg/m2-s).
   Based on meteorological data from Philadelphia, PA (USEPA 2002, Appendix D).

Table 5.3b: Cancer Risk Estimates for Routine Worker Outdoor Air Vapor Inhalation at OU-2 GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	Carc Class	C_{gw} [1] (mg/l)	C_{air} (mg/m^3)	URF (m^3/mg)	Risk
VOC	Acetone	67-64-1	ID	4.70E+02	6.87E-03		
VOC	Benzene	71-43-2	A	1.20E+00	1.78E-03	7.8E-03	3.4E-06
VOC	2-Butanone	78-93-3	ID	8.50E-01	1.16E-05		
VOC	Chlorobenzene	108-90-7	D	7.60E-01	6.25E-04		
VOC	Cumene	98-82-8	D	1.00E-01	2.56E-04		
VOC	Cyclohexane	110-82-7	ID	7.90E-02	3.91E-03		
VOC	1,2-Dichlorobenzene	95-50-1	D	6.80E-03	2.71E-06		
VOC	1,3-Dichlorobenzene	541-73-1	D	1.00E-03	6.50E-07		
VOC	1,4-Dichlorobenzene	106-46-7	C	1.40E-02	7.13E-06	6.3E-03	1.1E-08
VOC	cis-1,2-Dichloroethene	156-59-2	ID	7.10E-03	6.47E-06		
VOC	trans-1,2-Dichloroethene	156-60-5		4.00E-04	8.07E-07		
VOC	Ethyl Benzene	100-41-4	D	1.80E+01	3.23E-02		
VOC	Methyl Acetate	79-20-9		4.50E-02	1.18E-06		
VOC	Methyl tert-butyl ether	1634-04-4		8.10E-01	1.24E-04		
VOC	4-Methyl-2-pentanone	108-10-1	ID	5.80E-01	1.82E-05		
VOC	Methylcyclohexane	108-87-2		2.00E-01	1.91E-02		
VOC	Styrene	100-42-5		3.00E-04	1.78E-07		
VOC	Tetrachloroethene	127-18-4	C-B2	1.60E-03	6.44E-06	3.1E-03	4.8E-09
VOC	Toluene	108-88-3	ID	1.90E+02	3.33E-01		
VOC	1,2,4-Trichlorobenzene	120-82-1	D	7.00E-04	9.06E-08		
VOC	Trichloroethene	79-01-6	C-B2	3.00E-03	7.41E-06	1.7E-03	3.1E-09
VOC	Xylenes (total)	1330-20-7	ID	3.00E+01	4.78E-02		
SVOC	Acenaphthene	83-32-9		2.20E-03	4.36E-08		
SVOC	Acetophenone	98-86-2	D	1.80E-01	4.67E-07		
SVOC	Anthracene	120-12-7	D	3.50E-04	2.24E-09		
SVOC	Benzaldehyde	100-52-7		1.40E-01	7.28E-07		
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1.60E-02	1.86E-10	4.0E-03	2E-13
SVOC	Caprolactam	105-60-2		1.70E-02	4.99E-11		
SVOC	Carbazole	86-74-8	B2	3.00E-04	9.84E-13	5.7E-03	1E-15
SVOC	4-Chloroaniline	106-47-8		1.70E-03	8.63E-11		
SVOC	2-Chlorophenol	95-57-8		4.60E-03	2.73E-07		
SVOC	Dibenzofuran	132-64-9	D	5.50E-04	5.00E-10		
SVOC	2,4-Dimethylphenol	105-67-9		6.00E-01	2.14E-07		
SVOC	2,6-Dinitrotoluene	606-20-2	B2	4.00E-04	3.03E-11	1.9E-01	1E-12
SVOC	Fluoranthene	206-44-0	D	5.20E-03	7.69E-09		
SVOC	Fluorene	86-73-7	D	6.00E-04	4.21E-09		
SVOC	2-Methylnaphthalene	91-57-6	ID	6.90E-02	5.65E-06		
SVOC	Methylphenol (total)	1319-77-3		1.06E+00	2.08E-07		
SVOC	Naphthalene	91-20-3	C	2.40E+00	2.08E-04		
SVOC	Pentachlorophenol	87-86-5	B2	5.00E-04	2.71E-12	3.4E-02	2E-14
SVOC	Phenanthrene	85-01-8	D	9.00E-04	2.38E-09		
SVOC	Phenol	108-95-2	ID	3.80E-02	3.84E-09		
SVOC	Pyrene	129-00-0	D	2.80E-03	2.55E-09		
INORG	Arsenic	7440-38-2	A	4.74E-02		4.3E+00	
INORG	Barium	7440-39-3	NC	5.55E-01			
INORG	Beryllium	7440-41-7	B1	2.40E-03		2.4E+00	
INORG	Chromium (total)	7440-47-3		1.45E-01		1.2E+01	
INORG	Cobalt	7440-48-4	B1	2.34E-01		2.8E+00	
INORG	Copper	7440-50-8	D	6.57E-02			
INORG	Manganese	7439-96-5	D	2.13E+01			
INORG	Mercury	7439-97-6	D	1.50E-04	9.90E-08		
INORG	Nickel	7440-02-0	A	6.62E-02		2.4E-01	
INORG	Silver	7440-22-4	D	5.80E-03			
INORG	Vanadium	7440-62-2		1.99E-01			
INORG	Zinc	7440-66-6	ID	2.37E-01			
		Cumulative Risk:					**3E-06**

Note:

1. The highest detected concentrations in OU-2 among all groundwater sampling locations and sampling events.
2. C/Q based on the annual maximum exposure for a 3 acre site-specific source area = 15.6 kg/m3 per (kg/m2-s).
   Based on meteorological data from Philadelphia, PA (USEPA 2002, Appendix D).

Table 5.3c: Noncancer Risk Estimates for Routine Worker Outdoor Air Vapor Inhalation at OU-2 GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	Carc Class	C_{gw} [1] (mg/l)	C_{air} (mg/m^3)	RfC (mg/m^3)	HQ
VOC	Acetone	67-64-1	ID	4.70E+02	6.87E-03	3.1E+01	2E-04
VOC	Benzene	71-43-2	A	1.20E+00	1.78E-03	3.0E-02	4E-02
VOC	2-Butanone	78-93-3	ID	8.50E-01	1.16E-05	5.0E+00	2E-06
VOC	Chlorobenzene	108-90-7	D	7.60E-01	6.25E-04	5.0E-02	9E-03
VOC	Cumene	98-82-8	D	1.00E-01	2.56E-04	4.0E-01	4E-04
VOC	Cyclohexane	110-82-7	ID	7.90E-02	3.91E-03	6.0E+00	4E-04
VOC	1,2-Dichlorobenzene	95-50-1	D	6.80E-03	2.71E-06	2.0E-01	9E-06
VOC	1,3-Dichlorobenzene	541-73-1	D	1.00E-03	6.50E-07	1.4E-01	3E-06
VOC	1,4-Dichlorobenzene	106-46-7	C	1.40E-02	7.13E-06	8.0E-01	6E-06
VOC	cis-1,2-Dichloroethene	156-59-2	ID	7.10E-03	6.47E-06	3.5E-02	1E-04
VOC	trans-1,2-Dichloroethene	156-60-5		4.00E-04	8.07E-07	6.0E-02	9E-06
VOC	Ethyl Benzene	100-41-4	D	1.80E+01	3.23E-02	1.0E+00	2E-02
VOC	Methyl Acetate	79-20-9		4.50E-02	1.18E-06	3.5E+00	2E-07
VOC	Methyl tert-butyl ether	1634-04-4		8.10E-01	1.24E-04	3.0E+00	3E-05
VOC	4-Methyl-2-pentanone	108-10-1	ID	5.80E-01	1.82E-05	3.0E+00	4E-06
VOC	Methylcyclohexane	108-87-2		2.00E-01	1.91E-02	3.0E+00	4E-03
VOC	Styrene	100-42-5		3.00E-04	1.78E-07	1.0E+00	1E-07
VOC	Tetrachloroethene	127-18-4	C-B2	1.60E-03	6.44E-06	4.0E-01	1E-05
VOC	Toluene	108-88-3	ID	1.90E+02	3.33E-01	5.0E+00	5E-02
VOC	1,2,4-Trichlorobenzene	120-82-1	D	7.00E-04	9.06E-08	3.5E-03	2E-05
VOC	Trichloroethene	79-01-6	C-B2	3.00E-03	7.41E-06		
VOC	Xylenes (total)	1330-20-7	ID	3.00E+01	4.78E-02	1.0E-01	3E-01
SVOC	Acenaphthene	83-32-9		2.20E-03	4.36E-08	2.1E-01	1E-07
SVOC	Acetophenone	98-86-2	D	1.80E-01	4.67E-07	3.5E-01	9E-07
SVOC	Anthracene	120-12-7	D	3.50E-04	2.24E-09		
SVOC	Benzaldehyde	100-52-7		1.40E-01	7.28E-07	3.5E-01	1E-06
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1.60E-02	1.86E-10	7.0E-02	2E-09
SVOC	Caprolactam	105-60-2		1.70E-02	4.99E-11	1.8E+00	2E-11
SVOC	Carbazole	86-74-8	B2	3.00E-04	9.84E-13		
SVOC	4-Chloroaniline	106-47-8		1.70E-03	8.63E-11	1.4E-02	4E-09
SVOC	2-Chlorophenol	95-57-8		4.60E-03	2.73E-07	1.8E-02	1E-05
SVOC	Dibenzofuran	132-64-9	D	5.50E-04	5.00E-10	7.0E-03	5E-08
SVOC	2,4-Dimethylphenol	105-67-9		6.00E-01	2.14E-07	7.0E-02	2E-06
SVOC	2,6-Dinitrotoluene	606-20-2	B2	4.00E-04	3.03E-11	3.5E-03	6E-09
SVOC	Fluoranthene	206-44-0	D	5.20E-03	7.69E-09	1.4E-01	4E-08
SVOC	Fluorene	86-73-7	D	6.00E-04	4.21E-09	1.4E-01	2E-08
SVOC	2-Methylnaphthalene	91-57-6	ID	6.90E-02	5.65E-06	3.0E-03	1E-03
SVOC	Methylphenol (total)	1319-77-3		1.06E+00	2.08E-07		
SVOC	Naphthalene	91-20-3	C	2.40E+00	2.08E-04	3.0E-03	5E-02
SVOC	Pentachlorophenol	87-86-5	B2	5.00E-04	2.71E-12	1.1E-01	2E-11
SVOC	Phenanthrene	85-01-8	D	9.00E-04	2.38E-09	1.1E-01	2E-08
SVOC	Phenol	108-95-2	ID	3.80E-02	3.84E-09		
SVOC	Pyrene	129-00-0	D	2.80E-03	2.55E-09	1.1E-01	1.7E-08
INORG	Arsenic	7440-38-2	A	4.74E-02			
INORG	Barium	7440-39-3	NC	5.55E-01			
INORG	Beryllium	7440-41-7	B1	2.40E-03		2.0E-05	
INORG	Chromium (total)	7440-47-3		1.45E-01		1.0E-04	
INORG	Cobalt	7440-48-4	B1	2.34E-01		2.0E-05	
INORG	Copper	7440-50-8	D	6.57E-02		1.4E-01	
INORG	Manganese	7439-96-5	D	2.13E+01		5.0E-05	
INORG	Mercury	7439-97-6	D	1.50E-04	9.90E-08	3.0E-04	2.3E-04
INORG	Nickel	7440-02-0	A	6.62E-02		9.0E-05	
INORG	Silver	7440-22-4	D	5.80E-03		1.0E-05	
INORG	Vanadium	7440-62-2		1.99E-01		3.5E-03	
INORG	Zinc	7440-66-6	ID	2.37E-01		1.1E+00	
		Hazard Index:					**5E-01**

Note:

1. The highest detected concentrations in OU-2 among all groundwater sampling locations and sampling events.
2. C/Q based on the annual maximum exposure for a 3 acre site-specific source area = 15.6 kg/m3 per (kg/m2-s).
   Based on meteorological data from Philadelphia, PA (USEPA 2002, Appendix D).

Table 5.4a: Upper-Bound Cancer Risk Estimates for Construction Worker Exposure to Groundwater in Excavations
GM Wilmington Assembly Plant, Wilmington, Delaware

					Incidental Ingestion			Dermal Contact			Vapor Inhalation			
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**C_{gw} [1] (mg/l)**	**LADD (mg/kg/d)**	**SF_{oral} $(mg/kg/d)^{-1}$**	**Risk**	**LADD (mg/kg/d)**	**SF_{derm} $(mg/kg/d)^{-1}$**	**Risk**	**C_{air} (mg/m^3)**	**URF (m^3/mg)**	**Risk**	**Sum of Risk**
VOC	Acetone	67-64-1	ID	4.70E+02	1.31E-04			5.51E-05			1.69E+01			
VOC	Benzene	71-43-2	A	1.20E+00	3.35E-07	5.5E-02	1.8E-08	4.09E-06	5.5E-02	2.3E-07	1.58E-01	7.8E-03	2.4E-06	2.6E-06
VOC	2-Butanone	78-93-3	ID	8.50E-01	2.38E-07			1.90E-07			3.68E-02			
VOC	Chlorobenzene	108-90-7	D	7.60E-01	2.12E-07			5.61E-06			8.24E-02			
VOC	Cumene	98-82-8	D	1.00E-01	2.80E-08			1.78E-06			1.07E-02			
VOC	Cyclohexane	110-82-7	ID	7.90E-02	2.21E-08			1.68E-06			1.02E-02			
VOC	1,2-Dichlorobenzene	95-50-1	D	6.80E-03	1.90E-09			9.15E-08			6.29E-04			
VOC	1,3-Dichlorobenzene	541-73-1	D	1.00E-03	2.80E-10			1.25E-08			9.44E-05			
VOC	1,4-Dichlorobenzene	106-46-7	C	1.40E-02	3.91E-09	2.4E-02	9.4E-11	1.86E-07	2.4E-02	4.5E-09	1.31E-03	6.3E-03	1.6E-08	2.1E-08
VOC	cis-1,2-Dichloroethene	156-59-2	ID	7.10E-03	1.98E-09			1.36E-08			8.31E-04			
VOC	trans-1,2-Dichloroethene	156-60-5		4.00E-04	1.12E-10			1.05E-09			4.76E-05			
VOC	Ethyl Benzene	100-41-4	D	1.80E+01	5.03E-06			2.10E-04			2.04E+00			
VOC	Methyl Acetate	79-20-9		4.50E-02	1.26E-08			8.46E-09			2.62E-03			
VOC	Methyl tert-butyl ether	1634-04-4		8.10E-01	2.26E-07			6.60E-07			8.49E-02			
VOC	4-Methyl-2-pentanone	108-10-1	ID	5.80E-01	1.62E-07			3.91E-07			3.70E-02			
VOC	Methylcyclohexane	108-87-2		2.00E-01	5.59E-08			1.93E-06			2.39E-02			
VOC	Styrene	100-42-5		3.00E-04	8.39E-11			2.67E-09			3.34E-05			
VOC	Tetrachloroethene	127-18-4	C-B2	1.60E-03	4.47E-10	5.2E-02	2.3E-11	5.89E-09	5.2E-02	3.1E-10	1.46E-04	3.1E-03	8.8E-10	1.2E-09
VOC	Toluene	108-88-3	ID	1.90E+02	5.31E-05			1.42E-03			2.31E+01			
VOC	1,2,4-Trichlorobenzene	120-82-1	D	7.00E-04	1.96E-10			1.78E-08			5.73E-05			
VOC	Trichloroethene	79-01-6	C-B2	3.00E-03	8.39E-10	1.1E-02	9.2E-12	1.53E-08	1.1E-02	1.7E-10	3.07E-04	1.7E-03	1.0E-09	1.2E-09
VOC	Xylenes (total)	1330-20-7	ID	3.00E+01	8.39E-06			3.65E-04			3.39E+00			
SVOC	Acenaphthene	83-32-9		2.20E-03	6.15E-10			6.01E-08			1.23E-04			
SVOC	Acetophenone	98-86-2	D	1.80E-01	5.03E-08			1.84E-07			1.66E-03			
SVOC	Anthracene	120-12-7	D	3.50E-04	9.78E-11			2.07E-08			1.18E-05			
SVOC	Benzaldehyde	100-52-7		1.40E-01	3.91E-08			1.39E-07			2.73E-03			
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1.60E-02	4.47E-09	1.4E-02	6.3E-11	6.29E-06	1.4E-02	8.8E-08	1.04E-06	4.0E-03	8.1E-12	8.8E-08
SVOC	Caprolactam	105-60-2		1.70E-02	4.75E-09			1.26E-09			8.26E-08			
SVOC	Carbazole	86-74-8	B2	3.00E-04	8.39E-11	2.0E-02	1.7E-12	4.43E-09	2.0E-02	8.9E-11	3.88E-09	5.7E-03	4.3E-14	9.0E-11
SVOC	4-Chloroaniline	106-47-8		1.70E-03	4.75E-10			2.45E-09			5.22E-07			
SVOC	2-Chlorophenol	95-57-8		4.60E-03	1.29E-09			1.03E-08			3.73E-04			
SVOC	Dibenzofuran	132-64-9	D	5.50E-04	1.54E-10			2.72E-08			5.24E-06			
SVOC	2,4-Dimethylphenol	105-67-9		6.00E-01	1.68E-07			1.95E-06			1.11E-03			
SVOC	2,6-Dinitrotoluene	606-20-2	B2	4.00E-04	1.12E-10	6.8E-01	7.6E-11	3.93E-10	6.8E-01	2.7E-10	2.44E-07	1.9E-01	9.3E-11	4.4E-10
SVOC	Fluoranthene	206-44-0	D	5.20E-03	1.45E-09			6.26E-07			5.77E-05			
SVOC	Fluorene	86-73-7	D	6.00E-04	1.68E-10			2.29E-08			2.04E-05			
SVOC	2-Methylnaphthalene	91-57-6	ID	6.90E-02	1.93E-08			1.84E-06			5.65E-03			
SVOC	Methylphenol (total)	1319-77-3		1.06E+00	2.96E-07			2.13E-06			8.90E-04			
SVOC	Naphthalene	91-20-3	C	2.40E+00	6.71E-07			3.30E-05			2.04E-01			
SVOC	Pentachlorophenol	87-86-5	B2	5.00E-04	1.40E-10	1.2E-01	1.7E-11	3.43E-08	1.2E-01	4.1E-09	8.85E-09	3.4E-02	5.9E-13	4.1E-09
SVOC	Phenanthrene	85-01-8	D	9.00E-04	2.52E-10			4.64E-08			1.43E-05			
SVOC	Phenol	108-95-2	ID	3.80E-02	1.06E-08			4.21E-08			1.55E-05			

Table 5.4a: Upper-Bound Cancer Risk Estimates for Construction Worker Exposure to Groundwater in Excavations
GM Wilmington Assembly Plant, Wilmington, Delaware

					Incidental Ingestion			Dermal Contact			Vapor Inhalation			
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**C_{gw} [1]** (mg/l)	**LADD** (mg/kg/d)	**SF_{oral}** $(mg/kg/d)^{-1}$	**Risk**	**LADD** (mg/kg/d)	**SF_{derm}** $(mg/kg/d)^{-1}$	**Risk**	**C_{air}** (mg/m^3)	**URF** (m^3/mg)	**Risk**	**Sum of Risk**
SVOC	Pyrene	129-00-0	D	2.80E-03	7.83E-10			3.32E-07			2.22E-05			
INORG	Arsenic	7440-38-2	A	4.74E-02	1.33E-08	1.5E+00	2.0E-08	8.75E-09	1.5E+00	1.3E-08		4.3E+00		3.3E-08
INORG	Barium	7440-39-3	NC	5.55E-01	1.55E-07			1.02E-07						
INORG	Beryllium	7440-41-7	B1	2.40E-03	6.71E-10			4.43E-10				2.4E+00		
INORG	Chromium (total)	7440-47-3		1.45E-01	4.05E-08			5.35E-08				1.2E+01		
INORG	Chromium III	16065-83-1	D											
INORG	Cobalt	7440-48-4	B1	2.34E-01	6.54E-08			1.73E-08				2.8E+00		
INORG	Copper	7440-50-8	D	6.57E-02	1.84E-08			1.21E-08						
INORG	Manganese	7439-96-5	D	2.13E+01	5.95E-06			3.93E-06						
INORG	Mercury	7439-97-6	D	1.50E-04	4.19E-11			2.77E-11			1.24E-05			
INORG	Nickel	7440-02-0	A	6.62E-02	1.85E-08			2.44E-09				2.4E-01		
INORG	Silver	7440-22-4	D	5.80E-03	1.62E-09			6.42E-10						
INORG	Vanadium	7440-62-2		1.99E-01	5.56E-08			3.67E-08						
INORG	Zinc	7440-66-6	ID	2.37E-01	6.63E-08			2.62E-08						
		Cumulative Risk:					**4E-08**			**3E-07**			**2E-06**	**3E-06**

Note:

1. The highest detected concentrations in OU-2 among all groundwater sampling locations and sampling events.
2. C/Q based on the 24-hour maximum exposure for a 15' x 15' excavation area = 10.96 kg/m^3 per $(kg/m^2\text{-}s)$.
   Based on meteorological data from Philadelphia, PA (USEPA 2002, Appendix D).

Table 5.4b: Upper-Bound Noncancer Risk Estimates for Construction Worker Exposure to Groundwater in Excavations
GM Wilmington Assembly Plant, Wilmington, Delaware

					Incidental Ingestion			Dermal Contact			Vapor Inhalation				
Chem Group	Chemical	CASRN	Carc Class	C_{gw} [1] (mg/l)	ADD (mg/kg/d)	RfD_{oral} (mg/kg/d)	HQ	ADD (mg/kg/d)	RfD_{derm} (mg/kg/d)	HQ	C_{air} (mg/m^3)	ADD (mg/m^3)	RfC (mg/m^3)	HQ	Sum of HQs
VOC	Acetone	67-64-1	ID	4.70E+02	9.20E-04	9.0E-01	1.0E-03	3.86E-04	9.0E-01	4.3E-04	1.69E+01	2.32E-01	3.1E+01	7.5E-03	9.0E-03
VOC	Benzene	71-43-2	A	1.20E+00	2.35E-06	4.0E-03	5.9E-04	2.87E-05	4.0E-03	7.2E-03	1.58E-01	2.16E-03	3.0E-02	7.2E-02	8.0E-02
VOC	2-Butanone	78-93-3	ID	8.50E-01	1.66E-06	6.0E-01	2.8E-06	1.33E-06	6.0E-01	2.2E-06	3.68E-02	5.04E-04	5.0E+00	1.0E-04	1.1E-04
VOC	Chlorobenzene	108-90-7	D	7.60E-01	1.49E-06	2.0E-02	7.4E-05	3.93E-05	2.0E-02	2.0E-03	8.24E-02	1.13E-03	5.0E-02	2.3E-02	2.5E-02
VOC	Cumene	98-82-8	D	1.00E-01	1.96E-07	1.0E-01	2.0E-06	1.24E-05	1.0E-01	1.2E-04	1.07E-02	1.47E-04	4.0E-01	3.7E-04	4.9E-04
VOC	Cyclohexane	110-82-7	ID	7.90E-02	1.55E-07			1.17E-05			1.02E-02	1.40E-04	6.0E+00	2.3E-05	2.3E-05
VOC	1,2-Dichlorobenzene	95-50-1	D	6.80E-03	1.33E-08	9.0E-02	1.5E-07	6.41E-07	9.0E-02	7.1E-06	6.29E-04	8.61E-06	2.0E-01	4.3E-05	5.0E-05
VOC	1,3-Dichlorobenzene	541-73-1	D	1.00E-03	1.96E-09	9.0E-02	2.2E-08	8.74E-08	9.0E-02	9.7E-07	9.44E-05	1.29E-06	1.4E-01	9.2E-06	1.0E-05
VOC	1,4-Dichlorobenzene	106-46-7	C	1.40E-02	2.74E-08	3.0E-02	9.1E-07	1.30E-06	3.0E-02	4.3E-05	1.31E-03	1.79E-05	8.0E-01	2.2E-05	6.7E-05
VOC	cis-1,2-Dichloroethene	156-59-2	ID	7.10E-03	1.39E-08	1.0E-02	1.4E-06	9.49E-08	1.0E-02	9.5E-06	8.31E-04	1.14E-05	3.5E-02	3.3E-04	3.4E-04
VOC	trans-1,2-Dichloroethene	156-60-5		4.00E-04	7.83E-10	2.0E-02	3.9E-08	7.32E-09	2.0E-02	3.7E-07	4.76E-05	6.52E-07	6.0E-02	1.1E-05	1.1E-05
VOC	Ethyl Benzene	100-41-4	D	1.80E+01	3.52E-05	1.0E-01	3.5E-04	1.47E-03	1.0E-01	1.5E-02	2.04E+00	2.80E-02	1.0E+00	2.8E-02	4.3E-02
VOC	Methyl Acetate	79-20-9		4.50E-02	8.81E-08	1.0E+00	8.8E-08	5.92E-08	1.0E+00	5.9E-08	2.62E-03	3.59E-05	3.5E+00	1.0E-05	1.0E-05
VOC	Methyl tert-butyl ether	1634-04-4		8.10E-01	1.59E-06			4.62E-06			8.49E-02	1.16E-03	3.0E+00	3.9E-04	3.9E-04
VOC	4-Methyl-2-pentanone	108-10-1	ID	5.80E-01	1.14E-06			2.74E-06			3.70E-02	5.07E-04	3.0E+00	1.7E-04	1.7E-04
VOC	Methylcyclohexane	108-87-2		2.00E-01	3.91E-07			1.35E-05			2.39E-02	3.28E-04	3.0E+00	1.1E-04	1.1E-04
VOC	Styrene	100-42-5		3.00E-04	5.87E-10	2.0E-01	2.9E-09	1.87E-08	2.0E-01	9.3E-08	3.34E-05	4.58E-07	1.0E+00	4.6E-07	5.5E-07
VOC	Tetrachloroethene	127-18-4	C-B2	1.60E-03	3.13E-09	1.0E-02	3.1E-07	4.12E-08	1.0E-02	4.1E-06	1.46E-04	2.01E-06	4.0E-01	5.0E-06	9.5E-06
VOC	Toluene	108-88-3	ID	1.90E+02	3.72E-04	8.0E-02	4.6E-03	9.91E-03	8.0E-02	1.2E-01	2.31E+01	3.16E-01	5.0E+00	6.3E-02	1.9E-01
VOC	1,2,4-Trichlorobenzene	120-82-1	D	7.00E-04	1.37E-09	1.0E-02	1.4E-07	1.25E-07	1.0E-02	1.2E-05	5.73E-05	7.85E-07	3.5E-03	2.2E-04	2.4E-04
VOC	Trichloroethene	79-01-6	C-B2	3.00E-03	5.87E-09	6.0E-03	9.8E-07	1.07E-07	6.0E-03	1.8E-05	3.07E-04	4.21E-06			1.9E-05
VOC	Xylenes (total)	1330-20-7	ID	3.00E+01	5.87E-05	2.0E-01	2.9E-04	2.55E-03	2.0E-01	1.3E-02	3.39E+00	4.65E-02	1.0E-01	4.6E-01	4.8E-01
SVOC	Acenaphthene	83-32-9		2.20E-03	4.31E-09	6.0E-02	7.2E-08	4.21E-07	6.0E-02	7.0E-06	1.23E-04	1.69E-06	2.1E-01	8.0E-06	1.5E-05
SVOC	Acetophenone	98-86-2	D	1.80E-01	3.52E-07	1.0E-01	3.5E-06	1.28E-06	1.0E-01	1.3E-05	1.66E-03	2.28E-05	3.5E-01	6.5E-05	8.1E-05
SVOC	Anthracene	120-12-7	D	3.50E-04	6.85E-10	3.0E-01	2.3E-09	1.45E-07	3.0E-01	4.8E-07	1.18E-05	1.61E-07			4.9E-07
SVOC	Benzaldehyde	100-52-7		1.40E-01	2.74E-07	1.0E-01	2.7E-06	9.71E-07	1.0E-01	9.7E-06	2.73E-03	3.73E-05	3.5E-01	1.1E-04	1.2E-04
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1.60E-02	3.13E-08	2.0E-02	1.6E-06	4.40E-05	2.0E-02	2.2E-03	1.04E-06	1.42E-08	7.0E-02	2.0E-07	2.2E-03
SVOC	Caprolactam	105-60-2		1.70E-02	3.33E-08	5.0E-01	6.7E-08	8.80E-09	5.0E-01	1.8E-08	8.26E-08	1.13E-09	1.8E+00	6.5E-10	8.5E-08
SVOC	Carbazole	86-74-8	B2	3.00E-04	5.87E-10			3.10E-08			3.88E-09	5.32E-11			
SVOC	4-Chloroaniline	106-47-8		1.70E-03	3.33E-09	4.0E-03	8.3E-07	1.72E-08	4.0E-03	4.3E-06	5.22E-07	7.15E-09	1.4E-02	5.1E-07	5.6E-06
SVOC	2-Chlorophenol	95-57-8		4.60E-03	9.00E-09	5.0E-03	1.8E-06	7.24E-08	5.0E-03	1.4E-05	3.73E-04	5.11E-06	1.8E-02	2.9E-04	3.1E-04
SVOC	Dibenzofuran	132-64-9	D	5.50E-04	1.08E-09	2.0E-03	5.4E-07	1.90E-07	2.0E-03	9.5E-05	5.24E-06	7.18E-08	7.0E-03	1.0E-05	1.1E-04
SVOC	2,4-Dimethylphenol	105-67-9		6.00E-01	1.17E-06	2.0E-02	5.9E-05	1.36E-05	2.0E-02	6.8E-04	1.11E-03	1.52E-05	7.0E-02	2.2E-04	9.6E-04
SVOC	2,6-Dinitrotoluene	606-20-2	B2	4.00E-04	7.83E-10	1.0E-03	7.8E-07	2.75E-09	1.0E-03	2.7E-06	2.44E-07	3.35E-09	3.5E-03	9.6E-07	4.5E-06
SVOC	Fluoranthene	206-44-0	D	5.20E-03	1.02E-08	4.0E-02	2.5E-07	4.38E-06	4.0E-02	1.1E-04	5.77E-05	7.91E-07	1.4E-01	5.6E-06	1.2E-04
SVOC	Fluorene	86-73-7	D	6.00E-04	1.17E-09	4.0E-02	2.9E-08	1.60E-07	4.0E-02	4.0E-06	2.04E-05	2.80E-07	1.4E-01	2.0E-06	6.0E-06
SVOC	2-Methylnaphthalene	91-57-6	ID	6.90E-02	1.35E-07	4.0E-03	3.4E-05	1.29E-05	4.0E-03	3.2E-03	5.65E-03	7.74E-05	3.0E-03	2.6E-02	2.9E-02
SVOC	Methylphenol (total)	1319-77-3		1.06E+00	2.07E-06	5.0E-02	4.1E-05	1.49E-05	5.0E-02	3.0E-04	8.90E-04	1.22E-05			3.4E-04
SVOC	Naphthalene	91-20-3	C	2.40E+00	4.70E-06	2.0E-02	2.3E-04	2.31E-04	2.0E-02	1.2E-02	2.04E-01	2.79E-03	3.0E-03	9.3E-01	9.4E-01
SVOC	Pentachlorophenol	87-86-5	B2	5.00E-04	9.78E-10	3.0E-02	3.3E-08	2.40E-07	3.0E-02	8.0E-06	8.85E-09	1.21E-10	1.1E-01	1.2E-09	8.0E-06
SVOC	Phenanthrene	85-01-8	D	9.00E-04	1.76E-09	3.0E-02	5.9E-08	3.25E-07	3.0E-02	1.1E-05	1.43E-05	1.95E-07	1.1E-01	1.9E-06	1.3E-05
SVOC	Phenol	108-95-2	ID	3.80E-02	7.44E-08	3.0E-01	2.5E-07	2.94E-07	3.0E-01	9.8E-07	1.55E-05	2.12E-07			1.2E-06
SVOC	Pyrene	129-00-0	D	2.80E-03	5.48E-09	3.0E-02	1.8E-07	2.33E-06	3.0E-02	7.8E-05	2.22E-05	3.04E-07	1.1E-01	2.9E-06	8.1E-05
INORG	Arsenic	7440-38-2	A	4.74E-02	9.28E-08	3.0E-04	3.1E-04	6.12E-08	3.0E-04	2.0E-04					5.1E-04
INORG	Barium	7440-39-3	NC	5.55E-01	1.09E-06	2.0E-01	5.4E-06	7.17E-07	1.4E-02	5.1E-05					5.7E-05

Table 5.4b: Upper-Bound Noncancer Risk Estimates for Construction Worker Exposure to Groundwater in Excavations
GM Wilmington Assembly Plant, Wilmington, Delaware

					Incidental Ingestion			Dermal Contact			Vapor Inhalation				
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**C_{gw}[1] (mg/l)**	**ADD (mg/kg/d)**	**RfD_{oral} (mg/kg/d)**	**HQ**	**ADD (mg/kg/d)**	**RfD_{derm} (mg/kg/d)**	**HQ**	**C_{air} (mg/m^3)**	**ADD (mg/m^3)**	**RfC (mg/m^3)**	**HQ**	**Sum of HQs**
INORG	Beryllium	7440-41-7	B1	2.40E-03	4.70E-09	2.0E-03	2.3E-06	3.10E-09	1.4E-05	2.2E-04			2.0E-05		2.2E-04
INORG	Chromium (total)	7440-47-3		1.45E-01	2.84E-07	3.0E-03	9.5E-05	3.75E-07	7.5E-05	5.0E-03			1.0E-04		5.1E-03
INORG	Cobalt	7440-48-4	B1	2.34E-01	4.58E-07	2.0E-02	2.3E-05	1.21E-07	2.0E-02	6.0E-06			2.0E-05		2.9E-05
INORG	Copper	7440-50-8	D	6.57E-02	1.29E-07	4.0E-02	3.2E-06	8.49E-08	4.0E-02	2.1E-06			1.4E-01		5.3E-06
INORG	Manganese	7439-96-5	D	2.13E+01	4.17E-05	1.4E-01	3.0E-04	2.75E-05	8.4E-03	3.3E-03			5.0E-05		3.6E-03
INORG	Mercury	7439-97-6	D	1.50E-04	2.94E-10	3.0E-04	9.8E-07	1.94E-10	2.1E-05	9.2E-06	1.24E-05	1.69E-07	3.0E-04	5.6E-04	5.7E-04
INORG	Nickel	7440-02-0	A	6.62E-02	1.30E-07	2.0E-02	6.5E-06	1.71E-08	8.0E-04	2.1E-05			9.0E-05		2.8E-05
INORG	Silver	7440-22-4	D	5.80E-03	1.14E-08	5.0E-03	2.3E-06	4.49E-09	2.0E-04	2.2E-05			1.0E-05		2.5E-05
INORG	Vanadium	7440-62-2		1.99E-01	3.89E-07	1.0E-03	3.9E-04	2.57E-07	2.6E-05	9.9E-03			3.5E-03		1.0E-02
INORG	Zinc	7440-66-6	ID	2.37E-01	4.64E-07	3.0E-01	1.5E-06	1.84E-07	3.0E-01	6.1E-07			1.1E+00		2.2E-06
		Hazard Index:					**9E-03**			**2E-01**				**2E+00**	**2E+00**
Note:															
1. The highest detected concentrations in OU-2 among all groundwater sampling locations and sampling events.															
2. C/Q based on the 24-hour maximum exposure for a 15' x 15' excavation area = 10.96 kg/m^3 per (kg/m^2-s).															
Based on meteorological data from Philadelphia, PA (USEPA 2002, Appendix D).															

Table 5.4c: Upper-Bound Noncancer Risk Estimates for the Construction Worker Exposure to Groundwater: Critical Effects Summary GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	Most Significant Pathway	Critical Effects	HQ	Reference
VOC	Toluene	71-43-2	Dermal Contact	Increased kidney weight	2E-01	IRIS, USEPA 2004
VOC	Xylenes (total)	1330-20-7	Vapor Inhalation	Impaired motor coordination	5E-01	IRIS
SVOC	Naphthalene	91-20-3	Vapor Inhalation	Nasal effects: hyperplasia and metaplasia in respiratory and olfactory epithelium, respectively	9E-01	IRIS
VARIOUS	Remaining chemicals	Various	Various	Various	2E-01	Various
Reference:						
USEPA. Integrated Risk Information System (IRIS). On-line database.						
USEPA. 2004. Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. July.						

Table 5.4d: Noncancer Risk Estimates for Construction Worker Exposure to Groundwater in Excavations
GM Wilmington Assembly Plant, Wilmington, Delaware

					Incidental Ingestion			Dermal Contact			Vapor Inhalation				
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**C_{gw}[1] (mg/l)**	**ADD (mg/kg/d)**	**RfD_{oral} (mg/kg/d)**	**HQ**	**ADD (mg/kg/d)**	**RfD_{derm} (mg/kg/d)**	**HQ**	**C_{air} (mg/m^3)**	**ADD (mg/m^3)**	**RfC (mg/m^3)**	**HQ**	**Sum of HQs**
VOC	Acetone	67-64-1	ID	4.70E+02	9.20E-04	9.0E-01	1.0E-03	3.86E-04	9.0E-01	4.3E-04	1.69E+01	2.32E-01	3.1E+01	7.5E-03	9.0E-03
VOC	Benzene	71-43-2	A	1.20E+00	2.35E-06	4.0E-03	5.9E-04	2.87E-05	4.0E-03	7.2E-03	1.58E-01	2.16E-03	3.0E-02	7.2E-02	8.0E-02
VOC	2-Butanone	78-93-3	ID	8.50E-01	1.66E-06	6.0E-01	2.8E-06	1.33E-06	6.0E-01	2.2E-06	3.68E-02	5.04E-04	5.0E+00	1.0E-04	1.1E-04
VOC	Chlorobenzene	108-90-7	D	7.60E-01	1.49E-06	2.0E-02	7.4E-05	3.93E-05	2.0E-02	2.0E-03	8.24E-02	1.13E-03	5.0E-02	2.3E-02	2.5E-02
VOC	Cumene	98-82-8	D	1.00E-01	1.96E-07	1.0E-01	2.0E-06	1.24E-05	1.0E-01	1.2E-04	1.07E-02	1.47E-04	4.0E-01	3.7E-04	4.9E-04
VOC	Cyclohexane	110-82-7	ID	7.90E-02	1.55E-07			1.17E-05			1.02E-02	1.40E-04	6.0E+00	2.3E-05	2.3E-05
VOC	1,2-Dichlorobenzene	95-50-1	D	6.80E-03	1.33E-08	9.0E-02	1.5E-07	6.41E-07	9.0E-02	7.1E-06	6.29E-04	8.61E-06	2.0E-01	4.3E-05	5.0E-05
VOC	1,3-Dichlorobenzene	541-73-1	D	1.00E-03	1.96E-09	9.0E-02	2.2E-08	8.74E-08	9.0E-02	9.7E-07	9.44E-05	1.29E-06	1.4E-01	9.2E-06	1.0E-05
VOC	1,4-Dichlorobenzene	106-46-7	C	1.40E-02	2.74E-08	3.0E-02	9.1E-07	1.30E-06	3.0E-02	4.3E-05	1.31E-03	1.79E-05	8.0E-01	2.2E-05	6.7E-05
VOC	cis-1,2-Dichloroethene	156-59-2	ID	7.10E-03	1.39E-08	1.0E-02	1.4E-06	9.49E-08	1.0E-02	9.5E-06	8.31E-04	1.14E-05	3.5E-02	3.3E-04	3.4E-04
VOC	trans-1,2-Dichloroethene	156-60-5		4.00E-04	7.83E-10	2.0E-02	3.9E-08	7.32E-09	2.0E-02	3.7E-07	4.76E-05	6.52E-07	6.0E-02	1.1E-05	1.1E-05
VOC	Ethyl Benzene	100-41-4	D	1.80E+01	3.52E-05	1.0E-01	3.5E-04	1.47E-03	1.0E-01	1.5E-02	2.04E+00	2.80E-02	1.0E+00	2.8E-02	4.3E-02
VOC	Methyl Acetate	79-20-9		4.50E-02	8.81E-08	1.0E+00	8.8E-08	5.92E-08	1.0E+00	5.9E-08	2.62E-03	3.59E-05	3.5E+00	1.0E-05	1.0E-05
VOC	Methyl tert-butyl ether	1634-04-4		8.10E-01	1.59E-06			4.62E-06			8.49E-02	1.16E-03	3.0E+00	3.9E-04	3.9E-04
VOC	4-Methyl-2-pentanone	108-10-1	ID	5.80E-01	1.14E-06			2.74E-06			3.70E-02	5.07E-04	3.0E+00	1.7E-04	1.7E-04
VOC	Methylcyclohexane	108-87-2		2.00E-01	3.91E-07			1.35E-05			2.39E-02	3.28E-04	3.0E+00	1.1E-04	1.1E-04
VOC	Styrene	100-42-5		3.00E-04	5.87E-10	2.0E-01	2.9E-09	1.87E-08	2.0E-01	9.3E-08	3.34E-05	4.58E-07	1.0E+00	4.6E-07	5.5E-07
VOC	Tetrachloroethene	127-18-4	C-B2	1.60E-03	3.13E-09	1.0E-02	3.1E-07	4.12E-08	1.0E-02	4.1E-06	1.46E-04	2.01E-06	4.0E-01	5.0E-06	9.5E-06
VOC	Toluene	108-88-3	ID	4.67E+01	9.14E-05	8.0E-02	1.1E-03	2.44E-03	8.0E-02	3.0E-02	5.67E+00	7.76E-02	5.0E+00	1.6E-02	4.7E-02
VOC	1,2,4-Trichlorobenzene	120-82-1	D	7.00E-04	1.37E-09	1.0E-02	1.4E-07	1.25E-07	1.0E-02	1.2E-05	5.73E-05	7.85E-07	3.5E-03	2.2E-04	2.4E-04
VOC	Trichloroethene	79-01-6	C-B2	3.00E-03	5.87E-09	6.0E-03	9.8E-07	1.07E-07	6.0E-03	1.8E-05	3.07E-04	4.21E-06			1.9E-05
VOC	Xylenes (total)	1330-20-7	ID	8.46E+00	1.66E-05	2.0E-01	8.3E-05	7.20E-04	2.0E-01	3.6E-03	9.57E-01	1.31E-02	1.0E-01	1.3E-01	1.3E-01
SVOC	Acenaphthene	83-32-9		2.20E-03	4.31E-09	6.0E-02	7.2E-08	4.21E-07	6.0E-02	7.0E-06	1.23E-04	1.69E-06	2.1E-01	8.0E-06	1.5E-05
SVOC	Acetophenone	98-86-2	D	1.80E-01	3.52E-07	1.0E-01	3.5E-06	1.28E-06	1.0E-01	1.3E-05	1.66E-03	2.28E-05	3.5E-01	6.5E-05	8.1E-05
SVOC	Anthracene	120-12-7	D	3.50E-04	6.85E-10	3.0E-01	2.3E-09	1.45E-07	3.0E-01	4.8E-07	1.18E-05	1.61E-07			4.9E-07
SVOC	Benzaldehyde	100-52-7		1.40E-01	2.74E-07	1.0E-01	2.7E-06	9.71E-07	1.0E-01	9.7E-06	2.73E-03	3.73E-05	3.5E-01	1.1E-04	1.2E-04
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1.60E-02	3.13E-08	2.0E-02	1.6E-06	4.40E-05	2.0E-02	2.2E-03	1.04E-06	1.42E-08	7.0E-02	2.0E-07	2.2E-03
SVOC	Caprolactam	105-60-2		1.70E-02	3.33E-08	5.0E-01	6.7E-08	8.80E-09	5.0E-01	1.8E-08	8.26E-08	1.13E-09	1.8E+00	6.5E-10	8.5E-08
SVOC	Carbazole	86-74-8	B2	3.00E-04	5.87E-10			3.10E-08			3.88E-09	5.32E-11			
SVOC	4-Chloroaniline	106-47-8		1.70E-03	3.33E-09	4.0E-03	8.3E-07	1.72E-08	4.0E-03	4.3E-06	5.22E-07	7.15E-09	1.4E-02	5.1E-07	5.6E-06
SVOC	2-Chlorophenol	95-57-8		4.60E-03	9.00E-09	5.0E-03	1.8E-06	7.24E-08	5.0E-03	1.4E-05	3.73E-04	5.11E-06	1.8E-02	2.9E-04	3.1E-04
SVOC	Dibenzofuran	132-64-9	D	5.50E-04	1.08E-09	2.0E-03	5.4E-07	1.90E-07	2.0E-03	9.5E-05	5.24E-06	7.18E-08	7.0E-03	1.0E-05	1.1E-04
SVOC	2,4-Dimethylphenol	105-67-9		6.00E-01	1.17E-06	2.0E-02	5.9E-05	1.36E-05	2.0E-02	6.8E-04	1.11E-03	1.52E-05	7.0E-02	2.2E-04	9.6E-04
SVOC	2,6-Dinitrotoluene	606-20-2	B2	4.00E-04	7.83E-10	1.0E-03	7.8E-07	2.75E-09	1.0E-03	2.7E-06	2.44E-07	3.35E-09	3.5E-03	9.6E-07	4.5E-06
SVOC	Fluoranthene	206-44-0	D	5.20E-03	1.02E-08	4.0E-02	2.5E-07	4.38E-06	4.0E-02	1.1E-04	5.77E-05	7.91E-07	1.4E-01	5.6E-06	1.2E-04
SVOC	Fluorene	86-73-7	D	6.00E-04	1.17E-09	4.0E-02	2.9E-08	1.60E-07	4.0E-02	4.0E-06	2.04E-05	2.80E-07	1.4E-01	2.0E-06	6.0E-06
SVOC	2-Methylnaphthalene	91-57-6	ID	6.90E-02	1.35E-07	4.0E-03	3.4E-05	1.29E-05	4.0E-03	3.2E-03	5.65E-03	7.74E-05	3.0E-03	2.6E-02	2.9E-02
SVOC	Methylphenol (total)	1319-77-3		1.06E+00	2.07E-06	5.0E-02	4.1E-05	1.49E-05	5.0E-02	3.0E-04	8.90E-04	1.22E-05			3.4E-04
SVOC	Naphthalene	91-20-3	C	6.08E-01	1.19E-06	2.0E-02	5.9E-05	5.85E-05	2.0E-02	2.9E-03	5.16E-02	7.07E-04	3.0E-03	2.4E-01	2.4E-01
SVOC	Pentachlorophenol	87-86-5	B2	5.00E-04	9.78E-10	3.0E-02	3.3E-08	2.40E-07	3.0E-02	8.0E-06	8.85E-09	1.21E-10	1.1E-01	1.2E-09	8.0E-06
SVOC	Phenanthrene	85-01-8	D	9.00E-04	1.76E-09	3.0E-02	5.9E-08	3.25E-07	3.0E-02	1.1E-05	1.43E-05	1.95E-07	1.1E-01	1.9E-06	1.3E-05
SVOC	Phenol	108-95-2	ID	3.80E-02	7.44E-08	3.0E-01	2.5E-07	2.94E-07	3.0E-01	9.8E-07	1.55E-05	2.12E-07			1.2E-06
SVOC	Pyrene	129-00-0	D	2.80E-03	5.48E-09	3.0E-02	1.8E-07	2.33E-06	3.0E-02	7.8E-05	2.22E-05	3.04E-07	1.1E-01	2.9E-06	8.1E-05
INORG	Arsenic	7440-38-2	A	4.74E-02	9.28E-08	3.0E-04	3.1E-04	6.12E-08	3.0E-04	2.0E-04					5.1E-04
INORG	Barium	7440-39-3	NC	5.55E-01	1.09E-06	2.0E-01	5.4E-06	7.17E-07	1.4E-02	5.1E-05					5.7E-05

Table 5.4d: Noncancer Risk Estimates for Construction Worker Exposure to Groundwater in Excavations
GM Wilmington Assembly Plant, Wilmington, Delaware

					Incidental Ingestion			Dermal Contact			Vapor Inhalation				
Chem Group	**Chemical**	**CASRN**	**Carc Class**	**C_{gw}[1] (mg/l)**	**ADD (mg/kg/d)**	**RfD_{oral} (mg/kg/d)**	**HQ**	**ADD (mg/kg/d)**	**RfD_{derm} (mg/kg/d)**	**HQ**	**C_{air} (mg/m^3)**	**ADD (mg/m^3)**	**RfC (mg/m^3)**	**HQ**	**Sum of HQs**
INORG	Beryllium	7440-41-7	B1	2.40E-03	4.70E-09	2.0E-03	2.3E-06	3.10E-09	1.4E-05	2.2E-04			2.0E-05		2.2E-04
INORG	Chromium (total)	7440-47-3		1.45E-01	2.84E-07	3.0E-03	9.5E-05	3.75E-07	7.5E-05	5.0E-03			1.0E-04		5.1E-03
INORG	Cobalt	7440-48-4	B1	2.34E-01	4.58E-07	2.0E-02	2.3E-05	1.21E-07	2.0E-02	6.0E-06			2.0E-05		2.9E-05
INORG	Copper	7440-50-8	D	6.57E-02	1.29E-07	4.0E-02	3.2E-06	8.49E-08	4.0E-02	2.1E-06			1.4E-01		5.3E-06
INORG	Manganese	7439-96-5	D	2.13E+01	4.17E-05	1.4E-01	3.0E-04	2.75E-05	8.4E-03	3.3E-03			5.0E-05		3.6E-03
INORG	Mercury	7439-97-6	D	1.50E-04	2.94E-10	3.0E-04	9.8E-07	1.94E-10	2.1E-05	9.2E-06	1.24E-05	1.69E-07	3.0E-04	5.6E-04	5.7E-04
INORG	Nickel	7440-02-0	A	6.62E-02	1.30E-07	2.0E-02	6.5E-06	1.71E-08	8.0E-04	2.1E-05			9.0E-05		2.8E-05
INORG	Silver	7440-22-4	D	5.80E-03	1.14E-08	5.0E-03	2.3E-06	4.49E-09	2.0E-04	2.2E-05			1.0E-05		2.5E-05
INORG	Vanadium	7440-62-2		1.99E-01	3.89E-07	1.0E-03	3.9E-04	2.57E-07	2.6E-05	9.9E-03			3.5E-03		1.0E-02
INORG	Zinc	7440-66-6	ID	2.37E-01	4.64E-07	3.0E-01	1.5E-06	1.84E-07	3.0E-01	6.1E-07			1.1E+00		2.2E-06
		Hazard Index:					**5E-03**			**9E-02**				**5E-01**	**6E-01**
Note:															
1. The 95% UCLs were for naphthalene, toluene and xylene and the highest detected concentrations were used for the remaining chemicals in OU-2 among all groundwater sampling locations and sampling events.															
2. C/Q based on the 24-hour maximum exposure for a 15' x 15' excavation area = 10.96 kg/m^3 per (kg/m^2-s). Based on meteorological data from Philadelphia, PA (USEPA 2002, Appendix D).															

Table 5.4e: Noncancer Risk Estimates for the Construction Worker
Exposure to Groundwater: Critical Effects Summary
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	Most Significant Pathway	Critical Effects	HQ	Reference
VOC	Toluene	71-43-2	Dermal Contact	Increased kidney weight	5E-02	IRIS, USEPA 2004
VOC	Xylenes (total)	1330-20-7	Vapor Inhalation	Impaired motor coordination	1E-01	IRIS
SVOC	Naphthalene	91-20-3	Vapor Inhalation	Nasal effects: hyperplasia and metaplasia in respiratory and olfactory epithelium, respectively	2E-01	IRIS
VARIOUS	Remaining chemicals	Various	Various	Various	2E-01	Various
Reference:						
USEPA. Integrated Risk Information System (IRIS). On-line database.						
USEPA. 2004. Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. July.						

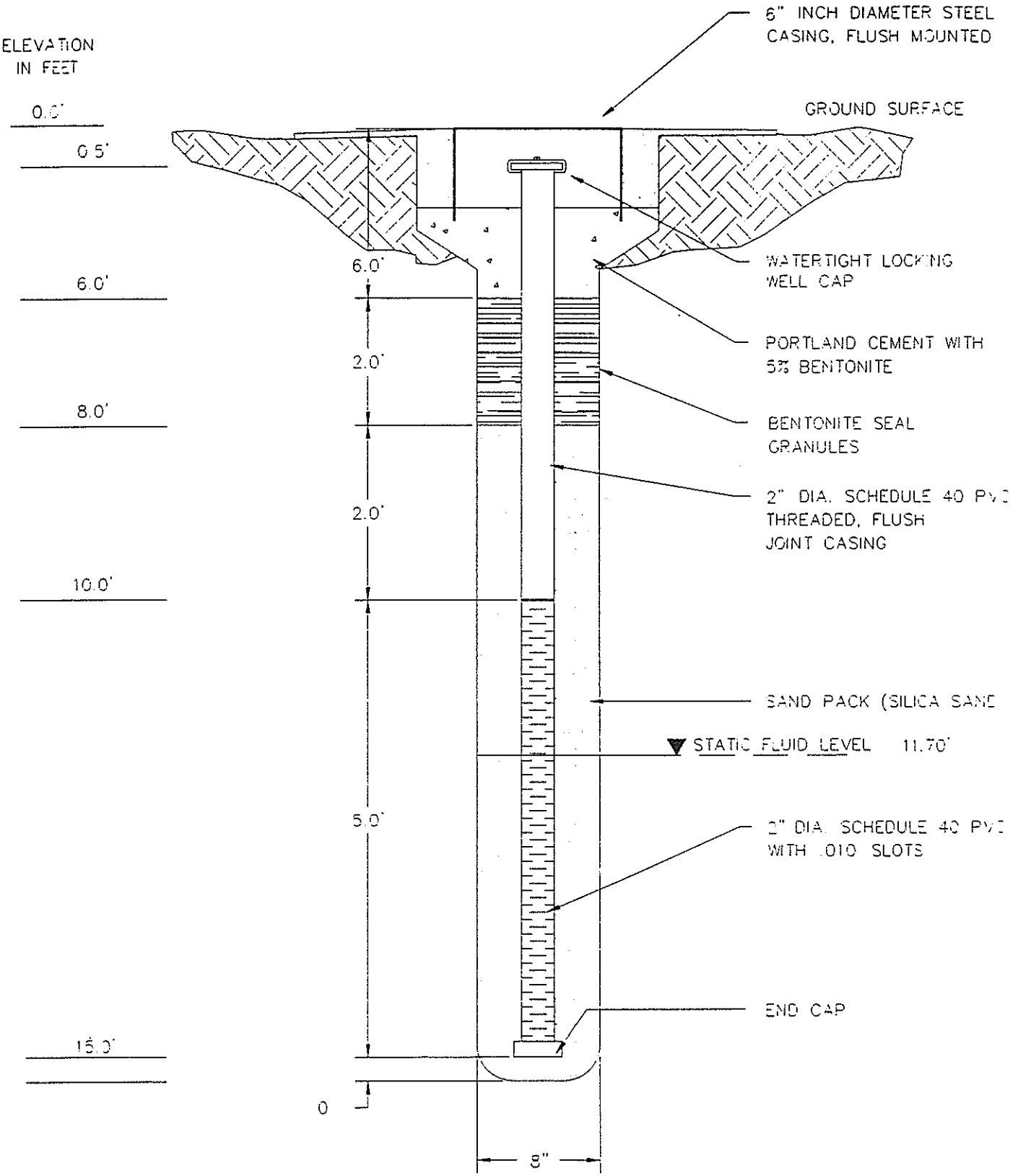
TABLE 8.1

LIMITED ACTION ALTERNATIVE COST SUMMARY
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Task	*Description*	*Estimated Cost*
A	**Field Sample Collection & Coordination** (per year) - coordination and collection of groundwater samples	$10,000
B	**Laboratory Analysis (per year)** - analytical and validation costs associated with one annual monitoring event (sample all monitoring wells) - analytical and validation costs associated with one semiannual monitoring event (sample select monitoring wells)	
B.1	**Annual Groundwater Sampling Round**	$ 22,000.00
B.2	**Semi-Annual Groundwater Sampling Round**	$ 15,000.00
		$ 81,000.00
C.	**Reporting (per year)**	$ 5,000.00
	GRAND TOTAL	**$ 96,000.00**

APPENDIX A

SOIL STRATIGRAPHIC AND MONITORING WELL INSTRUMENTATION LOGS

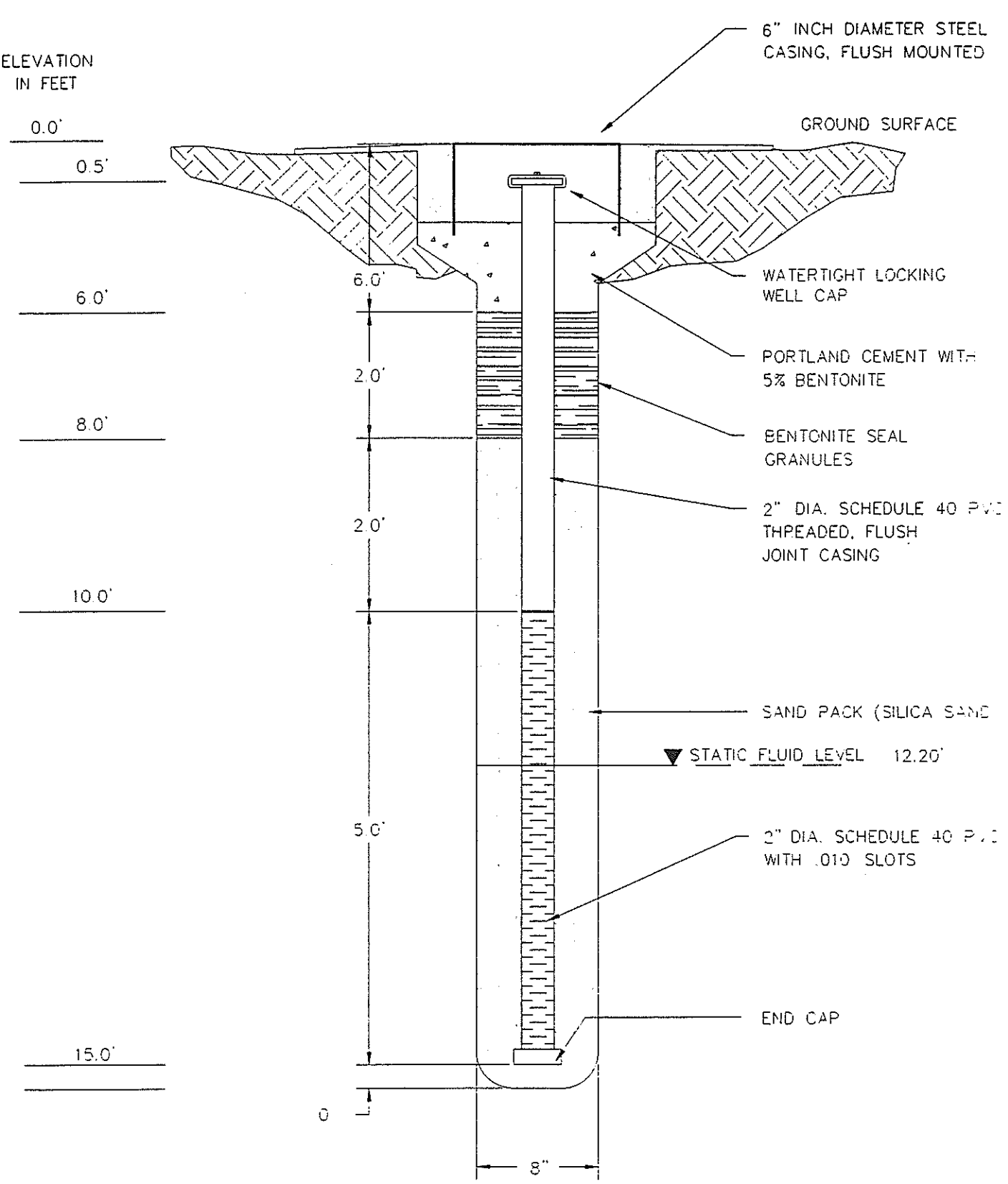


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Project	GNI – WILMINGTON PLANT
	BOXWOOD AND DODSON ROADS WILMINGTON, DE

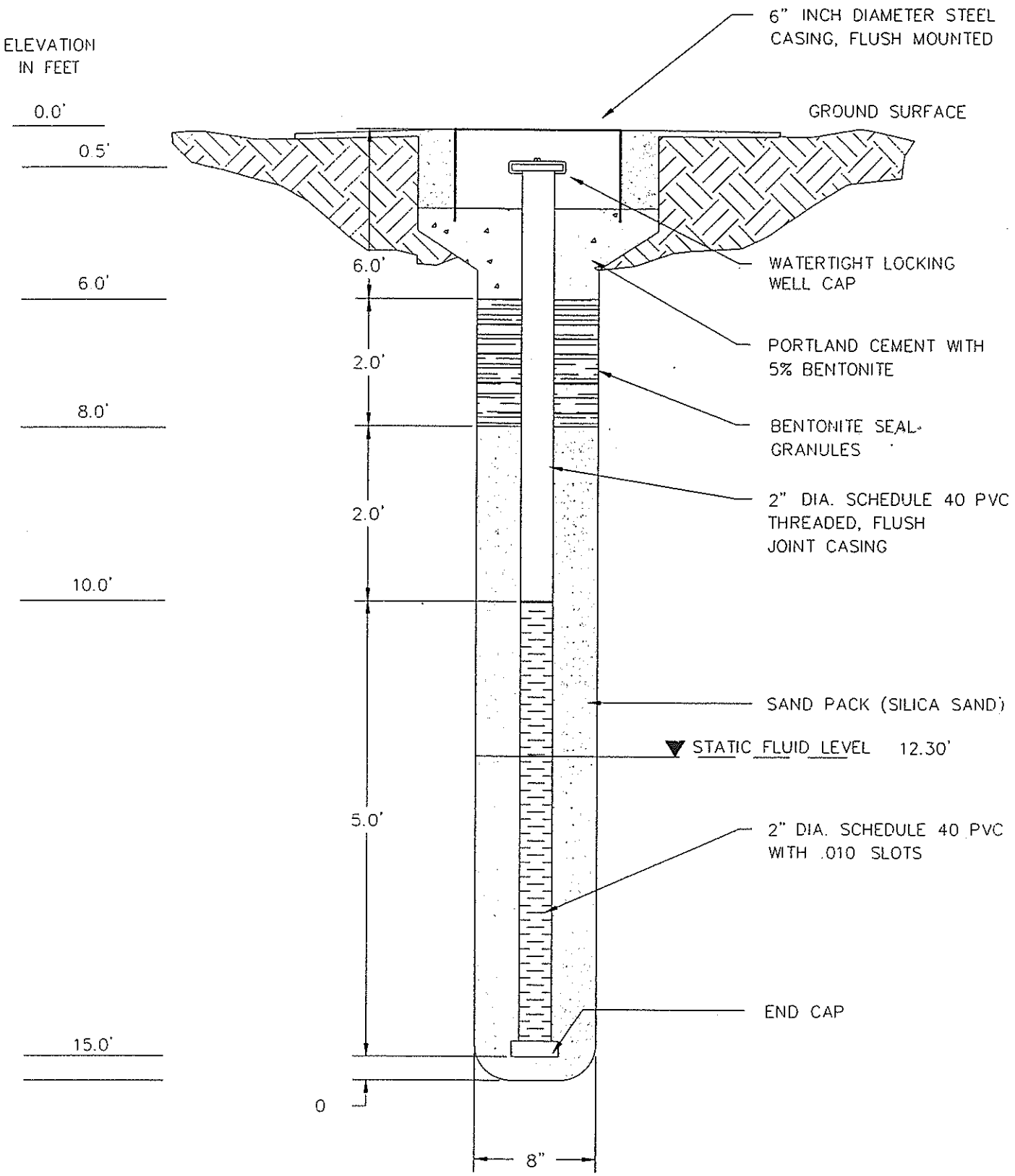
MW-1 CONSTRUCTION

File No	105B-003	ACAD File No	1057003P	Date	6/8/98	REV	
Drawn By	MRE	Design By		Checked By		Approved By	FIG. NO



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Project	GM – WILMINGTON PLANT			
	BOXWOOD AND DODSON ROADS WILMINGTON, DE			MW-2 CONSTRUCTION
File No.	1055-003	ACAD File No. 10570030	Date 6 5 98	REV
Drawn By	MFF	Design By	Checked By	Approved By	FIG No.



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Project: GM – WILMINGTON PLANT	MW-3 CONSTRUCTION
BOXWOOD AND DODSON ROADS WILMINGTON, DE	

File No 105P-003		ACAD File No 1057003R		Date 6/8/98		REV	
Drawn By MRP	Design By		Checked By		Approved By		FIG NO

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

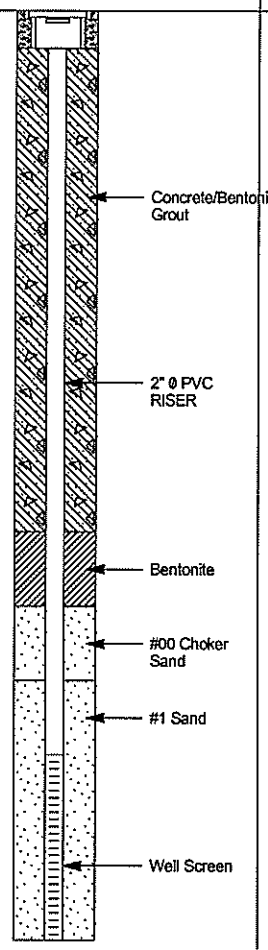
HOLE DESIGNATION: MW-3D
DATE COMPLETED: October 25, 2005
DRILLING METHOD: HSA
FIELD PERSONNEL: R. Redman

NORTHING: 629726.26
EASTING: 600836.02

	ELEV. ft FT NGVD
TOP OF CASING	77.84
GROUND SURFACE	77.84
TOP OF RISER	77.60

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft FT NGVD
	CONCRETE	76.84
2	ML/SM - SAND and SILT, medium grain, dark brown, loose, moist	76.34
	SP - SAND, trace silt, trace fine grain, light brown, loose, moist	75.34
4	CL - CLAY, grey. plastic, moist - reddish deposits within clay - odor	73.14 72.64
6	SP - SAND/SILT, medium grain, whitish grey, loose, wet	
	CL - CLAY, grey, firm, plastic, moist, occasional reddish deposits	69.94
8	SM/ML - SAND and SILT, medium grain, light brown, loose, strong odor, light sheen	69.14
	CL - CLAY, grey, firm, plastic, moist, occasional reddish deposits	68.54
10	ML - SILT, brown, odor, loose, moist	67.04
	SP - SAND, medium grain, whitish, some fine grains, loose, wet	66.84
12	ML - SILT, brown, firm, moist	
	SM/ML - SILTY SAND/SANDY SILT, brown, loose, wet	64.84
14		
	ML - SILT, trace fine grain sand, trace clay, brown, stiff, wet	62.84
16		
	ML - SILT, brown, soft, wet	60.84
	ML/CL - SILT with SAND, medium grain, brey, soft, saturated	60.64 59.84
18		
	CL - SANDY CLAY, grey, occasional think medium to coarse grain land layers, stiff, wet - 0.05' thick medium grain sand layer	58.54
20		
	ML - SILT, brown, firm, wet	56.84
	CL - CLAY, seams of brown silt, grey, soft, wet	
22		
	SW - SAND and SILT, brown, well graded, loose, saturated	54.84
24		
	END OF BOREHOLE @ 25.0ft BGS	52.84
26		
28		
30		
32		
34		

MONITOR INSTALLATION

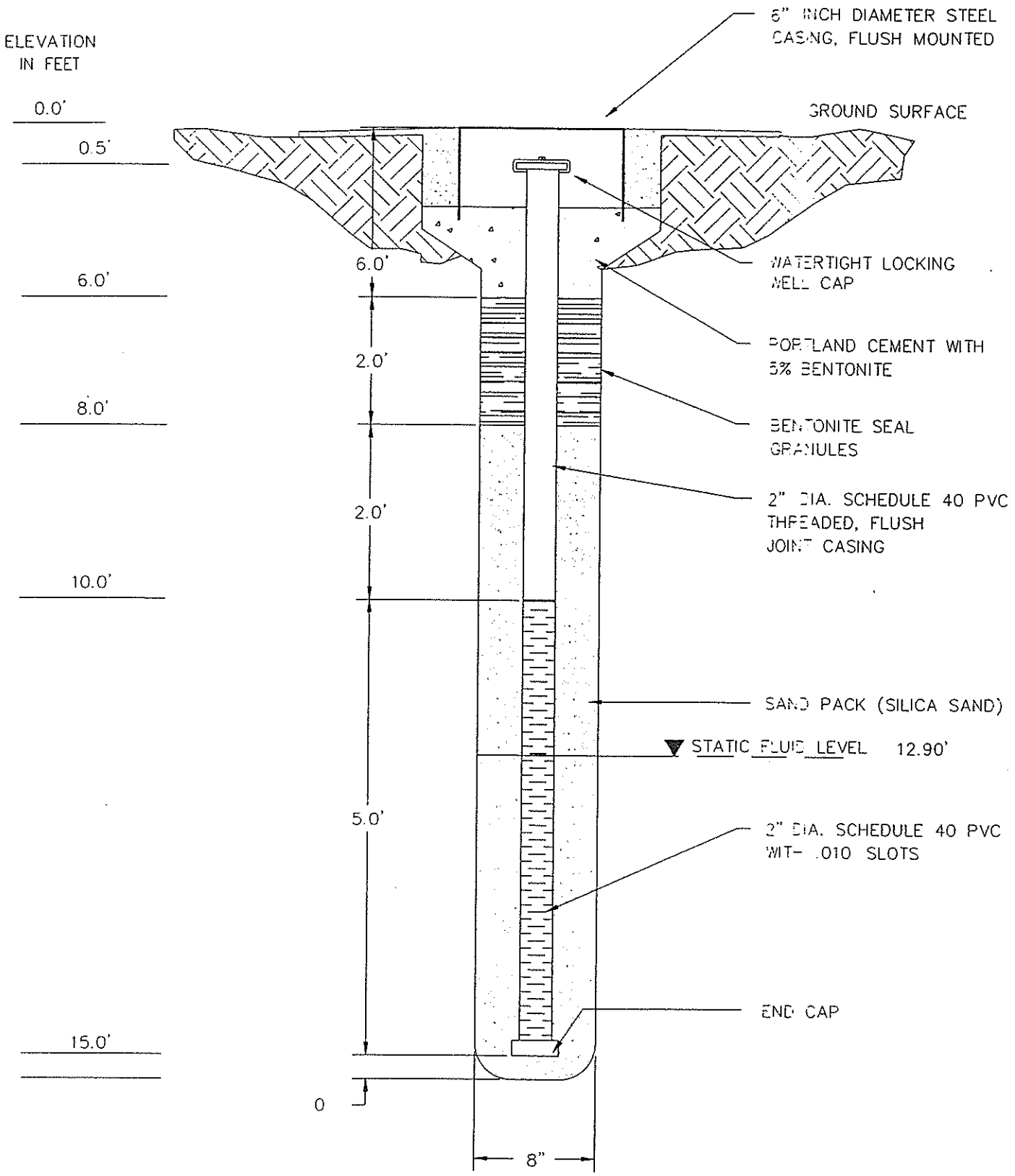


WELL DETAILS
Screened interval:
57.84 to 52.84ft FT NGVD
20.00 to 25.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: #10
Material: PVC
Seal:
63.84 to 61.84ft FT NGVD
14.00 to 16.00ft BGS
Material: Bentonite/Concrete grout
Sand Pack:
61.84 to 52.84ft FT NGVD
16.00 to 25.00ft BGS
Material: #1 & #00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
001		1.8	7	1273
002		2.0	21	141
003		2.0	30	156
004		2.0	35	158
005		2.0	34	139
006		57.1	39	57.1
007		0.7	7	64.1
008		0.8	11	145
009		2.0	9	114
010		2.0	10	68.9
011		0.1	40	60.3
012		1.4	17	38.5

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 12/15/05

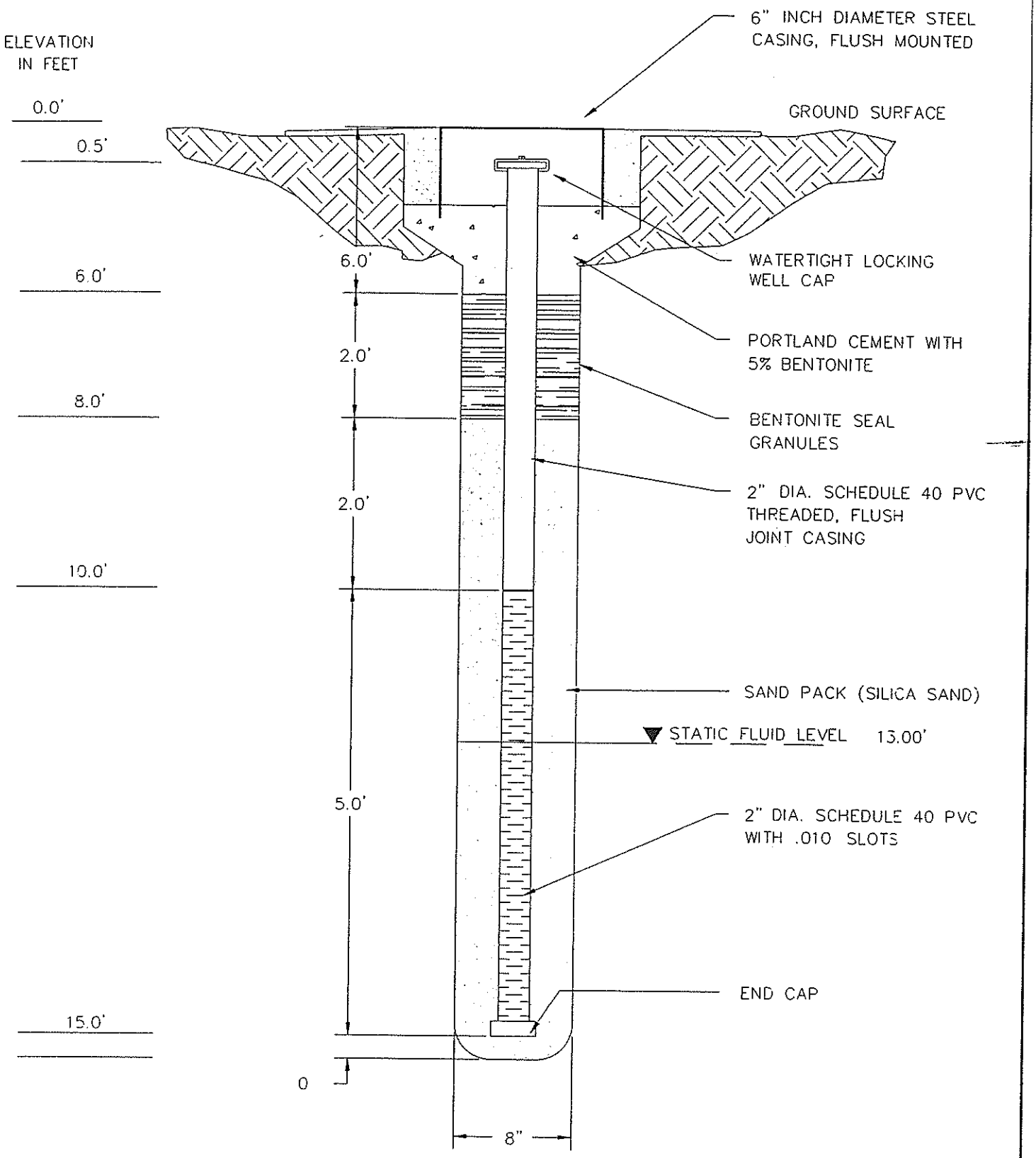


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Project	GM – WILMINGTON PLANT
	BOXWOOD AND DODSON ROADS WILMINGTON, DE

MW-4 CONSTRUCTION

File No	105P-003	ACAD File No	1057003S	Date:	6/8 98
Drawn By	MPP	Design By	Checked By	Approved By	FIG NO



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Project: GM – WILMINGTON PLANT	MW-5 CONSTRUCTION
BOXWOOD AND DODSON ROADS WILMINGTON, DE	

File No. 105P-003	ACAD File No. 1057003T	Date: 6/8/93	REV.	
Drawn By: MRT	Design By:	Checked By:	Approved By:	FIG. NO.

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

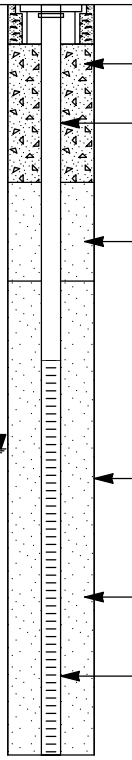
PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: MW-6
DATE COMPLETED: May 10, 2005
DRILLING METHOD: Hollow Stem Auger
FIELD PERSONNEL: E. Pinto, M. Mylet

NORTHING: 629717.24
EASTING: 600908.3
TOP OF CASING 78.26
TOP OF RISER 77.84

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
0	MH-CLAYEY SILT, little medium to fine grained sand, brown to black-grey, trace roots, earthy odor	
2		
	- becoming slightly cohesive, moist at 3 ft BGS	
4	- some black mottling at 4 ft BGS	
6		
	SW-SAND, medium grained, brown, fuel odor	7.00
		7.10
8	MH-CLAYEY SILT, brown, moist, slightly cohesive, with medium grained sand varves	8.00
	CL-SILTY CLAY, grey brown	
10	SP-SAND, coarse grained, sub-angular, some medium to fine grained, steel grey to greenish-grey, loose, wet, fuel odor	10.00
12	SP-SAND, poorly sorted coarse grained with gravel and cobbles, clay and silt, grey-brown, wet, strong fuel odor	12.00
		13.00
	CH-CLAY, grey, cohesive	13.50
14	SP-SAND, poorly sorted coarse grained, trace gravel and cobbles, grey, wet	
16	No Recovery	16.00
18	SP-SAND, poorly sorted coarse grained, trace gravel and cobbles and silt, reddish-orange brown to dark brown, wet	18.00
20		
22	- becoming fine to medium grained, light brown to orange brown below 22 ft BGS	
24	No Recovery	24.00
26		
	SW-SAND, coarse grained, red	27.00
		27.20
28	SP-SAND, poorly sorted medium to coarse grained, trace clay and silt, tan to reddish-brown	
30	- occasional bands of clayey silt below 29 ft BGS	
	No Sample	31.00
32	CH-SILTY CLAY, trace fine grained sand, reddish to reddish-purple mottled with white to grey	32.00
34		

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
9.00 to 19.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: #10
Material: SCH 40 PVC
Seal:
0.00 to 4.50ft BGS
Material: Concrete
Sand Pack:
4.50 to 19.00ft BGS
Material: #1 Silica Sand (7 ft to 19 ft BGS), #00A Choker Sand (4.5 ft to 7 ft BGS)

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
		1.2	19	0
		1.5	18	0
		2.0	38	5.0
		1.9	49	150
		1.3	28	700
		1.7	26	>2000
		1.3	23	>2000
		0.1	40	120
		0.1	17	1.4
		0.3	7	1.3
		0.5	17	
		1.5	19	2.0
		0.0		
		0.0		
		0.7	12	0
		0.7	9	0
		1.7	36	0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STATIC WATER LEVEL ▼

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 7/6/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: MW-6
DATE COMPLETED: May 10, 2005
DRILLING METHOD: Hollow Stem Auger
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
36						1.7	33	0
38						1.3	84	0
40						0.5	53	0
	END OF BOREHOLE @ 40.0ft BGS	40.00						
42	Borehole backfilled to surface with cement-bentonite grout. Monitoring well then installed within 5 feet of borehole.							
44								
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STATIC WATER LEVEL ▼

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 7/6/05

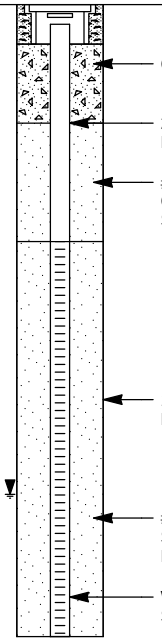
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: MW-7
DATE COMPLETED: May 4, 2005
DRILLING METHOD: Hollow Stem Auger
FIELD PERSONNEL: E. Pinto, M. Mylet

NORTHING: 629531.61
EASTING: 600887.15
TOP OF CASING 78.34
TOP OF RISER 78.07

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Crushed Stone	0.20
2	SPG-SAND, fine to medium grained, reddish-brown to grey, some mottling, dry, loose, trace cobbles and silt - grey at 2 ft BGS	
	CL-CLAY, dark grey with brown mottling, slightly cohesive, moist	3.00
4	MH-CLAYEY SILT, grey with brown mottling, slightly to moderately cohesive, moist	4.00
6		
8		
10		9.80
	SW-SM-SAND, fine grained, grey, moderately well sorted, loose	10.00
	MH-SILT, grey	11.50
12	- moist from 11 ft to 11.5 ft BGS SWG-SAND, fine grained, brown, trace gravel - light grey to grey at 12 ft BGS, poorly sorted angular fragments, wet	
14	- increasing medium and coarse grained sand, grey to brownish, at 14 ft BGS	
16		16.00
	SP-SAND, poorly sorted, light grey to tan to reddish-brown, with sub-rounded to angular gravel and coarse sand, loose, wet	
18	- becoming yellow to reddish-brown with occassional well sorted fine grained sand lenses	
20		20.00
	SW-SAND, moderately well sorted, fine to medium grained, trace to little coarse sand and gravels, yellow to reddish-brown, angular, loose, wet	
22		
24	- increasing mica flecks, reddish-brown at 24 ft BGS	
26	- some black horizontal laminations 1/8" thick at 26 ft BGS	
28		
30		
32		
	GWS-GRAVEL, with sand, reddish-brown	33.30
34	CH-CLAY, light grey, mottled reddish-grey,	33.50



WELL DETAILS
Screened interval:
6.00 to 16.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: #10
Material: SCH 40 PVC
Seal:
0.00 to 3.00ft BGS
Material: Concrete
Sand Pack:
3.00 to 16.00ft BGS
Material: #1 Silica Sand (6 ft to 16 ft BGS), #00A Choker Sand (3 ft to 6 ft BGS)

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
		1.0	33	0
		1.4	22	0
		2.0	12	0
		2.0	33	0
		1.8	40	0
		1.5	32	0
		0.6	21	0
		0.7	13	0
		0.5	14	0
		1.2	6	0
		1.8	24	0
		0.5	14	0
		0.4	16	0
		0.8	15	0
		0.3	10	0
		0.0	NA	0
		1.0	5	0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STATIC WATER LEVEL ▼

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 7/6/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: MW-7
DATE COMPLETED: May 4, 2005
DRILLING METHOD: Hollow Stem Auger
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
36	very cohesive, moderately soft, wet (Potomac) - becoming predominantly reddish-brown in color at 36 ft BGS, denser and harder from 36.5 ft to 37.5 ft BGS					2.0	18	0
38	- maroon in color, more dense below 38 ft BGS					1.7	24	0
40						1.7	16	0
	END OF BOREHOLE @ 40.0ft BGS	40.00						
42	Borehole backfilled to surface with cement-bentonite grout. Monitoring well then installed within 5 ft of borehole.							
44								
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STATIC WATER LEVEL ▼

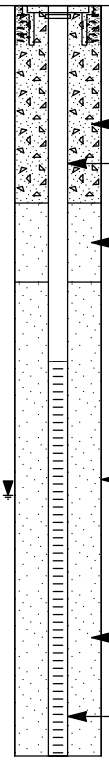
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: MW-8
DATE COMPLETED: May 12, 2005
DRILLING METHOD: Hollow Stem Auger
FIELD PERSONNEL: E. Pinto, M. Mylet

NORTHING: 629532.13
EASTING: 600743.3
TOP OF CASING 77.84
TOP OF RISER 77.46

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
0	SPG-GRAVELLY SAND, dark brown to grey, angular, moist	
2	CL-SILTY CLAY, grey, mottled reddish-brown, cohesive, moist	2.00
6	ML-SILT, trace to little clay, grey with brownish-red mottling	6.00
8	- coarse to medium grained sand lenses and reddish-brown rounded cobbles, moist below 8 ft BGS	
10	SW-SM-SAND, fine to medium grained, well sorted, some silt, grey with some reddish-brown mottling, moist	10.00
12	- sand becoming medium to coarse grained, trace silt, wet below 12 ft BGS	
14	SPG-GRAVELLY SAND, coarse to very coarse grained, angular, with gravel and cobbles, reddish-brown to light yellow-brown, some interbedded clay lenses, wet	14.00
16	- becoming poorly sorted, very fine to very coarse grained, little to some silt below 16 ft BGS	
18	- becoming light grey below 18 ft BGS	
20		
22	- becoming reddish-brown below 21.5 ft BGS	
24	No Sample	24.00
26	SP-SAND, poorly sorted, very fine to very coarse grained, angular, reddish-brown	25.00
28	SW-SAND, moderately well sorted, fine to medium grained, little coarse grained, angular, reddish-brown	27.00
30	No Sample	29.00
32	SP-SAND, poorly sorted, fine to very coarse grained, angular, reddish-brown, loose	30.00
34	SM-SILTY SAND, fine grained, some medium to coarse grained, angular, off-white to tan,	33.50 34.00



WELL DETAILS
Screened interval:
9.00 to 19.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: #10
Material: SCH 40 PVC
Seal:
0.00 to 5.00ft BGS
Material: Concrete
Sand Pack:
5.00 to 19.00ft BGS
Material: #1 Silica Sand (7 ft to 19 ft BGS), #00A Choker Sand (5 ft to 7 ft BGS)

SAMPLE NUMBER	SAMPLE INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
		0.2	33	0
		1.3	17	0.5
		0.1	56	0
		1.8	52	0
		1.3	17	0
		1.8	7	0
		1.3	12	0
		1.3	15	0
		0.3	40	0
		1.0	16	0
		0.8	19	0
		0.3	35	0
		1.3	36	0
		1.3	42	0
		1.2	39	0
		0.4	18	0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STATIC WATER LEVEL ▼

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 7/6/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: MW-8
DATE COMPLETED: May 12, 2005
DRILLING METHOD: Hollow Stem Auger
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
36	occasional clay varves No Sample	35.00			X	1.3	27	0
	SW-SAND, moderately well sorted, medium grained, trace fine and coarse grained, light grey to yellowish to maroon, occasional clay varves	37.00						
38	No Sample	38.00			X	1.0	100/3"	0
40	SP-SAND, poorly sorted, very coarse, angular quartzitic (abundent quartz grains), with little very fine to coarse sand and gravel	39.80						
	CH-CLAY, grey with red-maroon mottling, cohesive, very hard (Potomac)	40.00						
42	END OF BOREHOLE @ 40.0ft BGS							
44	Borehole backfilled to surface with cement-bentonite grout. Monitoring well then installed within 5 ft of borehole.							
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

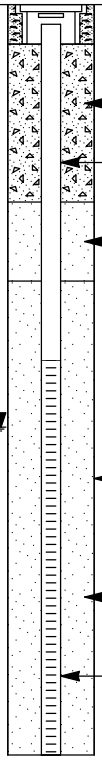
PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: MW-9
DATE COMPLETED: May 11, 2005
DRILLING METHOD: Hollow Stem Auger
FIELD PERSONNEL: E. Pinto, M. Mylet

NORTHING: 629686.19
EASTING: 600594.65
TOP OF CASING 75.44
TOP OF RISER 74.92

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
0	ML-SILT, with little fine to medium grained sand, brown to grey mottled, slightly cohesive, dry	
2	- becoming red-brown to grey with trace clay and mica flakes, moist below 2 ft BGS	
4	- occasional medium to coarse grained 1/4" to 1" width sand lenses below 4 ft BGS	
6		
8	SPG-GRAVELLY SAND, poorly sorted, angular coarse grained, little silt, trace clay varves, reddish brown, moist	7.80
10	- increasing medium grained sand, and becoming off-white to tan to greyish-brown, loose below 8 ft BGS	
12	- trace angular cobbles, reddish brown, wet below 10 ft BGS	
14		
16		
18	- becoming yellow red-brown below 18 ft BGS	
20	SP-SAND, poorly sorted, coarse grained, tan to reddish-brown, pockets of fine grained sand and clay	20.00
22		
24	CL-CLAY with interbedded fine to medium grained sands, light brown to off white, cohesive	23.80
26	- becoming light-brown to orange with white to grey mottling, trace coarse grained sand belwo 24 ft BGS	26.00
	No Sample	27.00
28	CL-CLAY, trace very coarse grained sand and gravel, light brown to orange with white mottling	28.00
30	CL-ML-SILTY CLAY, light brown to orange with white mottling	
32	- decreasing silt below 29 ft BGS - green mottling (glauconite) below 31 ft BGS	
	No Sample	33.00
34	CL-ML-CLAY, trace silt, light brown to orange	34.00 34.50

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
9.00 to 19.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: #10
Material: SCH 40 PVC
Seal:
0.00 to 5.00ft BGS
Material: Concrete
Sand Pack:
5.00 to 19.00ft BGS
Material: #1 Silica Sand (7 ft to 19 ft BGS, #00A Choker Sand (7 ft to 5 ft BGS)

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
		1.2	12	0
		2.0	31	0
		2.0	12	0
		1.8	49	0
		0.8	26	0
		0.8	43	0
		1.2	36	0
		0.1	29	0
		0.3	43	0
		1.5	18	0
		0.7	30	0
		1.3	34	0
		0.7	9	0
		1.8	17	0
		1.0	24	0
		1.2	42	0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STATIC WATER LEVEL ▼

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 7/6/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: MW-9
DATE COMPLETED: May 11, 2005
DRILLING METHOD: Hollow Stem Auger
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
36	with white mottling MH-CLAYEY SILT, orange, red and green layers					2.0	29	0
38	- becoming light brown with green, grey, red and orange layers					1.0	29	0
40						1.3	43	0
	END OF BOREHOLE @ 40.0ft BGS	40.00						
42	Borehole backfilled to surface with cement-bentonite grout. Monitoring well then installed within 5 ft of borehole.							
44								
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STATIC WATER LEVEL ▼

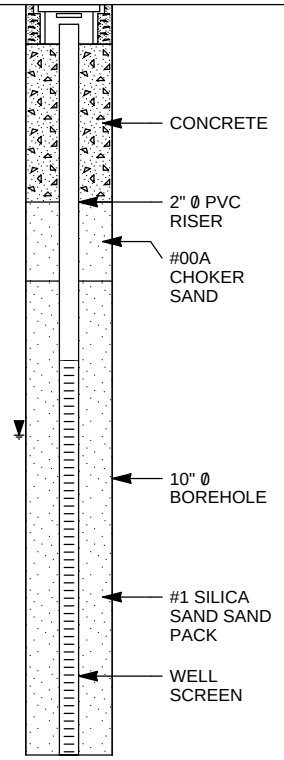
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: MW-10
DATE COMPLETED: May 6, 2005
DRILLING METHOD: Hollow Stem Auger
FIELD PERSONNEL: E. Pinto, M. Mylet

NORTHING: 629777.08
EASTING: 600838.83
TOP OF CASING 77.71
TOP OF RISER 77.48

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	Not Sampled	
	SWG-SAND, fine grained, well sorted, with angular gravel, greyish-brown, dry	1.00
	CL-CLAY, grey with light brown varves, variegated, cohesive, little fine grained sand, dry	3.00
	MH-CLAYEY SILT, grey, slightly cohesive, dry - Strong chemical odor from 7 ft to 9 ft BGS	5.00
	SPG-SAND, poorly sorted, light grey mottled black, some coarse angular cobbles	10.00 11.00
	SWG-SAND, moderately well sorted, fine to medium grained, light grey, trace coarse grained sand and angular gravel, wet - some pink to salmon colored staining at 13 ft to 18.7 ft BGS	
	SW-SAND, medium grained, angular, moderately well sorted, yellow-brown, loose	18.70 19.00
	SP-SAND, poorly sorted, fine to medium grained, some coarse grained, some silt, some angular gravel, yellow brown - wet, with some dark brown to black banding and sub-rounded gravels at 21 ft BGS - yellow brown with some cobbles at 23 ft BGS	
	No Recovery	25.00
	SW-SAND, moderately well sorted, fine grained, with trace clay, off white to tan, wet	27.00
	- alternating layers of increasingly clayey sand and coarse, angular gravel and sand lenses from 32.2 ft to 32.7 ft BGS	33.00
	SP-SC-SAND, fine to medium grained, with clay and silty clay, yellow-brown to	



WELL DETAILS
Screened interval:
9.00 to 19.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: #10
Material: SCH 40 PVC
Seal:
0.00 to 5.00ft BGS
Material: Concrete
Sand Pack:
5.00 to 19.00ft BGS
Material: #1 Silica Sand (7 ft to 19 ft), #00A Choker Sand (5 ft to 7 ft BGS)

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
		1.7	57	NA
		0.3	15	3.4
		1.8	34	2000
		1.7	35	850
		1.1	33	700
		1.0	30	34
		0.9	19	51
		1.2	23	7.4
		1.0	9	7
		1.2	13	3.6
		1.5	26	0.1
		0.5	28	1.5
		0.0	64	NA
		0.8	49	4.7
		1.3	32	3.4
		1.2	17	7.4
		1.2	11	3.4

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
STATIC WATER LEVEL ▼

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 7/6/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: MW-10
DATE COMPLETED: May 6, 2005
DRILLING METHOD: Hollow Stem Auger
FIELD PERSONNEL: E. Pinto, M. Mylet

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
36	brownish-red, cohesive, sticky - becoming harder and reddish to tan-brown-red at 35 ft BGS				X	1.3	16	4.2
		37.00						
38	No Sample	38.00						
	CH-CLAY, maroon, mottled grey, very cohesive, sticky (Potomac)				X	2.0	21	5.7
40	END OF BOREHOLE @ 40.0ft BGS	40.00						
	Borehole backfilled to surface with cement-bentonite grout. Monitoring well then installed within 5 feet of borehole.							
42								
44								
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STATIC WATER LEVEL ▼

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 7/6/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

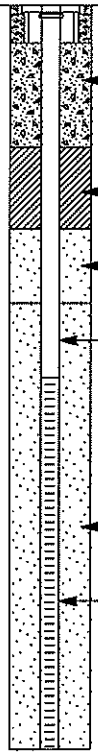
HOLE DESIGNATION: MW-11
DATE COMPLETED: October 24, 2005
DRILLING METHOD: HSA
FIELD PERSONNEL: R. Redman

NORTHING: 629714.98
EASTING: 600806.18

	ELEV. ft FT NGVD
TOP OF CASING	78.11
GROUND SURFACE	78.11
TOP OF RISER	77.71

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft FT NGVD
	GRAVEL	77.61
2	ML - SILTY SAND, medium grain, olive, moist, firm	76.11
	CL - CLAY, dark gray, firm, light plasticity, moist with odor	
4	- seams of black medium grain sand present, becomes wet	74.31
	ML - SANDY SILT, fine to medium grain, brown, moderately dense, moist	74.11
6	CL - SILTY CLAY, blue grey, light plasticity, stiff, moist	
	- seans if fine sand present, light odor	
8	CL - CLAY, seams of very fine sand, reddish grey, low plasticity moist	70.11
	CH - CLAY, dark gray, soft, plastic, moist	68.61
10	ML - SILT, dark grey, moist, firm	68.11
	GM - SILTY GRAVEL, fine well rounded gravel, loose, moist	67.11
12	SP - SAND and SILT, very fine, trace medium grain sand, dark grey, moderately dense, wet	66.11
	GM - SILTY GRAVEL, fine well rounded gravel, loose, wet	64.91
14	SP - SAND and SILT, very fine, trace medium grain sand, dark grey, moderately dense, wet	64.51 64.11 63.61
	CL - SANDY CLAY, trace sand, grey, plastic, soft, wet	63.41
16	SP - SAND, trace silt, coarse grain, loose, wet	61.61
	SM/ML - SILTY SAND/SANDY SILT, trace fine well rounded gravel, brown, moderately dense, wet	60.81
18	CL - CLAY, with a mix of silt and very fine grain sand, gray, firm, wet	60.11
20	SW - SAND with SILT, trace fine gravel, brown, well graded, loose, wet	58.11
	SP - SAND with SILT, fine to medium grain, reddish brown, loose, wet	
22	END OF BOREHOLE @ 20.0ft BGS	
24		
26		
28		
30		
32		
34		

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
68.11 to 58.11ft FT NGVD
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: #10
Material: PVC
Seal:
74.31 to 72.11ft FT NGVD
3.80 to 6.00ft BGS
Material: Bentonite
Sand Pack:
72.11 to 58.11ft FT NGVD
6.00 to 20.00ft BGS
Material: #1 & #00 Sand

SAMPLE

NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
001		0.2	19	62.7
002		1.8	12	139
003		0.9	30	181
004		2.0	94	181
005		1.3	56	173
006		1.1	12	329
007		0.8	20	154
008		1.0	13	3.9
009		1.8	10	4.1
010		2.0	17	2.1

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 12/15/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

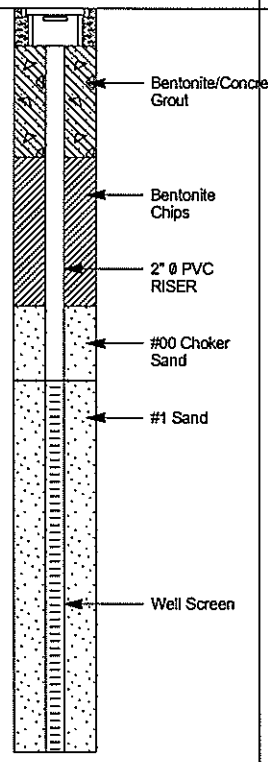
HOLE DESIGNATION: MW-11R
DATE COMPLETED: October 27, 2005
DRILLING METHOD: HSA
FIELD PERSONNEL: R. Redman

NORTHING: 629739.02
EASTING: 600610.31

	ELEV. ft FT NGVD
TOP OF CASING	77.82
GROUND SURFACE	77.82
TOP OF RISER	77.30

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft FT NGVD
	GP - GRAVEL, loose	77.62
	SM/ML - SILT and SAND, medium grain, brown, loose, moist	76.92
2	CL - CLAY, grey with red deposits, soft, plastic, moist	75.52
	- trace medium grain sand and silt	74.62
4	SC - SAND and CLAY, very fine grain, ~60% sand and 40% clay, red sand, grey clay, slightly moist, plastic	73.82
6	SC - CLAYEY SAND, grey, firm, moist	71.82
	CL - SANDY CLAY, medium grain, some reddish deposits, stiff, occasional seams of medium grain sand, moist	71.02
8	CL - SANDY CLAY, grey, some reddish very fine grain sand/silt, plastic, soft, moist	70.92 / 70.52
	SP - SAND with SILT, coarse grain, reddish, loose, wet	
10	SP - SAND and SILT, medium to coarse grain, whitish, loose, moist	67.52
12	SW - SAND and SILT, well graded, reddish, moderately dense, moist	66.02
	- occasional (5%-7%) fine sub-rounded gravels	65.82
14	SC/CL - SAND and CLAY, some silt, very fine sand, reddish brown, slight plasticity, moist	63.82
	SP - SAND with SILT, medium grain, whitish, loose, moist	
16	No Recovery	62.02
	SP - SAND and SILT, medium grain, brown, loose, wet	60.92
18	SW - SAND and SILT, well graded, orange brown, occasional sub-angular gravel, loose, wet	59.82
	SM - SILTY SAND, medium grain, orangish, loose, wet	58.72
20	SW/SM - SAND and SILT, well graded, orangish, moderately dense, wet	57.82
22	SM - SAND and SILT, medium to fine grain, orangish, moderately dense, wet	
	END OF BOREHOLE @ 20.0ft BGS	
24		
26		
28		
30		
32		
34		

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
67.82 to 57.82ft FT NGVD
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: #10
Material: PVC
Seal:
73.82 to 69.82ft FT NGVD
4.00 to 8.00ft BGS
Material: Bentonite/Concrete Grout
Sand Pack:
69.82 to 57.82ft FT NGVD
8.00 to 20.00ft BGS
Material: #1, #00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
001		2.0	7	11.8
002		2.0	27	14
003		2.0	39	41.6
004		2.0	38	10.2
005		0.9	30	13.5
006		0.9		12.1
007		0.0	26	
008		1.5	21	7.2
009		2.0	27	10.6
010		1.9	30	2.2

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 12/15/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

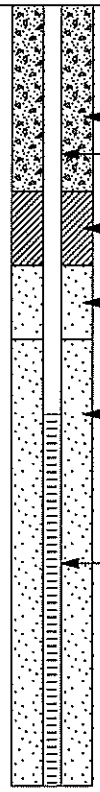
HOLE DESIGNATION: MW-12
DATE COMPLETED: October 25, 2005
DRILLING METHOD: HSA
FIELD PERSONNEL: R. Redman

NORTHING: 629700.24
EASTING: 600853.28

TOP OF CASING 78.27
GROUND SURFACE 78.27
TOP OF RISER 77.87

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft FT NGVD
	Concrete	77.27
2	ML - SANDY SILT, trace gravel, brown, loose, moist	76.27
	SM - SAND and SILT, medium grain, grey brown, loose, moist, odor	75.67
4	CL - CLAY, grey, plastic, moist, reddish deposits	74.27
	SM - SAND and SILT, medium grain, grey brown, moist, odor, light sheen	73.37
6	CL - CLAY, sandy, grey, firm, plastic, moist	72.27
	ML - SAND and SILT, medium grain, brown, wet	71.07
8	CL - CLAY, trace fine grain sand, grey, low plasticity, moist	70.27
	SM - SILTY SAND, fine to medium grain, brown, loose, wet	69.07
10	CL - SANDY CLAY, trace very fine sand, blue grey, stiff, wet	67.77
	- plastic at 10' BGS	67.07
12	ML - SILT, grey, stiff, wet	
	SW/SP - SAND with SILT, fine to coarse grain, brown, clay seams, wet, moderately dense	65.37
14	ML - SILT with SAND, very fine grain sand, dark grey, stiff, wet	64.27
	SC - CLAYEY SAND, grey, ~30% clay and 70% even graded sand	62.27
16	SC - CLAYEY SAND, ~20% clay, ~80% sand, fine to coarse grain sand, stiff, wet	61.77
	ML - SILT, brown, stiff, wet	60.27
18	ML/SM - SANDY SILT/SILTY SAND, brown, soft, wet	59.77
	SP - SAND, medium to fine grain, whitish, some silt	58.27
20	END OF BOREHOLE @ 20.0ft BGS	
22		
24		
26		
28		
30		
32		
34		

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
67.27 to 57.27ft FT NGVD
11.00 to 21.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: #10
Material: PVC
Seal:
73.27 to 71.27ft FT NGVD
5.00 to 7.00ft BGS
Material: Bentonite/Concrete Grout
Sand Pack:
71.27 to 57.27ft FT NGVD
7.00 to 21.00ft BGS
Material: #1, #00 Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
001				60.4
002		1.0	8	13.2
003		2.0	45	27.6
004		1.0		8.9
005		2.0	70	8.2
006		2.0		6.2
007		1.5	22	4.3
008		1.8	13	4.2
009		2.0	8	4.6
010		2.0	15	4.8

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

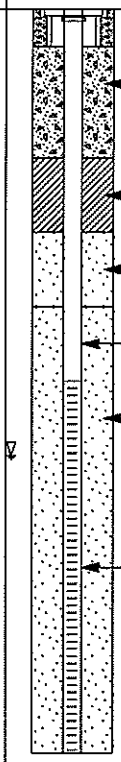
PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: MW-13
DATE COMPLETED: October 26, 2005
DRILLING METHOD: HSA
FIELD PERSONNEL: R. Redman

NORTHING: 629662.15
EASTING: 600845.68

	ELEV. ft FT NGVD
TOP OF CASING	78.12
GROUND SURFACE	78.12
TOP OF RISER	77.82

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft FT NGVD
0	Concrete	77.12
2	GP - GRAVEL, fine, subangular, loose, wet	75.62
4	SM/ML - SANDY SILT/SILTY SAND, fine grain, whitish, soft, loose, wet	74.12
6	CL - SANDY CLAY, gray, ~60% clay and 40% very fine sand, low plasticity, stiff, wet	
8		69.12
10	SC - SAND with CLAY, very fine grain, grey, ~80% sand, 20% clay, moderately dense, stiff, wet	68.62
	SP/ML - SAND with SILT/SANDY SILT, very fine grain, brown	68.12
12	SC - CLAYEY SAND, very fine grain, grey, moderately dense, stiff, wet	66.62
	SM/ML - SILTY SAND/SANDY SILT, very fine sand and silt, brown, moderately dense, wet	66.12
14	SC - CLAYEY SAND, grey, ~20% clay, 80% fine sand, saturated, soft	64.62
16	SM - SAND and SILT, very fine grain, grey, soft, loose, wet	64.12
	SC - CLAYEY SAND, very fine grain, grey, ~20% clay, 80% very fine sand, saturated, odor	63.12
18	SP - SAND with SILT, medium grain, whitish, loose, wet, odor	62.12
20	SM - SAND and SILT, medium to coarse grain, whitish, loose, wet, odor	60.82
	SW - SAND and SILT, well graded, brown, loose wet, odor	60.12
22	SP - SAND with SILT, medium grain, whitish, loose, wet, odor	59.02
24	SP - SAND with SILT, medium grain, brown, loose, wet, odor	58.12
	END OF BOREHOLE @ 20.0ft BGS	
26		
28		
30		
32		
34		



WELL DETAILS
Screened interval:
68.12 to 58.12ft FT NGVD
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: #10
Material: PVC
Seal:
74.12 to 72.12ft FT NGVD
4.00 to 6.00ft BGS
Sand Pack:
72.12 to 58.12ft FT NGVD
6.00 to 20.00ft BGS
Material: Silica Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
001		0.3	7	0.8
002		0.5	12	3.5
003		2.0	20	4.7
004		2.0	45	4.2
005		2.0	45	4.0
006		1.8	15	4.2
007		1.8	31	42.1
008		2.0	42	646
009		2.0	40	89.1
010		2.0	32	487

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 12/15/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

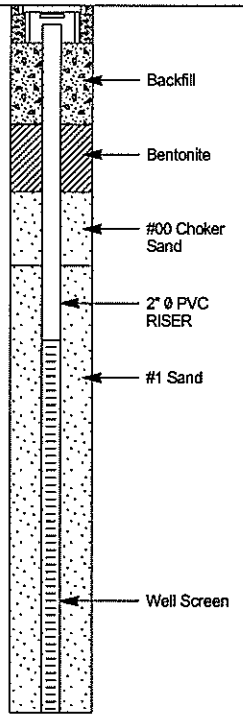
HOLE DESIGNATION: MW-14
DATE COMPLETED: October 24, 2005
DRILLING METHOD: HSA
FIELD PERSONNEL: R. Redman

NORTHING: 629590.76
EASTING: 600462.18

	ELEV. ft FT NGVD
TOP OF CASING	79.69
GROUND SURFACE	79.69
TOP OF RISER	79.17

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft FT NGVD
	Concrete	78.69
2	SM - SILTY SAND, reddish-brown, rock chips present, dry	77.69
	SM/ML - SILTY SAND/SANDY SILT, redish-brown, fine to medium sand grains, dry, loose	
4	- fine subangular gravel present (~20%)	75.69
	ML - SILTY SAND, fine grain, orangish, dry, loose	75.19 / 74.69
6	BRICK CHIPS	73.69
	ML - SILTY SAND/SANDY SILT, brown, moist, loose	
8	CL - CLAY, grey, reddish deposits, moist, firm, low plasticiy	71.69
	CL - CLAY with SAND, medium grain, grey, firm, low plasticity, moist	70.69 / 70.49
10	GP - GRAVEL, fine, moist, loose	69.89 / 69.69
	CL - CLAY with SAND, fine grain, grey, firm, low plasticity, moist	
12	ML - SILT and SAND, fine grain, reddish borwn,soft, wet	67.69 / 67.49
14	SM - SAND with SILT, medium grain, moderately dense, ~20% fine well-rounded gravel, moist	65.69
	GM - SILTY GRAVEL, reddish brown, fine well-rounded gravel, moist to wet	64.69 / 64.39
16	CL/SC - CLAYEY SAND/SANDY CLAY, greyish brown, soft, wet	63.69 / 63.09
18	SM - SAND and SILT, white, medium grain, wet, loose, some fine gravel	62.49
	SM/ML - SANDY SILT/SILTY SAND, brown, firm, wet	
20	ML/CL - SILT with CLAY, borwn, streaks of gray clay, stiff, wet	59.69
22	SM - SAND and SILT, whitish, medium grain ~10% fine gravels, loose, wet	
	ML - SILT, trace sand, reddish brown, trace well rounded gravel, soft, wet	
24	SM - SAND with SILT, whitish, medium grain, wet, loose, deposits of olive fine sand	
	END OF BOREHOLE @ 20.0ft BGS	
26		
28		
30		
32		
34		

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
70.69 to 60.69ft FT NGVD
9.00 to 19.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: #10
Material: PVC
Seal:
76.49 to 74.69ft FT NGVD
3.20 to 5.00ft BGS
Material: Bentonite
Sand Pack:
74.69 to 60.69ft FT NGVD
5.00 to 19.00ft BGS
Material: Silica Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
001		0.3	17	8.1
002		0.9	13	52.7
003		0.4	6	18.8
004		1.2	28	57.2
005		2.0	22	63.9
006		1.2	23	37.9
007		1.0	36	
008		1.8	24	36.2
009		2.0	38	43.7
010		2.0	38	39.5

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 17338.GPJ CRA_CORP.GDT 12/15/05

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

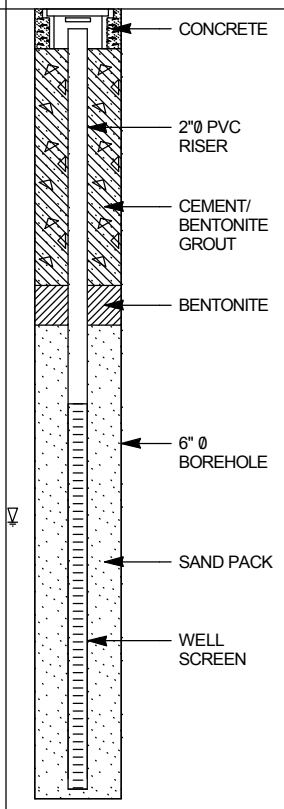
HOLE DESIGNATION: MW-15
DATE COMPLETED: August 16, 2006
DRILLING METHOD: HSA
FIELD PERSONNEL: M. Mylet

NORTHING: 629807.94
EASTING: 600645.36

GROUND SURFACE 78.76
TOP OF RISER 78.46

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	SP-SAND with silt and gravel, fine to coarse grained, brown, orange, poorly sorted.	
4	ML-SANDY SILT, greenish gray.	74.76
5	SM-SILTY SAND, greenish gray.	73.76
6	ML-SILT with fine sand, greenish gray, orange mottles.	72.76
8	- trace fine sand, gray, orange mottles.	
10	- and fine sand, greenish gray.	68.26
12	SP-SAND, fine to coarse grained, orange brown intermixed with gray lenses, poorly sorted. - orange/tan, saturated below 13.0 ft BGS.	
14	ML-SILT, trace fine sand, brown.	64.76
16	SP-SAND, coarse grained, orange/tan, contains quartz. - and gravel, orange.	63.76
20	END OF BOREHOLE @ 20.0ft BGS	58.76

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
68.76 to 58.76ft
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.1
Material: PVC
Seal:
71.76 to 70.76ft
7.00 to 8.00ft BGS
Material: Grout-Cement/Bentonite
Sand Pack:
70.76 to 58.76ft
8.00 to 20.00ft BGS
Material: Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
SS1		1.0	12	0
SS2		1.5	11	0
SS3		1.5	6	0
SS4		2.0	41	0
SS5		2.0	7	0
SS6		1.5	13	0
SS7		1.5	14	0
SS8		1.0	18	0
SS9		2.0	17	0
SS10		2.0	13	0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 017338.GPJ CRA_CORP.GDT 9/12/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

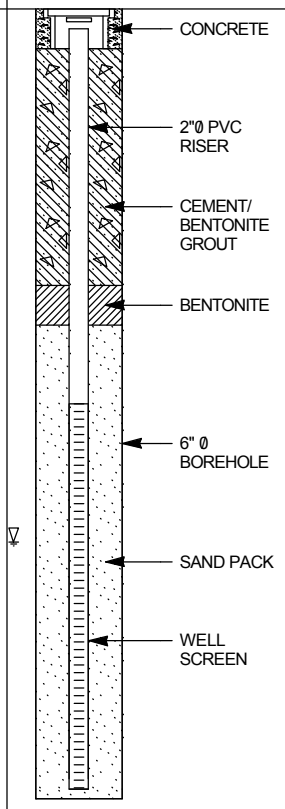
HOLE DESIGNATION: MW-16
DATE COMPLETED: August 17, 2006
DRILLING METHOD: HSA
FIELD PERSONNEL: J. Skurat

NORTHING: 629754.01
EASTING: 600913.7

GROUND SURFACE 78.14
TOP OF RISER 77.62

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	CONCRETE	77.14
2	SM-SAND with silt, gray, dry.	
4	- gray/brown.	
6	- tightly packed.	
8	- medium grained, cohesive.	
10	SW-SAND, medium grained, brownish gray, moist, cohesive.	68.14
12	- gray, stained.	
14	- saturated below 13.5 ft BGS.	64.14
16	Zero Recovery.	62.14
18	SW-SAND, medium to coarse grained, gray.	60.14
20	Not Sampled.	58.14
22	END OF BOREHOLE @ 20.0ft BGS	
24		
26		
28		
30		
32		
34		

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
68.14 to 58.14ft
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.1
Material: PVC
Seal:
71.14 to 70.14ft
7.00 to 8.00ft BGS
Material: Grout-Cement/Bentonite
Sand Pack:
70.14 to 58.14ft
8.00 to 20.00ft BGS
Material: Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
SS1		1.0		0
SS2		1.5	16	0.1
SS3		1.0	7	1.9
SS4		1.5	10	0.7
SS5		1.5	4	1.8
SS6		1.5	7	20.1
SS7		1.0	4	1.9
		0.0		
SS8		0.5	11	0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 017338.GPJ CRA_CORP.GDT 9/12/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

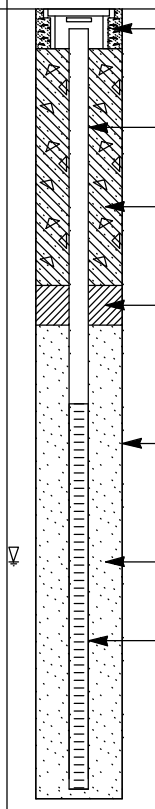
HOLE DESIGNATION: MW-17
DATE COMPLETED: August 17, 2006
DRILLING METHOD: HSA
FIELD PERSONNEL: J. Skurat

NORTHING: 629749.45
EASTING: 601014.96

GROUND SURFACE 78.76
TOP OF RISER 78.37

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	CONCRETE	77.76
2	SW-SAND, medium grained, brown, dry. - grayish brown.	
4		74.76
6	SM-SAND with Silt, medium grained, gray, cohesive. - fine grained, crumbly.	
8	- and silt, fine grained, iron staining.	
10	- with silt, fine to medium grained, brown/gray.	
12		66.76
14	SP-SAND, medium to coarse grained, gray/brown. - coarse grained, saturated below 14.0 ft BGS.	
16		
18	Not Sampled.	60.76
20	END OF BOREHOLE @ 20.0ft BGS	58.76
22		
24		
26		
28		
30		
32		
34		

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
68.76 to 58.76ft
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.1
Material: PVC
Seal:
71.76 to 70.76ft
7.00 to 8.00ft BGS
Material: Grout-Cement/Bentonite
Sand Pack:
70.76 to 58.76ft
8.00 to 20.00ft BGS
Material: Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
SS1		1.0		0
SS2		1.5	31	0
SS3		1.0	10	0
SS4		2.0	27	0
SS5		1.0	7	0
SS6		1.5	27	0
SS7		1.5	20	0
SS8		1.5	13	0
SS9		2.0	15	0
		0.0		

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 017338.GPJ CRA_CORP.GDT 9/12/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

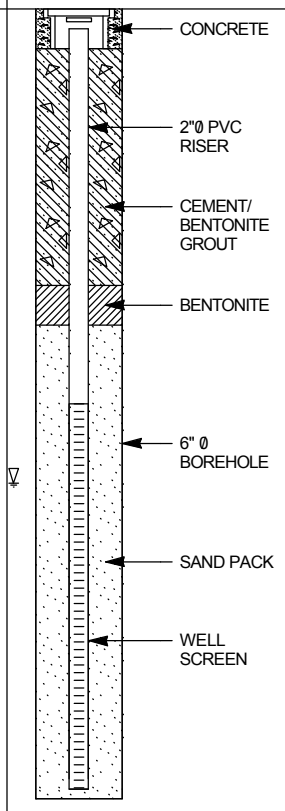
PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

HOLE DESIGNATION: MW-18
DATE COMPLETED: August 18, 2006
DRILLING METHOD: HSA
FIELD PERSONNEL: M. Mylet

NORTHING: 629658.83
EASTING: 601000.93

GROUND SURFACE 78.99
TOP OF RISER 78.51

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	CONCRETE	
2	SP-SAND with gravel (quartz) and silt, fine to coarse grained, brownish orange, poorly sorted.	76.99
4		
6	ML-SILT, trace fine sand, grey with orange mottles, crumbly.	73.99
	Zero Recovery.	72.99
8	ML-SILT, trace fine sand, brownish gray, crumbly.	70.99
10		
12	SW-SAND, trace silt, trace gravel (quartz), medium to coarse grained, brown. - and gravel, coarse grained. - saturated below 13.0 ft BGS.	67.99
14		
16		
18	- brown and gray.	
20	END OF BOREHOLE @ 20.0ft BGS	58.99
22		
24		
26		
28		
30		
32		
34		



WELL DETAILS
Screened interval:
68.99 to 58.99ft
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.1
Material: PVC
Seal:
71.99 to 70.99ft
7.00 to 8.00ft BGS
Material: Grout-Cement/Bentonite
Sand Pack:
70.99 to 58.99ft
8.00 to 20.00ft BGS
Material: Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
SS1		2.0	29	0
SS2		2.0	8	0
		0.0		
SS3		2.0	13	0
SS4		2.0	20	0
SS5		0.5	22	0
SS6		1.0	15	0
SS7		0.5	22	0
SS8		2.0	34	0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 017338.GPJ CRA_CORP.GDT 9/12/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: OU 2 Soil Investigation
PROJECT NUMBER: 17338
CLIENT: General Motors Corp.
LOCATION: Wilmington, Delaware

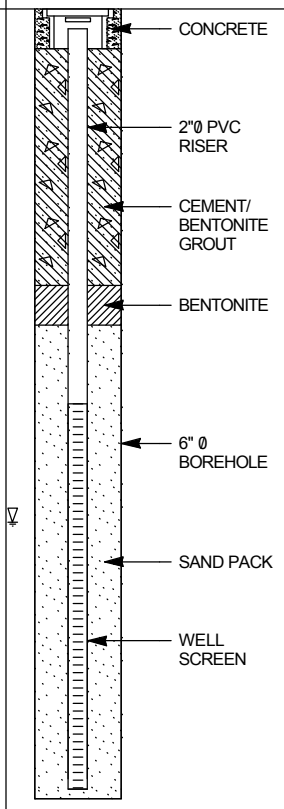
HOLE DESIGNATION: MW-19
DATE COMPLETED: August 16, 2006
DRILLING METHOD: HSA
FIELD PERSONNEL: M. Mylet

NORTHING: 629550.78
EASTING: 600552.86

GROUND SURFACE 78.74
TOP OF RISER 78.36

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	ML-SANDY SILT, trace gravel, brownish orange, gray, poorly sorted sands.	
2	Zero Recovery.	76.74
4	SP-SILTY SAND, gray, brown, poorly sorted, sticky.	74.74
6	ML-SANDY SILT, gray, brown, poorly sorted sand, sticky.	72.74
8	Zero Recovery - piece of wood blocked spoon.	70.74
10	SW-SAND, some silt and gravel, medium to coarse grained, gray, moist, sticky.	68.74
12	SM-SAND, with silt, trace gravel, coarse grained, brown, gray. - saturated below 13.0 ft BGS.	66.74
20	END OF BOREHOLE @ 20.0ft BGS	58.74

MONITOR INSTALLATION



WELL DETAILS
Screened interval:
68.74 to 58.74ft
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.1
Material: PVC
Seal:
71.74 to 70.74ft
7.00 to 8.00ft BGS
Material: Grout-Cement/Bentonite
Sand Pack:
70.74 to 58.74ft
8.00 to 20.00ft BGS
Material: Sand

SAMPLE NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID (ppm)
SS1	X	0.5	7	0
		0.0		
SS2	X	1.5	8	0
SS3	X	2.0	9	0
		0.0		
SS4	X	2.0	9	0
SS5	X	2.0	9	0
SS6	X	1.0	13	0
SS7	X	0.3	10	0
SS8	X	1.5	9	0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽

OVERBURDEN LOG 017338.GPJ CRA_CORP.GDT 9/12/06

APPENDIX B

ANALYTICAL DATA REPORTS AND VALIDATION MEMORANDA

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
www.stl-inc.com

06/22/2005

Conestoga Rovers Associates, Inc.
651 Colby Drive
Waterloo
OntarioCanada, - N2V 1C2

Attention: Mr. Greg Carti

Laboratory Results
Job No. Z551 - GM Wilmington-17338

Dear Mr. Carti:

Enclosed are the results you requested for the following sample(s) received at our laboratory on June 2, 2005.

Lab No.	Client ID	Analysis Required
638728	MW2-060105EAP001	TCL VOA+10
		TCL BNA+20
		TAL Metals
638729	MW10060105EAP002	TCL VOA+10
		TCL BNA+20
		TAL Metals
638730	MW3-060105EAP003	TCL VOA+10
		TCL BNA+20
		PCBs
		TAL Metals
638731	MW6-060105EAP004	TCL VOA+10
		TCL BNA+20
		PCBs
		TAL Metals
638732	MW7-060105EAP005	TCL VOA+10
		TCL BNA+20
		PCBs
		TAL Metals
638733	MW8-060205EAP001	TCL VOA+10

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
www.stl-inc.com

Laboratory Results
Job No. Z551 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
		TCL BNA+20
		TAL Metals
638734	MW8-060205EAP002	TCL VOA+10
		TCL BNA+20
		TAL Metals
638735	MW9-060205EAP003	TCL VOA+10
		TCL BNA+20
		TAL Metals
638736	MW9A060205EAP004	TCL VOA+10
		TCL BNA+20
		TAL Metals
638737	FB-060205-EAP005	TCL VOA+10
		TCL BNA+20
		PCBs
		TAL Metals

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
www.stl-inc.com

Laboratory Results
Job No. Z551 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
638738	TB-17338-EAP-006	TCL VOA+10

If you have any questions please contact your Project Manager, Joy Kelly, at (732) 549-3900.

Very Truly Yours,

Michael J. Urban
Laboratory Manager

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Analytical Results Summary

Client ID: **MW2-060105EAP001**
Site: GM Wilmington-17338

Lab Sample No: **638728**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/15/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04396.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	12	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	0.4J	5.0
cis-1,2-Dichloroethene	1.0J	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	0.7J	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	15	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	0.4J	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	1.2J	5.0
Ethylbenzene	ND	4.0
Styrene	0.3J	5.0

Client ID: **MW2-060105EAP001**
Site: GM Wilmington-17338

Lab Sample No: **638728**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/15/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04396.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	270	5.0
Freon TF	ND	5.0
MTBE	54	5.0
Cyclohexane	47	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	0.5J	5.0
1,4-Dichlorobenzene	1.5J	5.0
1,2-Dichlorobenzene	1.2J	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	15	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	32	5.0

Client ID: **MW2-060105EAP001**
Site: GM Wilmington-17338

Lab Sample No: **638728**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/15/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04396.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	C5H12 Alkane	0.92	14	
2.	C6H14 Alkane	1.17	5.6	
3.	C6H14 Alkane	1.34	7.8	
4.	Propane, 2,2'-oxybis-	1.82	8.3	
5.	C6H12 Cycloalkane	1.90	8.6	
6.	C7H14 Cycloalkane	2.84	6.0	
7.	C8H16 Cycloalkane	4.51	9.3	
8.	Benzene, propyl-	7.10	7.6	
9.	Trimethylbenzene isomer	7.44	3.9	
10.	Dihydroindene	7.72	5.9	
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION: 77

Client ID: **MW10060105EAP002**
Site: GM Wilmington-17338

Lab Sample No: **638729**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/15/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04397.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 20.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	100
Bromomethane	ND	100
Vinyl Chloride	ND	100
Chloroethane	ND	100
Methylene Chloride	ND	60
Acetone	ND	100
Carbon Disulfide	ND	100
Trichlorofluoromethane	ND	100
1,1-Dichloroethene	ND	40
1,1-Dichloroethane	ND	100
trans-1,2-Dichloroethene	ND	100
cis-1,2-Dichloroethene	ND	100
Chloroform	ND	100
1,2-Dichloroethane	ND	40
2-Butanone	ND	100
1,1,1-Trichloroethane	ND	100
Carbon Tetrachloride	ND	40
Bromodichloromethane	ND	20
1,2-Dichloropropane	ND	20
cis-1,3-Dichloropropene	ND	100
Trichloroethene	ND	20
Dibromochloromethane	ND	100
1,1,2-Trichloroethane	ND	60
Benzene	270	20
trans-1,3-Dichloropropene	ND	100
Bromoform	ND	80
4-Methyl-2-Pentanone	ND	100
2-Hexanone	ND	100
Tetrachloroethene	ND	20
1,1,2,2-Tetrachloroethane	ND	20
Toluene	*	100
Chlorobenzene	ND	100
Ethylbenzene	*	80
Styrene	ND	100

*See Dilution

Client ID: **MW10060105EAP002**
Site: GM Wilmington-17338

Lab Sample No: **638729**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/15/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04397.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 20.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	9500	100
Freon TF	ND	100
MTBE	ND	100
Cyclohexane	40 J	100
1,2-Dibromoethane	ND	100
1,3-Dichlorobenzene	ND	100
1,4-Dichlorobenzene	ND	100
1,2-Dichlorobenzene	ND	100
Dichlorodifluoromethane	ND	100
1,2,4-Trichlorobenzene	ND	100
1,2-Dibromo-3-chloropropane	ND	100
Isopropylbenzene	100	100
Methyl Acetate	ND	100
Methyl Cyclohexane	65 J	100

Client ID: **MW10060105EAP002**
Site: GM Wilmington-17338

Lab Sample No: **638729**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/15/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04397.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 20.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Propane, 2,2'-oxybis-	1.82	100	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION: 100

Client ID: **MW10060105EAP002D1**
Site: GM Wilmington-17338

Lab Sample No: **638729D1**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/07/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04286.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 100.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Toluene	15000	500
Ethylbenzene	3000	400

Client ID: **MW3-060105EAP003**
Site: GM Wilmington-17338

Lab Sample No: **638730**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/15/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04398.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 200.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	1000
Bromomethane	ND	1000
Vinyl Chloride	ND	1000
Chloroethane	ND	1000
Methylene Chloride	ND	600
Acetone	*	1000
Carbon Disulfide	ND	1000
Trichlorofluoromethane	ND	1000
1,1-Dichloroethene	ND	400
1,1-Dichloroethane	ND	1000
trans-1,2-Dichloroethene	ND	1000
cis-1,2-Dichloroethene	ND	1000
Chloroform	ND	1000
1,2-Dichloroethane	ND	400
2-Butanone	850 J	1000
1,1,1-Trichloroethane	ND	1000
Carbon Tetrachloride	ND	400
Bromodichloromethane	ND	200
1,2-Dichloropropane	ND	200
cis-1,3-Dichloropropene	ND	1000
Trichloroethene	ND	200
Dibromochloromethane	ND	1000
1,1,2-Trichloroethane	ND	600
Benzene	1200	200
trans-1,3-Dichloropropene	ND	1000
Bromoform	ND	800
4-Methyl-2-Pentanone	ND	1000
2-Hexanone	ND	1000
Tetrachloroethene	ND	200
1,1,2,2-Tetrachloroethane	ND	200
Toluene	*	1000
Chlorobenzene	ND	1000
Ethylbenzene	18000	800
Styrene	ND	1000

*See Dilution

Client ID: **MW3-060105EAP003**
Site: GM Wilmington-17338

Lab Sample No: **638730**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/15/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04398.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 200.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	30000	1000
Freon TF	ND	1000
MTBE	810 J	1000
Cyclohexane	ND	1000
1,2-Dibromoethane	ND	1000
1,3-Dichlorobenzene	ND	1000
1,4-Dichlorobenzene	ND	1000
1,2-Dichlorobenzene	ND	1000
Dichlorodifluoromethane	ND	1000
1,2,4-Trichlorobenzene	ND	1000
1,2-Dibromo-3-chloropropane	ND	1000
Isopropylbenzene	ND	1000
Methyl Acetate	ND	1000
Methyl Cyclohexane	ND	1000

Client ID: **MW3-060105EAP003**
Site: GM Wilmington-17338

Lab Sample No: **638730**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/15/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04398.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 200.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **MW3-060105EAP003D1**
Site: GM Wilmington-17338

Lab Sample No: **638730D1**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/07/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04284.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 2000.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Acetone	350000	10000
Toluene	190000	10000

Client ID: **MW6-060105EAP004**
Site: GM Wilmington-17338

Lab Sample No: **638731**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/15/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04399.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 50.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	250
Bromomethane	ND	250
Vinyl Chloride	ND	250
Chloroethane	ND	250
Methylene Chloride	ND	150
Acetone	ND	250
Carbon Disulfide	ND	250
Trichlorofluoromethane	ND	250
1,1-Dichloroethene	ND	100
1,1-Dichloroethane	ND	250
trans-1,2-Dichloroethene	ND	250
cis-1,2-Dichloroethene	ND	250
Chloroform	ND	250
1,2-Dichloroethane	ND	100
2-Butanone	ND	250
1,1,1-Trichloroethane	ND	250
Carbon Tetrachloride	ND	100
Bromodichloromethane	ND	50
1,2-Dichloropropane	ND	50
cis-1,3-Dichloropropene	ND	250
Trichloroethene	ND	50
Dibromochloromethane	ND	250
1,1,2-Trichloroethane	ND	150
Benzene	65	50
trans-1,3-Dichloropropene	ND	250
Bromoform	ND	200
4-Methyl-2-Pentanone	ND	250
2-Hexanone	ND	250
Tetrachloroethene	ND	50
1,1,2,2-Tetrachloroethane	ND	50
Toluene	*	250
Chlorobenzene	ND	250
Ethylbenzene	5600	200
Styrene	ND	250

*See Dilution

Client ID: **MW6-060105EAP004**
Site: GM Wilmington-17338

Lab Sample No: **638731**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/15/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04399.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 50.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	9200	250
Freon TF	ND	250
MTBE	ND	250
Cyclohexane	43 J	250
1,2-Dibromoethane	ND	250
1,3-Dichlorobenzene	ND	250
1,4-Dichlorobenzene	ND	250
1,2-Dichlorobenzene	ND	250
Dichlorodifluoromethane	ND	250
1,2,4-Trichlorobenzene	ND	250
1,2-Dibromo-3-chloropropane	ND	250
Isopropylbenzene	22 J	250
Methyl Acetate	ND	250
Methyl Cyclohexane	75 J	250

Client ID: **MW6-060105EAP004**
Site: GM Wilmington-17338

Lab Sample No: **638731**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/15/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04399.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 50.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
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TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **MW6-060105EAP004D1**
Site: GM Wilmington-17338

Lab Sample No: **638731D1**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/07/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04285.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 500.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Toluene	39000	2500

Client ID: **MW7-060105EAP005**
Site: GM Wilmington-17338

Lab Sample No: **638732**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04249.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	0.6J	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	*	5.0
Chlorobenzene	45	5.0
Ethylbenzene	40	4.0
Styrene	ND	5.0

*See Dilution

Client ID: **MW7-060105EAP005**
Site: GM Wilmington-17338

Lab Sample No: **638732**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04249.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	64	5.0
Freon TF	ND	5.0
MTBE	0.3J	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	0.5J	5.0
1,2-Dichlorobenzene	0.6J	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **MW7-060105EAP005**
Site: GM Wilmington-17338

Lab Sample No: **638732**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04249.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Methane, thiobis-	1.33	18	
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION 18

Client ID: **MW7-060105EAP005D1**
Site: GM Wilmington-17338

Lab Sample No: **638732D1**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04261.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 2.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Toluene	280	10

Client ID: **MW8-060205EAP001**
Site: GM Wilmington-17338

Lab Sample No: **638733**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04250.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	4.7	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	40	5.0
Chlorobenzene	*	5.0
Ethylbenzene	6.5	4.0
Styrene	ND	5.0

*See Dilution

Client ID: **MW8-060205EAP001**
Site: GM Wilmington-17338

Lab Sample No: **638733**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04250.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	9.1	5.0
Freon TF	ND	5.0
MTBE	1.3J	5.0
Cyclohexane	0.6J	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	0.6J	5.0
1,4-Dichlorobenzene	3.7J	5.0
1,2-Dichlorobenzene	0.7J	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	2.5J	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **MW8-060205EAP001**
Site: GM Wilmington-17338

Lab Sample No: **638733**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04250.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	2,3-dihydro-1H-Indene	7.76	48	
2.	Diethylbenzene isomer	7.80	6.4	
3.	2,3-dihydro-methyl-1H-Indene isomer	8.04	5.4	
4.				
5.				
6.				
7.				
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TOTAL ESTIMATED CONCENTRATION 60

Client ID: **MW8-060205EAP001D1**
Site: GM Wilmington-17338

Lab Sample No: **638733D1**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04262.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chlorobenzene	810	25

Client ID: **MW8-060205EAP002**
Site: GM Wilmington-17338

Lab Sample No: **638734**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04251.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	4.9	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	42	5.0
Chlorobenzene	*	5.0
Ethylbenzene	7.3	4.0
Styrene	ND	5.0

*See Dilution

Client ID: **MW8-060205EAP002**
Site: GM Wilmington-17338

Lab Sample No: **638734**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04251.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	9.6	5.0
Freon TF	ND	5.0
MTBE	1.4J	5.0
Cyclohexane	0.7J	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	0.6J	5.0
1,4-Dichlorobenzene	3.8J	5.0
1,2-Dichlorobenzene	0.8J	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	2.7J	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **MW8-060205EAP002**
Site: GM Wilmington-17338

Lab Sample No: **638734**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04251.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	2,3-dihydro-1H-Indene	7.76	52	
2.	Diethylbenzene isomer	7.80	7.0	
3.	2,3-dihydro-methyl-1H-Indene isomer	8.04	6.0	
4.				
5.				
6.				
7.				
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29.				
30.				

TOTAL ESTIMATED CONCENTRATION 65

Client ID: **MW8-060205EAP002D1**
Site: GM Wilmington-17338

Lab Sample No: **638734D1**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04263.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chlorobenzene	710	25

Client ID: **MW9-060205EAP003**
Site: GM Wilmington-17338

Lab Sample No: **638735**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04259.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	23	5.0
Chlorobenzene	1.3J	5.0
Ethylbenzene	2.8J	4.0
Styrene	ND	5.0

Client ID: **MW9-060205EAP003**
Site: GM Wilmington-17338

Lab Sample No: **638735**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04259.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	3.8J	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **MW9-060205EAP003**
Site: GM Wilmington-17338

Lab Sample No: **638735**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04259.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
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TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **MW9A060205EAP004**
Site: GM Wilmington-17338

Lab Sample No: **638736**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/07/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04282.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	9.6	5.0
Chlorobenzene	0.6J	5.0
Ethylbenzene	1.0J	4.0
Styrene	ND	5.0

Client ID: **MW9A060205EAP004**
Site: GM Wilmington-17338

Lab Sample No: **638736**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/07/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04282.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	1.3J	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	0.5J	5.0
1,2-Dichlorobenzene	0.2J	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **MW9A060205EAP004**
Site: GM Wilmington-17338

Lab Sample No: **638736**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/07/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04282.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.			
3.			
4.			
5.			
6.			
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TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **FB-060205-EAP005**
Site: GM Wilmington-17338

Lab Sample No: **638737**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04247.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	4.2J	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **FB-060205-EAP005**
Site: GM Wilmington-17338

Lab Sample No: **638737**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04247.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **FB-060205-EAP005**
Site: GM Wilmington-17338

Lab Sample No: **638737**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04247.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **TB-17338-EAP-006**
Site: GM Wilmington-17338

Lab Sample No: **638738**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04248.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **TB-17338-EAP-006**
Site: GM Wilmington-17338

Lab Sample No: **638738**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04248.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **TB-17338-EAP-006**
Site: GM Wilmington-17338

Lab Sample No: **638738**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Analyzed: 06/06/05
GC Column: Rtx-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca04248.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **MW2-060105EAP001**
Site: GM Wilmington-17338

Lab Sample No: **638728**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20415.d

Matrix: WATER
Level: LOW
Sample Volume: 870 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	ND	11
4-Methylphenol	ND	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	4.4J	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	46
4-Nitrophenol	ND	46
4,6-Dinitro-2-methylphenol	ND	46
Pentachlorophenol	ND	46
bis(2-Chloroethyl)ether	ND	1.1
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
Naphthalene	0.7J	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.3
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	23
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	2.3
3-Nitroaniline	ND	23
Acenaphthene	ND	11
Dibenzofuran	ND	11

Client ID: **MW2-060105EAP001**
Site: GM Wilmington-17338

Lab Sample No: **638728**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20415.d

Matrix: WATER
Level: LOW
Sample Volume: 870 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.3
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	23
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	23
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Acetophenone	ND	11
Diphenyl	ND	11
Atrazine	ND	11

Client ID: **MW2-060105EAP001**
Site: GM Wilmington-17338

Lab Sample No: **638728**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20415.d

Matrix: WATER
Level: LOW
Sample Volume: 870 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Xylene isomer	5.49	240	
2.	Ethylmethylbenzene isomer	6.16	13	
3.	Unknown	15.46	14	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 267

Client ID: **MW10060105EAP002**
Site: GM Wilmington-17338

Lab Sample No: **638729**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20416.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	2.1J	11
2-Chlorophenol	ND	11
2-Methylphenol	79	11
4-Methylphenol	20	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	38	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	43
4-Nitrophenol	ND	43
4,6-Dinitro-2-methylphenol	ND	43
Pentachlorophenol	ND	43
bis(2-Chloroethyl)ether	ND	1.1
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
Naphthalene	8.6J	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	3.5J	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	0.4J	11
Dibenzofuran	ND	11

Client ID: **MW10060105EAP002**
Site: GM Wilmington-17338

Lab Sample No: **638729**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20416.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	0.5J	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	2.4J	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Benzaldehyde	ND	11
Caprolactam	2.9J	11
Acetophenone	18	11
Diphenyl	ND	11
Atrazine	ND	11

Client ID: **MW10060105EAP002**
Site: GM Wilmington-17338

Lab Sample No: **638729**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20416.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Toluene	4.20	1900	
2. Unknown Alkane	5.10	26	
3. Benzene, ethyl-	5.40	89	
4. Xylene isomer	5.53	1400	
5. Xylene isomer	5.82	730	
6. Trimethylbenzene isomer	6.96	37	
7. Unknown	7.87	41	
8. Ethylphenol isomer	8.34	22	
9. Unknown	9.47	26	
10. Dimethylbenzoic acid isomer	10.24	20	
11. Unknown	10.38	35	
12. Ethyldimethylbenzoic acid isomer	11.35	18	
13.			
14.			
15.			
16.			
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19.			
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21.			
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30.			

TOTAL ESTIMATED CONCENTRATION	4344

Client ID: **MW3-060105EAP003**
Site: GM Wilmington-17338

Lab Sample No: **638730**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20417.d

Matrix: WATER
Level: LOW
Sample Volume: 920 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 5.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	28 J	54
2-Chlorophenol	ND	54
2-Methylphenol	200	54
4-Methylphenol	600	54
2-Nitrophenol	ND	54
2,4-Dimethylphenol	480	54
2,4-Dichlorophenol	ND	54
4-Chloro-3-methylphenol	ND	54
2,4,6-Trichlorophenol	ND	54
2,4,5-Trichlorophenol	ND	54
2,4-Dinitrophenol	ND	220
4-Nitrophenol	ND	220
4,6-Dinitro-2-methylphenol	ND	220
Pentachlorophenol	ND	220
bis(2-Chloroethyl)ether	ND	5.4
bis(2-chloroisopropyl)ether	ND	54
N-Nitroso-di-n-propylamine	ND	5.4
Hexachloroethane	ND	5.4
Nitrobenzene	ND	5.4
Isophorone	ND	54
bis(2-Chloroethoxy)methane	ND	54
Naphthalene	ND	54
4-Chloroaniline	ND	54
Hexachlorobutadiene	ND	11
2-Methylnaphthalene	ND	54
Hexachlorocyclopentadiene	ND	54
2-Chloronaphthalene	ND	54
2-Nitroaniline	ND	110
Dimethylphthalate	ND	54
Acenaphthylene	ND	54
2,6-Dinitrotoluene	ND	11
3-Nitroaniline	ND	110
Acenaphthene	ND	54
Dibenzofuran	ND	54

Client ID: **MW3-060105EAP003**
Site: GM Wilmington-17338

Lab Sample No: **638730**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20417.d

Matrix: WATER
Level: LOW
Sample Volume: 920 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 5.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	11
Diethylphthalate	ND	54
4-Chlorophenyl-phenylether	ND	54
Fluorene	ND	54
4-Nitroaniline	ND	110
N-Nitrosodiphenylamine	ND	54
4-Bromophenyl-phenylether	ND	54
Hexachlorobenzene	ND	5.4
Phenanthrene	ND	54
Anthracene	ND	54
Carbazole	ND	54
Di-n-butylphthalate	ND	54
Fluoranthene	ND	54
Pyrene	ND	54
Butylbenzylphthalate	ND	54
3,3'-Dichlorobenzidine	ND	110
Benzo(a)anthracene	ND	5.4
Chrysene	ND	54
bis(2-Ethylhexyl)phthalate	ND	54
Di-n-octylphthalate	ND	54
Benzo(b)fluoranthene	ND	5.4
Benzo(k)fluoranthene	ND	5.4
Benzo(a)pyrene	ND	5.4
Indeno(1,2,3-cd)pyrene	ND	5.4
Dibenz(a,h)anthracene	ND	5.4
Benzo(g,h,i)perylene	ND	54
Benzaldehyde	140	54
Caprolactam	ND	54
Acetophenone	ND	54
Diphenyl	ND	54
Atrazine	ND	54

Client ID: **MW3-060105EAP003**
Site: GM Wilmington-17338

Lab Sample No: **638730**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20417.d

Matrix: WATER
Level: LOW
Sample Volume: 920 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 5.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Toluene	4.25	15000	
2. Butanoic acid	4.79	1900	
3. Benzene, ethyl-	5.43	4300	
4. Xylene isomer	5.53	4400	
5. Xylene isomer	5.82	2800	
6. Unknown Alcohol	5.90	1100	
7. Hexanoic acid	6.89	1400	
8. Unknown	7.76	630	
9. Unknown	8.06	2000	
10. Octanoic acid	8.67	600	
11. Unknown	8.87	2100	
12. Unknown	10.62	14000	
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TOTAL ESTIMATED CONCENTRATION	50230

Client ID: **MW6-060105EAP004**
Site: GM Wilmington-17338

Lab Sample No: **638731**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20424.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	20
2-Chlorophenol	ND	20
2-Methylphenol	91	20
4-Methylphenol	52	20
2-Nitrophenol	ND	20
2,4-Dimethylphenol	22	20
2,4-Dichlorophenol	ND	20
4-Chloro-3-methylphenol	ND	20
2,4,6-Trichlorophenol	ND	20
2,4,5-Trichlorophenol	ND	20
2,4-Dinitrophenol	ND	80
4-Nitrophenol	ND	80
4,6-Dinitro-2-methylphenol	ND	80
Pentachlorophenol	ND	80
bis(2-Chloroethyl)ether	ND	2.0
bis(2-chloroisopropyl)ether	ND	20
N-Nitroso-di-n-propylamine	ND	2.0
Hexachloroethane	ND	2.0
Nitrobenzene	ND	2.0
Isophorone	ND	20
bis(2-Chloroethoxy)methane	ND	20
Naphthalene	1.6J	20
4-Chloroaniline	ND	20
Hexachlorobutadiene	ND	4.0
2-Methylnaphthalene	ND	20
Hexachlorocyclopentadiene	ND	20
2-Chloronaphthalene	ND	20
2-Nitroaniline	ND	40
Dimethylphthalate	ND	20
Acenaphthylene	ND	20
2,6-Dinitrotoluene	ND	4.0
3-Nitroaniline	ND	40
Acenaphthene	ND	20
Dibenzofuran	ND	20

Client ID: **MW6-060105EAP004**
Site: GM Wilmington-17338

Lab Sample No: **638731**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20424.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	4.0
Diethylphthalate	ND	20
4-Chlorophenyl-phenylether	ND	20
Fluorene	ND	20
4-Nitroaniline	ND	40
N-Nitrosodiphenylamine	ND	20
4-Bromophenyl-phenylether	ND	20
Hexachlorobenzene	ND	2.0
Phenanthrene	ND	20
Anthracene	ND	20
Carbazole	ND	20
Di-n-butylphthalate	ND	20
Fluoranthene	0.5J	20
Pyrene	ND	20
Butylbenzylphthalate	ND	20
3,3'-Dichlorobenzidine	ND	40
Benzo(a)anthracene	ND	2.0
Chrysene	ND	20
bis(2-Ethylhexyl)phthalate	16 J	20
Di-n-octylphthalate	ND	20
Benzo(b)fluoranthene	ND	2.0
Benzo(k)fluoranthene	ND	2.0
Benzo(a)pyrene	ND	2.0
Indeno(1,2,3-cd)pyrene	ND	2.0
Dibenz(a,h)anthracene	ND	2.0
Benzo(g,h,i)perylene	ND	20
Benzaldehyde	ND	20
Caprolactam	0.7J	20
Acetophenone	15 J	20
Diphenyl	ND	20
Atrazine	ND	20

Client ID: **MW6-060105EAP004**
Site: GM Wilmington-17338

Lab Sample No: **638731**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20424.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	4.22	4400	
2.	Benzene, ethyl-	5.42	1700	
3.	Xylene isomer	5.53	1900	
4.	Xylene isomer	5.82	1100	
5.	Ethylphenol isomer	8.34	25	
6.	Ethylphenol isomer	8.61	19	
7.	Methylbenzoic acid isomer	9.30	17	
8.	Phenol, 4,4'-(1-methylethylidene)bis-	15.82	160	
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10.				
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TOTAL ESTIMATED CONCENTRATION 9321

Client ID: **MW7-060105EAP005**
Site: GM Wilmington-17338

Lab Sample No: **638732**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20419.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	0.4J	10
2-Methylphenol	2.1J	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	0.4J	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	40
4-Nitrophenol	ND	40
4,6-Dinitro-2-methylphenol	ND	40
Pentachlorophenol	ND	40
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **MW7-060105EAP005**
Site: GM Wilmington-17338

Lab Sample No: **638732**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20419.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	0.9J	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	0.5J	10
Pyrene	0.4J	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	12	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Benzaldehyde	ND	10
Caprolactam	1.0J	10
Acetophenone	0.4J	10
Diphenyl	ND	10
Atrazine	ND	10

Client ID: **MW7-060105EAP005**
Site: GM Wilmington-17338

Lab Sample No: **638732**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20419.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	3.98	12	
2.	Toluene	4.16	320	
3.	Benzene, chloro-	5.22	28	
4.	Benzene, ethyl-	5.39	130	
5.	Xylene isomer	5.49	210	
6.	Xylene isomer	5.80	68	
7.	Unknown	11.27	11	
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TOTAL ESTIMATED CONCENTRATION 779

Client ID: **MW8-060205EAP001**
Site: GM Wilmington-17338

Lab Sample No: **638733**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20420.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	4.4J	10
2-Methylphenol	0.2J	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	42
4-Nitrophenol	ND	42
4,6-Dinitro-2-methylphenol	ND	42
Pentachlorophenol	ND	42
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	0.8J	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **MW8-060205EAP001**
Site: GM Wilmington-17338

Lab Sample No: **638733**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20420.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Acetophenone	ND	10
Diphenyl	ND	10
Atrazine	ND	10

Client ID: **MW8-060205EAP001**
Site: GM Wilmington-17338

Lab Sample No: **638733**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20420.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Unknown	3.97	38	
2. Toluene	4.16	28	
3. Benzene, chloro-	5.22	300	
4. 2,3-dihydro-methyl-1H-Indene isomer	7.46	36	
5. Trimethylbenzoic acid isomer	10.79	12	
6. Unknown	11.27	10	
7. Unknown	11.71	31	
8. Unknown	12.95	9.5	
9. Phenol, 4,4'-(1-methylethylidene)bis-	15.81	37	
10. Unknown	20.85	16	
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TOTAL ESTIMATED CONCENTRATION	518

Client ID: **MW8-060205EAP002**
Site: GM Wilmington-17338

Lab Sample No: **638734**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/15/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20395.d

Matrix: WATER
Level: LOW
Sample Volume: 600 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	17
2-Chlorophenol	4.8J	17
2-Methylphenol	ND	17
4-Methylphenol	0.4J	17
2-Nitrophenol	ND	17
2,4-Dimethylphenol	ND	17
2,4-Dichlorophenol	ND	17
4-Chloro-3-methylphenol	ND	17
2,4,6-Trichlorophenol	ND	17
2,4,5-Trichlorophenol	ND	17
2,4-Dinitrophenol	ND	67
4-Nitrophenol	ND	67
4,6-Dinitro-2-methylphenol	ND	67
Pentachlorophenol	ND	67
bis(2-Chloroethyl)ether	ND	1.7
bis(2-chloroisopropyl)ether	ND	17
N-Nitroso-di-n-propylamine	ND	1.7
Hexachloroethane	ND	1.7
Nitrobenzene	ND	1.7
Isophorone	ND	17
bis(2-Chloroethoxy)methane	ND	17
Naphthalene	0.8J	17
4-Chloroaniline	ND	17
Hexachlorobutadiene	ND	3.3
2-Methylnaphthalene	ND	17
Hexachlorocyclopentadiene	ND	17
2-Chloronaphthalene	ND	17
2-Nitroaniline	ND	33
Dimethylphthalate	ND	17
Acenaphthylene	ND	17
2,6-Dinitrotoluene	ND	3.3
3-Nitroaniline	ND	33
Acenaphthene	ND	17
Dibenzofuran	ND	17

Client ID: **MW8-060205EAP002**
Site: GM Wilmington-17338

Lab Sample No: **638734**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/15/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20395.d

Matrix: WATER
Level: LOW
Sample Volume: 600 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	3.3
Diethylphthalate	ND	17
4-Chlorophenyl-phenylether	ND	17
Fluorene	ND	17
4-Nitroaniline	ND	33
N-Nitrosodiphenylamine	ND	17
4-Bromophenyl-phenylether	ND	17
Hexachlorobenzene	ND	1.7
Phenanthrene	ND	17
Anthracene	ND	17
Carbazole	ND	17
Di-n-butylphthalate	ND	17
Fluoranthene	ND	17
Pyrene	ND	17
Butylbenzylphthalate	ND	17
3,3'-Dichlorobenzidine	ND	33
Benzo(a)anthracene	ND	1.7
Chrysene	ND	17
bis(2-Ethylhexyl)phthalate	ND	17
Di-n-octylphthalate	ND	17
Benzo(b)fluoranthene	ND	1.7
Benzo(k)fluoranthene	ND	1.7
Benzo(a)pyrene	ND	1.7
Indeno(1,2,3-cd)pyrene	ND	1.7
Dibenz(a,h)anthracene	ND	1.7
Benzo(g,h,i)perylene	ND	17
Benzaldehyde	ND	17
Caprolactam	ND	17
Acetophenone	ND	17
Diphenyl	ND	17
Atrazine	ND	17

Client ID: **MW8-060205EAP002**
Site: GM Wilmington-17338

Lab Sample No: **638734**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/15/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20395.d

Matrix: WATER
Level: LOW
Sample Volume: 600 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	3.99	28	
2.	Toluene	4.17	29	
3.	Benzene, chloro-	5.24	290	
4.	1H-Indene, 2,3-dihydro-	7.48	32	
5.	Unknown	11.28	14	
6.	Unknown	11.72	39	
7.	Phenol, 4,4'-(1-methylethylidene)bis-	15.81	39	
8.				
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TOTAL ESTIMATED CONCENTRATION: 471

Client ID: **MW9-060205EAP003**
Site: GM Wilmington-17338

Lab Sample No: **638735**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20421.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	41
4-Nitrophenol	ND	41
4,6-Dinitro-2-methylphenol	ND	41
Pentachlorophenol	ND	41
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **MW9-060205EAP003**
Site: GM Wilmington-17338

Lab Sample No: **638735**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20421.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Acetophenone	ND	10
Diphenyl	ND	10
Atrazine	ND	10

Client ID: **MW9-060205EAP003**
Site: GM Wilmington-17338

Lab Sample No: **638735**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20421.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	4.15	11	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	11

Client ID: **MW9A060205EAP004**
Site: GM Wilmington-17338

Lab Sample No: **638736**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20422.d

Matrix: WATER
Level: LOW
Sample Volume: 990 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	40
4-Nitrophenol	ND	40
4,6-Dinitro-2-methylphenol	ND	40
Pentachlorophenol	ND	40
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **MW9A060205EAP004**
Site: GM Wilmington-17338

Lab Sample No: **638736**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20422.d

Matrix: WATER
Level: LOW
Sample Volume: 990 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Acetophenone	ND	10
Diphenyl	ND	10
Atrazine	ND	10

Client ID: **MW9A060205EAP004**
Site: GM Wilmington-17338

Lab Sample No: **638736**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20422.d

Matrix: WATER
Level: LOW
Sample Volume: 990 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	4.16	12	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 12

Client ID: **FB-060205-EAP005**
Site: GM Wilmington-17338

Lab Sample No: **638737**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20423.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	ND	11
4-Methylphenol	ND	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	ND	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	44
4-Nitrophenol	ND	44
4,6-Dinitro-2-methylphenol	ND	44
Pentachlorophenol	ND	44
bis(2-Chloroethyl)ether	ND	1.1
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
Naphthalene	ND	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11

Client ID: **FB-060205-EAP005**
Site: GM Wilmington-17338

Lab Sample No: **638737**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20423.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Acetophenone	0.4J	11
Diphenyl	ND	11
Atrazine	ND	11

Client ID: **FB-060205-EAP005**
Site: GM Wilmington-17338

Lab Sample No: **638737**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/16/05
GC Column: DB-5
Instrument ID: BNAMS3.i
Lab File ID: t20423.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	4.15	21	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	21

Client ID: **MW3-060105EAP003**
Site: GM Wilmington-17338

Lab Sample ID: **638730**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/15/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC8.i

Matrix: WATER
Sample Volume: 940 ml
Extract Final Volume: 5.0 ml
Dilution Factor: 1.0
Front File ID: qf039301.d
Rear File ID: qr039301.d

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/l	Quantitation Limit Units: ug/l	Column
Aroclor-1016	ND	0.53	R
Aroclor-1221	ND	0.53	R
Aroclor-1232	ND	0.53	R
Aroclor-1242	ND	0.53	R
Aroclor-1248	ND	0.53	R
Aroclor-1254	ND	0.53	R
Aroclor-1260	ND	0.53	R

Client ID: **MW6-060105EAP004**
Site: GM Wilmington-17338

Lab Sample ID: **638731**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/07/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC8.i

Matrix: WATER
Sample Volume: 880 ml
Extract Final Volume: 5.0 ml
Dilution Factor: 1.0
Front File ID: qf038870.d
Rear File ID: qr038870.d

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/l	Quantitation Limit Units: ug/l	Column
Aroclor-1016	ND	0.57	R
Aroclor-1221	ND	0.57	R
Aroclor-1232	ND	0.57	R
Aroclor-1242	ND	0.57	R
Aroclor-1248	ND	0.57	R
Aroclor-1254	ND	0.57	R
Aroclor-1260	ND	0.57	R

Client ID: **MW7-060105EAP005**
Site: GM Wilmington-17338

Lab Sample ID: **638732**
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/07/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC8.i

Matrix: WATER
Sample Volume: 900 ml
Extract Final Volume: 5.0 ml
Dilution Factor: 1.0
Front File ID: qf038871.d
Rear File ID: qr038871.d

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/l	Quantitation Limit Units: ug/l	Column
Aroclor-1016	ND	0.56	R
Aroclor-1221	ND	0.56	R
Aroclor-1232	ND	0.56	R
Aroclor-1242	ND	0.56	R
Aroclor-1248	ND	0.56	R
Aroclor-1254	ND	0.56	R
Aroclor-1260	ND	0.56	R

Client ID: **FB-060205-EAP005**
Site: GM Wilmington-17338

Lab Sample ID: **638737**
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05
Date Extracted: 06/06/05
Date Analyzed: 06/07/05
GC Front Column: StxCLP2
GC Rear Column: StxCLP1
Instrument ID: PESTGC8.i

Matrix: WATER
Sample Volume: 890 ml
Extract Final Volume: 5.0 ml
Dilution Factor: 1.0
Front File ID: qf038872.d
Rear File ID: qr038872.d

ORGANOCHLORINE PCBs - GC/ECD
METHOD 8082

Parameter	Analytical Results Units: ug/l	Quantitation Limit Units: ug/l	Column
Aroclor-1016	ND	0.56	R
Aroclor-1221	ND	0.56	R
Aroclor-1232	ND	0.56	R
Aroclor-1242	ND	0.56	R
Aroclor-1248	ND	0.56	R
Aroclor-1254	ND	0.56	R
Aroclor-1260	ND	0.56	R

Client ID: **MW2-060105EAP001**
Site: **GM Wilmington-17338**

Lab Sample No: 638728
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	19.5	4.5		P
Barium	264	1.3		P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	30200	74.5		P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	ND	3.1		P
Iron	51500	39.7		P
Lead	ND	2.2		P
Magnesium	22200	70.0		P
Manganese	742	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	3050	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	100000	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **MW10060105EAP002**
Site: **GM Wilmington-17338**

Lab Sample No: 638729
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	77700	77.4		P
Antimony	ND	4.9		P
Arsenic	4.6	4.5	B	P
Barium	555	1.3		P
Beryllium	2.4	0.10		P
Cadmium	ND	0.50		P
Calcium	46200	74.5		P
Chromium	145	2.8		P
Cobalt	70.1	3.5		P
Copper	56.7	3.1		P
Iron	59700	39.7		P
Lead	30.2	2.2		P
Magnesium	32900	70.0		P
Manganese	1760	2.9		P
Mercury	ND	0.10		CV
Nickel	66.2	3.9		P
Potassium	11700	130		P
Selenium	ND	4.8		P
Silver	5.8	1.2	B	P
Sodium	58800	361		P
Thallium	ND	4.8		P
Vanadium	199	1.5		P
Zinc	120	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **MW3-060105EAP003**
Site: **GM Wilmington-17338**

Lab Sample No: 638730
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	6.3	4.5		P
Barium	555	1.3		P
Beryllium	0.45	0.10	B	P
Cadmium	ND	0.50		P
Calcium	83600	74.5		P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	ND	3.1		P
Iron	264000	119		P
Lead	6.9	2.2		P
Magnesium	84100	70.0		P
Manganese	21300	8.7		P
Mercury	0.15	0.10	B	CV
Nickel	ND	3.9		P
Potassium	2780	130	B	P
Selenium	ND	24.0		P
Silver	ND	1.2		P
Sodium	59000	361		P
Thallium	ND	14.4		P
Vanadium	4.0	1.5	B	P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **MW6-060105EAP004**
Site: **GM Wilmington-17338**

Lab Sample No: 638731
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	39300	77.4		P
Antimony	ND	4.9		P
Arsenic	5.9	4.5		P
Barium	515	1.3		P
Beryllium	1.3	0.10	B	P
Cadmium	ND	0.50		P
Calcium	63500	74.5		P
Chromium	57.3	2.8		P
Cobalt	31.8	3.5	B	P
Copper	34.0	3.1		P
Iron	38100	39.7		P
Lead	20.4	2.2		P
Magnesium	24100	70.0		P
Manganese	1240	2.9		P
Mercury	ND	0.10		CV
Nickel	30.5	3.9	B	P
Potassium	12300	130		P
Selenium	ND	4.8		P
Silver	2.5	1.2	B	P
Sodium	64300	361		P
Thallium	ND	4.8		P
Vanadium	95.4	1.5		P
Zinc	63.6	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **MW7-060105EAP005**
Site: **GM Wilmington-17338**

Lab Sample No: 638732
Lab Job No: Z551

Date Sampled: 06/01/05
Date Received: 06/02/05

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	5410	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	258	1.3		P
Beryllium	0.16	0.10	B	P
Cadmium	ND	0.50		P
Calcium	37900	74.5		P
Chromium	10.9	2.8		P
Cobalt	22.2	3.5	B	P
Copper	44.4	3.1		P
Iron	39000	39.7		P
Lead	ND	2.2		P
Magnesium	26300	70.0		P
Manganese	2130	2.9		P
Mercury	ND	0.10		CV
Nickel	6.9	3.9	B	P
Potassium	2840	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	44500	361		P
Thallium	ND	4.8		P
Vanadium	19.4	1.5	B	P
Zinc	16.2	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **MW8-060205EAP001**
Site: **GM Wilmington-17338**

Lab Sample No: 638733
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	7060	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	276	1.3		P
Beryllium	0.21	0.10	B	P
Cadmium	ND	0.50		P
Calcium	41700	74.5		P
Chromium	11.1	2.8		P
Cobalt	24.5	3.5	B	P
Copper	9.3	3.1	B	P
Iron	41300	39.7		P
Lead	4.0	2.2		P
Magnesium	27600	70.0		P
Manganese	2120	2.9		P
Mercury	ND	0.10		CV
Nickel	7.3	3.9	B	P
Potassium	2780	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	48900	361		P
Thallium	ND	4.8		P
Vanadium	18.1	1.5	B	P
Zinc	18.6	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **MW8-060205EAP002**
Site: **GM Wilmington-17338**

Lab Sample No: 638734
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	2310	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	285	1.3		P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	43000	74.5		P
Chromium	3.0	2.8	B	P
Cobalt	21.7	3.5	B	P
Copper	ND	3.1		P
Iron	43700	39.7		P
Lead	ND	2.2		P
Magnesium	29100	70.0		P
Manganese	2270	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	2610	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	51900	361		P
Thallium	ND	4.8		P
Vanadium	4.8	1.5	B	P
Zinc	9.6	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **MW9-060205EAP003**
Site: **GM Wilmington-17338**

Lab Sample No: 638735
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	2860	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	193	1.3	B	P
Beryllium	0.33	0.10	B	P
Cadmium	ND	0.50		P
Calcium	29800	74.5		P
Chromium	6.1	2.8	B	P
Cobalt	4.2	3.5	B	P
Copper	5.2	3.1	B	P
Iron	12200	39.7		P
Lead	ND	2.2		P
Magnesium	12400	70.0		P
Manganese	276	2.9		P
Mercury	ND	0.10		CV
Nickel	4.8	3.9	B	P
Potassium	4100	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	46200	361		P
Thallium	ND	4.8		P
Vanadium	5.5	1.5	B	P
Zinc	13.6	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **MW9A060205EAP004**
Site: **GM Wilmington-17338**

Lab Sample No: 638736
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	1930	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	180	1.3	B	P
Beryllium	0.23	0.10	B	P
Cadmium	ND	0.50		P
Calcium	28000	74.5		P
Chromium	5.1	2.8	B	P
Cobalt	3.6	3.5	B	P
Copper	5.3	3.1	B	P
Iron	8170	39.7		P
Lead	ND	2.2		P
Magnesium	11600	70.0		P
Manganese	236	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	3860	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	43600	361		P
Thallium	ND	4.8		P
Vanadium	3.9	1.5	B	P
Zinc	11.6	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **FB-060205-EAP005**
Site: **GM Wilmington-17338**

Lab Sample No: 638737
Lab Job No: Z551

Date Sampled: 06/02/05
Date Received: 06/02/05

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	ND	1.3		P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	ND	74.5		P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	ND	3.1		P
Iron	ND	39.7		P
Lead	ND	2.2		P
Magnesium	ND	70.0		P
Manganese	ND	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	ND	130		P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	ND	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

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MEMORANDUM

TO: Greg Carli

REF. NO.: 17307-091001

FROM: Susan C. Scrocchi/js/2

DATE: August 5, 2005

Via E-Mail and U.S. Mail

C.C.: Chris Barton

RE: Data Quality Assessment and Validation
OU-2 Area Investigation - Groundwater Samples
Wilmington, Delaware

The following details a quality assessment and validation of the analytical data resulting from the June 1-2, 2005, collection of seven samples and four quality control (QC) samples from the General Motors (GM) Assembly Plant Site in Wilmington, Delaware. The sample summary detailing sample identification, sample location, quality control samples, and analytical parameters is presented in Table 1. Sample analysis was completed at Severn Trent Laboratory in Edison, New Jersey (STL), in accordance with the methodologies presented in Table 2.

The QC criteria used to assess the data were established by the methods and the Quality Assurance Project Plan (QAPP). Application of quality assurance criteria was consistent with following guidance documents:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA 540/R-99/008, October 1999; and

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Review", EPA 540/R-94/013, February 1994.

These guidelines are collectively referred to as "Guidelines" in this memorandum.

Sample Quantitation

The laboratory reported detected concentrations of volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), polychlorinated biphenyls (PCBs), and inorganics below the laboratory's practical quantitation limit (PQL)/report limit (RL) but above the laboratory's method detection limit (MDL). The laboratory flagged these sample concentrations with a "J" or a "B" for organics and inorganics respectively. These concentrations should be qualified as estimated (J) values unless qualified otherwise in this memorandum. The laboratory "B" flags may be disregarded.

Sample Preservation and Holding Times

Sample holding time periods and preservation requirements are summarized in the analytical methods. All sample extractions and/or analyses were performed within the specified holding times.

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All samples were properly preserved and cooled to 4°C(±2°C) after collection.

Gas Chromatography/Mass Spectrometer (GC/MS) – Tuning and Mass Calibration (Instrument Performance Check) – Organic Analyses

To ensure adequate mass resolution, identification, and to some degree, sensitivity; the performance of each GC/MS instrument used for VOC and SVOC analyses was checked at the beginning of each 12-hour period using bromofluorobenzene (BFB) and decafluorotriphenylphosphine (DFTPP), respectively. The resulting spectra must meet the criteria cited in the "Guidelines" before initiating an analysis sequence.

Instrument performance check data were reviewed. These tuning compounds were analyzed at the required frequency throughout the VOC and SVOC analyses. The results of all instrument performance checks were within the acceptance criteria, indicating acceptable instrument performance.

Initial Calibration – Organic Analyses

Initial calibration data are used to demonstrate that each instrument is capable of generating acceptable quantitative data. A five point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each over a specific concentration range.

Initial calibration criteria for organic analyses are evaluated against the following criteria:

i) GC/MS (all compounds) – must meet a minimum mean relative response factor (RRF) of 0.05;

ii) GC/MS (all compounds) – the percent relative standard deviation (%RSD) values must not exceed 30.0 percent or a minimum coefficient of determination of 0.99 if quadratic equation calibration curves are used; and

iii) GC (all compounds using an average for multi-response compounds) – the %RSD must not exceed 20 percent or a correlation coefficient of 0.995 when linear regression calibration curves are used.

Calibration standards were analyzed at the required frequency and the results met the above criteria for linearity and sensitivity with the following exceptions:

i) the response factor of 2-butanone was less than 0.05. All associated sample results were non-detect and rejected due to poor analyte sensitivity; and

ii) the benzaldehyde and atrazine curve yielded standard deviations greater than 30 percent. All associated sample results were qualified as estimated.

A summary of the qualified samples is presented in Table 3.

Continuing Calibration – Organic Analyses

To ensure that each instrument was capable of producing acceptable quantitative data over the analysis period, continuing calibration standards must be analyzed every 12 hours for GC/MS analyses and every 10 samples by GC. The following criteria are employed to evaluate the continuing calibration data:

i) GC/MS (all compounds) – must meet a minimum mean RRF of 0.05;

ii) GC/MS (all compounds) – the percent difference between the mean initial calibration RRF and the continuing calibration RRF must not exceed 25 percent;

iii) GC/MS (compounds determined by quadratic curve) – the percent drift between the true value and the continuing calibration value must not exceed 25 percent;

iv) GC (all compounds using average for multi-response compounds) – the percent difference between mean initial calibration factor and the continuing calibration factor must not exceed 15 percent; and

v) GC (compounds determined by linear regression) – the percent drift between the true value and the continuing calibration value must not exceed 15 percent.

Calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity and linearity of response for all analytes of interest.

Initial Calibration – Inorganic Analyses

The initial calibration includes a blank and at least one standard for inductively coupled plasma (ICP) to establish the analytical curve. Mercury analysis by cold vapor atomic absorption spectroscopy (CVAA) requires the analysis of a calibration blank and a minimum of five standards to establish the calibration curve. The coefficient of variation for calibration curves must exceed 0.995.

Initial calibration is verified with an initial calibration verification (ICV) standard which must recover within 90 to 110 percent for metals by ICP and 80 to 120 percent for mercury by CVAA.

A review of the laboratory data showed that all inorganic initial calibration curves and ICVs were analyzed at the appropriate frequency and were within the acceptance criteria.

Continuing Calibration – Inorganic Analyses

Continuing calibration verification (CCV) standards are analyzed at method specified frequency (one every 10 samples). The CCVs must meet the percent recovery control limits specified above for the ICVs. Criteria for inorganic analyses are the same criteria as used for assessing the initial calibration data.

A review of the laboratory data showed that CCVs were analyzed at the appropriate frequency and the data were within the acceptance criteria.

Method Blank Samples

Method blank samples are prepared from a purified sample matrix and are processed concurrently with investigative samples to assess the presence and the magnitude of sample contamination introduced during sample analysis. Method blank samples are analyzed at a minimum frequency of one per analytical batch and target analytes should be non-detect.

Method blanks were analyzed at the recommended frequency and the results were non-detect for all analytes of interest.

Laboratory Blank Samples – Inorganic Analyses

Metals analyses include the analysis of initial calibration blanks (ICB) and continuing calibration blanks (CCB) to assess the presence and the magnitude of sample contamination introduced during sample analysis. The CCBs are analyzed at a minimum frequency of one every 10 samples and target analytes should be non-detect.

All ICBs and CCBs were non-detect.

Surrogate Compounds – Organic Analyses

Individual sample performance for organic analyses was monitored by assessing the results of surrogate compound percent recoveries. Surrogate percent recoveries are reviewed against the laboratory developed control limits provided in the analytical report.

All surrogate recoveries met the method criteria, demonstrating acceptable analytical efficiency for these analyses.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)Analyses and
Matrix Spike/Laboratory Duplicate Analyses (MS/Dup)

To assess the long term accuracy and precision of the analytical methods on various matrices, MS/MSD or MS/Dup percent recoveries and relative percent differences (RPD) of the concentrations were determined. The organic MS/MSD percent recovery and RPD control limits are established by the laboratory. The inorganic control limits are defined by the methods and the "Guidelines", which require recoveries between 75 to 125 percent with RPDs less than 20 percent for water samples and 30 percent for soil samples. The samples selected for MS/MSD analysis are identified in Table 1.

All MS/MSD or MS/Dup recoveries were acceptable with the exception of a high SVOC recovery. All associated sample results were non-detect and would not have been impacted by the implied high bias.

Laboratory Control Sample (LCS)

The LCS analysis serves as a monitor of the overall performance in all steps of the sample analysis and are analyzed with each sample batch. The LCS percent recoveries were evaluated against method and laboratory established control limits.

The LCS percent recoveries were all within the laboratory control limits indicating acceptable analytical accuracy.

Internal Standard (IS) Summaries – Organic Analyses

To correct for variability in the GC/MS response and sensitivity, IS compounds are added to all samples. All results are calculated as a ratio of the compound and associated IS response. Overall instrument stability and performance for VOC and SVOC analyses were monitored using IS peak area and retention time (RT) data. The IS peak areas and RTs of the samples are required to meet the following criteria:

i) IS area counts must not vary by more than a factor of two (-50 percent to +100 percent) from the associated continuing calibration standard IS area counts; and

ii) the RT of the IS must not vary by more than plus or minus 30 seconds from the associated continuing calibration standard.

A review of the VOC and SVOC internal standard data showed that the IS area counts and retention time data were within the acceptance criteria for all samples.

ICP ICS Analysis – Inorganic Analyses

To verify that proper inter-element and background correction factors had been established by the laboratory for metals analyses, the ICP ICS are analyzed. The ICSs are evaluated against recovery control limits of 80 to 120 percent.

The ICS analysis results were evaluated for all samples and were within the control limits.

Serial Dilution – Inorganic Analyses

The percent difference (D) between a serial dilution of a sample for each matrix was monitored to determine physical or chemical interference. A minimum of one sample per 20 investigative samples is analyzed at a five-fold dilution. The serial dilution results must agree within 10 percent difference (%D) of the original results for samples with detected concentrations greater than 50 times the instrument detection limit.

The %D acceptance criteria was met for all metals.

Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and mass spectra (if applicable) were evaluated according to identification criteria established by the methods. The organic compounds reported adhered to the specified identification criteria.

Target Compound Quantitation

The reported quantitation results and detection limits were checked to ensure results reported were accurate. No discrepancies were found between the raw data and the sample results reported by the laboratory.

Field Quality Assurance/Quality Control (QA/QC)

The field quality assurance/quality control consisted of one field blank sample, two field duplicate sample sets, and one trip blank sample.

To assess the cleanliness of sample containers and the presence of field contamination, the field blank sample identified in Table 1 was collected and analyzed.

Most field blank results were non-detect with the exception of low level concentrations of toluene and acetophenone. All associated sample results with similar concentrations were qualified as non-detect (see Table 4).

Overall precision for the sampling event and laboratory procedures was monitored using the results of the field duplicate sample sets. The RPDs associated with these duplicate samples must be less than 50 percent for water. If the reported concentration in either the investigative sample or its duplicate is less than five times the RL, the evaluation criteria is one times the RL value for water.

All field duplicate results were acceptable with the exception of some variability between toluene results. The sample and its duplicate were qualified as estimated for toluene (see Table 5).

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, a trip blank was submitted to the laboratory for VOC analysis with each shipping cooler containing multiple samples.

All trip blank results were non-detect for the compounds of interest.

System Performance

System performance between various quality control checks was evaluated to monitor for changes that may have caused the degradation of data quality. No technical problems or chromatographic anomalies were observed which would require qualification of the data.

Tentatively Identified Compounds (TICs)

TICs were evaluated for all samples submitted for volatile and semi-volatile analyses. A summary of the TICs reported and the estimated concentrations is presented in Table 6. TICs which were present in the blanks or which were identified as aldol condensation products and/or siloxanes have been eliminated.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted with the exception of 2-butanone data being rejected in several samples due to an initial calibration violation.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
JUNE 1-2, 2005

				Analysis/Parameters				
Sample I.D.	*Location I.D.*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*TCL VOCs plus TICs*	*TCL SVOCs plus TICs*	*PCBs*	*TAL Metals*	*Comments*
WG-17338-MW2-060105-EAP-001	MW2	06/01/05	11:15	X	X		X	
WG-17338-MW10-060105-EAP-002	MW10	06/01/05	11:40	X	X		X	
WG-17338-MW3-060105-EAP-003	MW3	06/02/05	12:15	X	X	X	X	
WG-17338-MW6-060105-EAP-004	MW6	06/01/05	13:30	X	X	X	X	
WG-17338-MW7-060105-EAP-005	MW7	06/01/05	14:30	X	X	X	X	
WG-17338-MW8-060205-EAP-001	MW8	06/02/05	9:10	X	X		X	
WG-17338-MW8-060205-EAP-002	MW8	06/02/05	9:10	X	X		X	Field duplicate of WG-17338-MW8-060205-EAP-001
WG-17338-MW9-060205-EAP-003	MW9	06/02/05	10:30	X	X		X	
WG-17338-MW9A-060205-EAP-004	MW9	06/02/05	10:30	X	X		X	Field duplicate of WG-17338-MW9-060205-EAP-003
FB-17388-060205-EAP-005	Field Blank	06/02/05	10:55	X	X	X	X	
TB-17338-EAP-006	Trip Blank	06/02/05	-	X				

Notes:

PCBs	Polychlorinated Biphenyls.
SVOCs	Semi-Volatile Organic Compounds.
TAL	Target Analyte List.
TCL	Target Compound List.
TIC	Tentatively Identified Compounds.
VOC	Volatile Organic Compounds.

TABLE 2

SUMMARY OF ANALYTICAL METHODS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
JUNE 1-2, 2005

Parameter	*Method* [1]
TCL VOCs plus TICs	SW-846 8260B
TCL SVOCs plus TICs	SW-846 8270C
Polychlorinated Biphenyls	SW-846 8082
TAL Metals	SW-846 6020/7470A

Notes:

[1] "Test Methods for Solid Waste/Physical Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

SVOCs Semi-Volatile Organic Compounds.

SVOCs Semi-Volatile Organic Compounds.

TAL Target Analyte List.

TCL Target Compound List.

TICs Tentatively Identified Compounds.

VOC Volatile Organic Compounds.

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INITIAL CALIBRATION RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
JUNE 1-2, 2005

Parameter	*Compound*	*Calibration Date*	*%RSD*	*RF*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
VOCs	2-Butanone (Methyl Ethyl Ketone)	5/23/05	5.4	0.040	MW7-060105EAP005	5.0 U	µg/L	R
					MW8-060205EAP001	5.0 U	µg/L	R
					MW8-060205EAP002	5.0 U	µg/L	R
					MW9-060205EAP003	5.0 U	µg/L	R
					MW9A060205EAP004	5.0 U	µg/L	R
SVOCs	Atrazine	6/15/05	35	>0.050	MW10060105EAP002	11 U	µg/L	UJ
					MW2-060105EAP001	11 U	µg/L	UJ
					MW3-060105EAP003	54 U	µg/L	UJ
					MW6-060105EAP004	20 U	µg/L	UJ
					MW7-060105EAP005	10 U	µg/L	UJ
					MW8-060205EAP001	10 U	µg/L	UJ
					MW8-060205EAP002	17 U	µg/L	UJ
					MW9-060205EAP003	10 U	µg/L	UJ
					MW9A060205EAP004	10 U	µg/L	UJ
SVOCs	Benzaldehyde	6/15/05	38	>0.050	MW10060105EAP002	11 U	µg/L	UJ
					MW2-060105EAP001	11 U	µg/L	UJ
					MW3-060105EAP003	140	µg/L	J
					MW6-060105EAP004	20 U	µg/L	UJ
					MW7-060105EAP005	10 U	µg/L	UJ
					MW8-060205EAP001	10 U	µg/L	UJ
					MW8-060205EAP002	17 U	µg/L	UJ
					MW9-060205EAP003	10 U	µg/L	UJ
					MW9A060205EAP004	10 U	µg/L	UJ

Notes:

%RSD	Percent Relative Standard Deviation.
J	Estimated.
R	Rejected.
RF	Response Factor.
SVOCs	Semi-Volatile Organic Compounds.
U	Non-detect at associated value.
UJ	The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity
VOCs	Volatile Organic Compounds.

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE FIELD BLANKS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
JUNE 1-2, 2005

Parameter	*Rinse Blank Date*	*Analyte*	*Blank Result*	*Sample ID*	*Sample Result*	*Qualified Sample Result*	*Units*
SVOCs	06/02/05	Acetophenone	0.4	MW7-060105EAP005	0.4	10 U	µg/L
VOCs	06/02/05	Toluene	4.2	MW9A060205EAP004	9.6	9.6 U	µg/L

Notes:
SVOCs Semi-Volatile Organic Compounds.
U Non-detect at associated value.
VOCs Volatile Organic Compounds.

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO VARIABILITY IN FIELD DUPLICATE RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
JUNE 1-2, 2005

Parameter	*Analyte*	*Original Sample ID*	*Original Result*	*Duplicate Sample ID*	*Duplicate Result*	*RPD*	*Units*	*Qualifier* [(1)]
VOCs	Toluene	MW9-060205EAP003	23	MW9A060205EAP004	9.6 U	NA	µg/L	J

Notes:

(1) Qualifier is associated with both original and duplicate sample result.
J Estimated.
NA Not Applicable.
RPD Relative Percent Difference.
U Non-detect at associated value.
VOC Volatile Organic Compounds.

TABLE 6

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
JUNE 1-2, 2005

Sample Location	*Volatile Organics*	*Estimated Concentration (µg/L)*	*Semi-Volatile Organics*	*Estimated Concentration (µg/L)*
WG-17338-MW2-060105-EAP-001	C5H12 Alkane	14 J	Ethylmethylbenzene isomer	13 J
	C6H14 Alkane	13 J	Unknown	14 J
	Propane, 2,2'-oxybis-	8.3 J		
	C6H12 Cycloalkane	8.6 J		
	C7H14 Cycloalkane	6.0 J		
	C8H16 Cycloalkane	9.3 J		
	Benzene, propyl-	7.6 J		
	Trimethylbenzene isomer	3.9 J		
	Dihydroindene	5.9 J		
WG-17338-MW10-060105-EAP-002	Propane, 2,2'-oxybis-	100 J	Unknown Alkane	26 J
			Trimethylbenzene isomer	37 J
			Unknowns	100 J
			Ethylphenol isomer	22 J
			Dimethylbenzoic acid isomer	20 J
			Ethyldimethylbenzoic acid isomer	18 J
WG-17338-MW3-060105-EAP-003	None		Butanoic acid	1900 J
			Unknown Alcohol	1100 J
			Hexanoic acid	1400 J
			Octanoic acid	600 J
			Unknowns	19000 J
WG-17338-MW6-060105-EAP-004	None		Ethylphenol isomers	44 J
			Methylbenzoic acid isomer	17 J
			Phenol, 4,4'-(1-methylethylidene)bis-	160 J
WG-17338-MW7-060105-EAP-005	Methane, thiobis-	18 J	Unknowns	23 J
WG-17338-MW8-060205-EAP-001	2,3-dihydro-1H-Indene	48 J	Trimethylbenzoic acid isomer	12J
	Diethylbenzene isomer	6.4 J	Unknowns	66 J
	2,3-dihydro-methyl-1H-Indene isomer	5.4 J	Phenol, 4,4'-(1-methylethylidene)bis-	37 J
WG-17338-MW8-060205-EAP-002	2,3-dihydro-1H-Indene	52 J	Unknowns	81 J
	Diethylbenzene isomer	7.0 J	Phenol, 4,4'-(1-methylethylidene)bis-	39 J

TABLE 6

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
JUNE 1-2, 2005

Sample Location	*Volatile Organics*	*Estimated Concentration (µg/L)*	*Semi-Volatile Organics*	*Estimated Concentration (µg/L)*
	2,3-dihydro-methyl-1H-Indene isomer	6.0 J		
WG-17338-MW9-060205-EAP-003	None		None	
WG-17338-MW9A-060205-EAP-004	None		None	

Note:
J Estimated.

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MEMORANDUM

TO: Greg Carli

REF. NO.: 17307-091001

FROM: Susan C. Scrocchi/js/3

DATE: August 5, 2005

Via E-Mail and U.S. Mail

C.C.: Chris Barton

RE: Data Quality Assessment and Validation
OU-2 Area Investigation - Groundwater Samples
Wilmington, Delaware

The following details a quality assessment and validation of the analytical data resulting from the May 3-9, 2005, collection of 40 samples and 6 quality control (QC) samples from the General Motors (GM) Assembly Plant Site (Site) in Wilmington, Delaware. The sample summary detailing sample identification, sample location, QC samples, and analytical parameters is presented in Table 1. Sample analysis was completed at Severn Trent Laboratory in Edison, New Jersey (STL), in accordance with the methodologies presented in Table 2.

The QC criteria used to assess the data were established by the methods and the Quality Assurance Project Plan (QAPP). Application of quality assurance criteria was consistent with the guidance document "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA 540/R-99/008, October 1999.

These guidelines are collectively referred to as "Guidelines" in this memorandum.

Sample Quantitation

The laboratory reported detected concentrations of volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), and polychlorinated biphenyls (PCB) below the laboratory's practical quantitation limit (PQL)/report limit (RL) but above the laboratory's method detection limit (MDL). The laboratory flagged these sample concentrations with a "J". These concentrations should be qualified as estimated (J) values unless qualified otherwise in this memorandum.

Sample Preservation and Holding Times

Sample holding time periods and preservation requirements are summarized in the analytical methods. All sample extractions and/or analyses were performed within the specified holding times.

All samples were properly preserved and cooled to 4°C(±2°C) after collection.

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Gas Chromatography/Mass Spectrometer (GC/MS) – Tuning and Mass Calibration (Instrument Performance Check) – Organic Analyses

To ensure adequate mass resolution, identification, and to some degree, sensitivity; the performance of each GC/MS instrument used for VOC and SVOC analyses was checked at the beginning of each 12-hour period using bromofluorobenzene (BFB) and decafluorotriphenylphosphine (DFTPP), respectively. The resulting spectra must meet the criteria cited in the "Guidelines" before initiating an analysis sequence.

Instrument performance check data were reviewed. These tuning compounds were analyzed at the required frequency throughout the VOC and SVOC analyses. The results of all instrument performance checks were within the acceptance criteria, indicating acceptable instrument performance.

Initial Calibration – Organic Analyses

Initial calibration data are used to demonstrate that each instrument is capable of generating acceptable quantitative data. A five-point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each over a specific concentration range.

Initial calibration criteria for organic analyses are evaluated against the following criteria:

i) GC/MS (all compounds) – must meet a minimum mean relative response factor (RRF) of 0.05;

ii) GC/MS (all compounds) – the percent relative standard deviation (%RSD) values must not exceed 30.0 percent or a minimum coefficient of determination of 0.99 if quadratic equation calibration curves are used; and

iii) GC (all compounds using an average for multi-response compounds) – the %RSD must not exceed 20 percent or a correlation coefficient of 0.995 when linear regression calibration curves are used.

Calibration standards were analyzed at the required frequency and the results met the above criteria for linearity and sensitivity with the following exceptions:

i) the response factor of 2-butanone was less than 0.05. All associated sample results were non-detect and rejected due to poor analyte sensitivity; and

ii) the benzaldehyde curve yielded a standard deviation greater than 30 percent. All associated positive sample results were qualified as estimated, the non-detect results were considered acceptable based on analyte sensitivity.

A summary of the qualified samples is presented in Table 3.

Continuing Calibration – Organic Analyses

To ensure that each instrument was capable of producing acceptable quantitative data over the analysis period, continuing calibration standards must be analyzed every 12 hours for GC/MS analyses and every 10 samples by GC. The following criteria are employed to evaluate the continuing calibration data:

i) GC/MS (all compounds) – must meet a minimum mean RRF of 0.05;

ii) GC/MS (all compounds) – the percent difference between the mean initial calibration RRF and the continuing calibration RRF must not exceed 25 percent;

iii) GC/MS (compounds determined by quadratic curve) – the percent drift between the true value and the continuing calibration value must not exceed 25 percent;

iv) GC (all compounds using average for multi-response compounds) – the percent difference between mean initial calibration factor and the continuing calibration factor must not exceed 15 percent; and

v) GC (compounds determined by linear regression) – the percent drift between the true value and the continuing calibration value must not exceed 15 percent.

Calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity and linearity of response for all analytes of interest with the exception of several SVOC responses varying from the initial calibration response by more than 25 percent. All associated sample results were qualified as estimated. A summary of the qualified results is presented in Table 4.

Method Blank Samples

Method blank samples are prepared from a purified sample matrix and are processed concurrently with investigative samples to assess the presence and the magnitude of sample contamination introduced during sample analysis. Method blank samples are analyzed at a minimum frequency of one per analytical batch and target analytes should be non-detect.

Method blanks were analyzed at the recommended frequency and the results were non-detect for all analytes of interest.

Surrogate Compounds – Organic Analyses

Individual sample performance for organic analyses was monitored by assessing the results of surrogate compound percent recoveries. Surrogate percent recoveries are reviewed against the laboratory developed control limits provided in the analytical report.

All surrogate recoveries met the method criteria, demonstrating acceptable analytical efficiency for these analyses.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)Analyses

To assess the long term accuracy and precision of the analytical methods on various matrices, MS/MSD percent recoveries and relative percent differences (RPD) of the concentrations were determined. The laboratory establishes the organic MS/MSD percent recovery and RPD control limits. The samples selected for MS/MSD analysis are identified in Table 1.

All MS/MSD recoveries were acceptable with the following exceptions:

i) sample SO-17338-050305-EAP-038 yielded high recoveries for phenol and 2,4-dinitrotoluene. All associated sample results were non-detect and would not have been impacted by the implied high bias; and

ii) sample SO-17338-050505-EAP-006 did not recover the PCB 1260 spike. The sample was positive for the Aroclor and qualified as estimated.

Laboratory Control Sample (LCS)

The LCS analysis serves as a monitor of the overall performance in all steps of the sample analysis and are analyzed with each sample batch. The LCS percent recoveries were evaluated against method and laboratory established control limits.

The LCS percent recoveries were all within the laboratory control limits indicating acceptable analytical accuracy with the exception of some high SVOC recoveries. All associated non-detect results would not have been impacted by the implied bias. Sample SO-17338-050305-EAP-018 had a positive result of phenol which was qualified as estimated.

Internal Standard Summaries – Organic Analyses

To correct for variability in the GC/MS response and sensitivity, internal standard (IS) compounds are added to all samples. All results are calculated as a ratio of the compound and associated IS response. Overall instrument stability and performance for VOC and SVOC analyses were monitored using IS peak area and retention time (RT) data. The IS peak areas and RTs of the samples are required to meet the following criteria:

i) IS area counts must not vary by more than a factor of two (-50 percent to +100 percent) from the associated continuing calibration standard IS area counts; and

ii) the RT of the IS must not vary by more than plus or minus 30 seconds from the associated continuing calibration standard.

A review of the VOC and SVOC internal standard data showed that the IS area counts and RT data were within the acceptance criteria for all samples.

Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and mass spectra (if applicable) were evaluated according to identification criteria established by the methods. The organic compounds reported adhered to the specified identification criteria.

Target Compound Quantitation

The reported quantitation results and detection limits were checked to ensure results reported were accurate. No discrepancies were found between the raw data and the sample results reported by the laboratory.

Field Quality Assurance/Quality Control (QA/QC)

The field QA/QC consisted of one field blank sample, three field duplicate sample sets, and two trip blank samples.

To assess the cleanliness of sample containers and the presence of field contamination, the field blank sample identified in Table 1 was collected and analyzed.

All field blank results were non-detect for the compounds of interest.

Overall precision for the sampling event and laboratory procedures was monitored using the results of the field duplicate sample sets. The RPDs associated with these duplicate samples must be less than 50 percent for water and 100 percent for soils. If the reported concentration in either the investigative sample or its duplicate is less than five times the RL, the evaluation criteria is one or two times the RL value for water and soil samples, respectively.

All field duplicate results were acceptable with the exception of some variability between ethylbenzene and benzo(a)anthracene results. The samples and their duplicates were qualified as estimated (see Table 5).

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, a trip blank was submitted to the laboratory for VOC analysis with each shipping cooler containing multiple samples.

All trip blank results were non-detect for the compounds of interest.

System Performance

System performance between various quality control checks was evaluated to monitor for changes that may have caused the degradation of data quality. No technical problems or chromatographic anomalies were observed which would require qualification of the data.

Tentatively Identified Compounds (TICs)

TICs were evaluated for all samples submitted for volatile and semi-volatile analyses. A summary of the TICs reported and the estimated concentrations is presented in Tables 6A and 6B. TICs which were present in the blanks or which were identified as aldol condensation products and/or siloxanes have been eliminated.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted with the exception of 2-butanone data being rejected in several samples due to an initial calibration violation.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLES
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 3-9, 2005

					Parameters			
Sample I.D.	*Location I.D.*	*Depth (Ft BGS)*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*TCL VOCs plus TICs*	*TLC SVOCs plus TICs*	*PCBs*	*Comments*
SO-17338-050305-EAP-011	PH-49S	0 - 2	05/03/05	10:10		X		
SO-17338-050305-EAP-012	PH-49D	4 - 6	05/03/05	10:15		X		
SO-17338-050305-EAP-013	PH-212	0 - 2	05/03/05	11:00		X		
SO-17338-050305-EAP-014	PH-212	2 - 4	05/03/05	11:05		X		
SO-17338-050305-EAP-016	PH-211	0 - 2	05/03/05	11:20		X		
SO-17338-050305-EAP-017	PH-211	2 - 4	05/03/05	11:25		X		
SO-17338-050305-EAP-018	PH-211	4 - 6	05/03/05	11:30		X		MS/MSD
SO-17338-050305-EAP-019	PH-213	0 - 2	05/03/05	11:55		X		
SO-17338-050305-EAP-020	PH-213	2 - 4	05/03/05	12:00		X		
SO-17338-050305-EAP-022	PH-210	0 - 2	05/03/05	12:10		X		
SO-17338-050305-EAP-023	PH-210	2 - 4	05/03/05	12:15		X		
SO-17338-050305-EAP-027	PH-214	0 - 2	05/03/05	13:00		X		
SO-17338-050305-EAP-028	PH-214	2 - 4	05/03/05	13:10		X		
SO-17338-050305-EAP-030	PH-216	0 - 2	05/03/05	13:30		X		
SO-17338-050305-EAP-031	PH-216	2 - 4	05/03/05	13:35		X		
SO-17338-050305-EAP-033	PH-215	0 - 2	05/03/05	13:55		X		
SO-17338-050305-EAP-034	PH-215	2 - 4	05/03/05	14:00		X		
SO-17338-050305-EAP-035	PH-215	4 - 6	05/03/05	14:05		X		
SO-17338-050305-EAP-036	PH-215	0 - 2	05/03/05	14:00		X		Field duplicate of SO-17338-050305-EAP-033
SO-17338-050305-EAP-037	PH-50	0 - 2	05/03/05	14:15		X		
SO-17338-050305-EAP-038	PH-50	4 - 6	05/03/05	14:20		X		MS/MSD
SO-17338-050305-EAP-039	PH-217	0 - 2	05/03/05	14:25		X		
SO-17338-050305-EAP-040	PH-217	2 - 4	05/03/05	14:30		X		
SO-17338-050305-EAP-041	PH-217	4 - 6	05/03/05	14:35		X		
SO-17338-050505-EAP-001	PH-201	1.5	05/05/05	8:00			X	
SO-17338-050505-EAP-002	PH-201	1.5	05/05/05	8:00			X	Field duplicate of SO-17338-050505-EAP-001
SO-17338-050505-EAP-005	PH-202	0 - 0.5	05/05/05	8:55			X	
SO-17338-050505-EAP-006	PH-202	0 - 0.5	05/05/05	8:55			X	MS/MSD

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLES
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 3-9, 2005

					Parameters			
Sample I.D.	*Location I.D.*	*Depth (Ft BGS)*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*TCL VOCs plus TICs*	*TLC SVOCs plus TICs*	*PCBs*	*Comments*
SO-17338-050505-EAP-009	PH-HA-2	3 - 4	05/05/05	9:20			X	
SO-17338-050505-EAP-010	PH-206	2 - 2.5	05/05/05	9:40	X			
SO-17338-050505-EAP-011	PH-206	3 - 4	05/05/05	9:40	X			
SO-17338-050505-EAP-012	PH-HA4	3 - 4	05/05/05	10:00	X			
SO-17338-050505-EAP-013	PH-205	2 - 2.5	05/05/05	10:10	X			
SO-17338-050505-EAP-014	PH-205	3 - 4	05/05/05	10:10	X			
SO-17338-050505-EAP-015	PH-205	3 - 4	05/05/05	10:10	X			Field duplicate of S0-17338-050505-EAP-014
SO-17338-050505-EAP-016	PH-208	2 - 2.5	05/05/05	10:40	X			
SO-17338-050505-EAP-017	PH-208	3 - 4	05/05/05	10:40	X			
SO-17338-050505-EAP-019	PH-207	0 - 2	05/05/05	11:10	X			
SO-17388-050505-EAP-018	PH-208	2 - 4	05/05/05	10:40	X			
FB-17338-050505-EAP-020	Field Blank	-	05/05/05	12:40	X		X	
TB-17338-050505-EAP-021	Trip Blank	-	05/05/05	-	X			
WG-17338-050505-EAP-007	PH-203	2.5	05/05/05	12:30			X	
WG-17338-050505-EAP-008	PH-203	2.5	05/05/05	12:30			X	MS/MSD
WG-17338-050505-EAP-022	STAND PIPE	-	05/05/05	13:30		X		
WG-17338-050905-EAP-001	STAND PIPE	-	05/09/05	9:20	X			MS/MSD
TB-17338-EAP-002	Trip Blank	-	05/09/05	-	X			

Notes:
ft bgs Feet Below Ground Surface.
MS Matrix Spike.
MSD Matrix Spike Duplicate.
PCBs Polychlorinated Biphenyls.
TCL Targt Compound List.
TICs Tentatively Identified Compounds.
VOCs Volatile Organic Compounds.

TABLE 2

SUMMARY OF ANALYTICAL METHODS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLES
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 3-9, 2005

Parameter	*Method* [1]
TCL VOCs plus TICs	SW-846 8260B
TCL SVOCs plus TICs	SW-846 8270C
Polychlorinated Biphenyls	SW-846 8082

Notes:

[1] "Test Methods for Solid Waste/Physical Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

SVOCs Semi-Volatile Organic Compounds.
TCL Target Compound List.
TICs Tentatively Identified Compounds.
VOC Volatile Organic Compounds.

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INITIAL CALIBRATION RESULTS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLES
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 3-9, 2005

Parameter	*Compound*	*Calibration Date*	*%RSD*	*RF*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
SVOCs	Benzaldehyde	05/18/05	35	>0.050	050305-EAP-039	10 J	µg/kg	J
					050305-EAP-038	14 J	µg/kg	J
					050305-EAP-031	30 J	µg/kg	J
SVOCs	Benzaldehyde	05/22/05	50	>0.050	050305-EAP-036	74 J	µg/kg	J
VOCs	2-Butanone (Methyl Ethyl Ketone)	04/20/05	<30	0.031	050505-EAP-010	500 U	µg/kg	R
					050505-EAP-011	520 U	µg/kg	R
					050505-EAP-018	470 U	µg/kg	R
					050505-EAP-014	4600 U	µg/kg	R
					050505-EAP-019	490 U	µg/kg	R
					050505-EAP-017	510 U	µg/kg	R
					050505-EAP-013	1300 U	µg/kg	R
					050505-EAP-015	2100 U	µg/kg	R
					050505-EAP-012	50000 U	µg/kg	R
					050505-EAP-016	480 U	µg/kg	R
VOCs	2-Butanone (Methyl Ethyl Ketone)	05/12/05	<30	0.037	WG-050905-EAP001	5.0 U	µg/L	R

Notes:
%RSD Percent Relative Standard Deviation.
J Estimated.
R Rejected.
RF Response Factor.
SVOCs Semi-Volatile Organic Compounds.
U Non-detect at associated value.
VOCs Volatile Organic Compounds.

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLES
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 3-9, 2005

Parameter	*Calibration Date*	*Compound*	*%D*	*RF*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
SVOCs	05/16/05	2,4-Dinitrophenol	31	>0.050	050305-EAP-013	1500 U	µg/kg	UJ
					050305-EAP-012	1600 U	µg/kg	UJ
					050305-EAP-028	1600 U	µg/kg	UJ
					050305-EAP-014	1500 U	µg/kg	UJ
					050305-EAP-020	1500 U	µg/kg	UJ
					050305-EAP-019	1500 U	µg/kg	UJ
					050305-EAP-030	1400 U	µg/kg	UJ
					050305-EAP-023	1600 U	µg/kg	UJ
					050305-EAP-022	1600 U	µg/kg	UJ
					050305-EAP-011	1400 U	µg/kg	UJ
					050305-EAP-017	1500 U	µg/kg	UJ
SVOCs	05/16/05	4,6-Dinitro-2-methylphenol	29	>0.050	050305-EAP-013	1500 U	µg/kg	UJ
					050305-EAP-030	1400 U	µg/kg	UJ
					050305-EAP-019	1500 U	µg/kg	UJ
					050305-EAP-028	1600 U	µg/kg	UJ
					050305-EAP-020	1500 U	µg/kg	UJ
					050305-EAP-022	1600 U	µg/kg	UJ
					050305-EAP-023	1600 U	µg/kg	UJ
					050305-EAP-011	1400 U	µg/kg	UJ
					050305-EAP-014	1500 U	µg/kg	UJ
					050305-EAP-012	1600 U	µg/kg	UJ
					050305-EAP-017	1500 U	µg/kg	UJ
SVOCs	05/16/05	Benzaldehyde	42	>0.050	050305-EAP-022	400 U	µg/kg	UJ
					050305-EAP-013	370 U	µg/kg	UJ
					050305-EAP-017	370 U	µg/kg	UJ
					050305-EAP-020	380 U	µg/kg	UJ
					050305-EAP-019	370 U	µg/kg	UJ
					050305-EAP-014	380 U	µg/kg	UJ
					050305-EAP-030	360 U	µg/kg	UJ
					050305-EAP-011	360 U	µg/kg	UJ
					050305-EAP-023	410 U	µg/kg	UJ
					050305-EAP-028	410 U	µg/kg	UJ
					050305-EAP-012	410 U	µg/kg	UJ
SVOCs	05/16/05	Benzo(g,h,i)perylene	30	>0.050	050305-EAP-023	410 U	µg/kg	UJ
					050305-EAP-011	300 J	µg/kg	J
					050305-EAP-020	8.8 J	µg/kg	J
					050305-EAP-013	62 J	µg/kg	J
					050305-EAP-017	50 J	µg/kg	J
					050305-EAP-022	260 J	µg/kg	J
					050305-EAP-028	410 U	µg/kg	UJ
					050305-EAP-012	410 U	µg/kg	UJ
					050305-EAP-019	180 J	µg/kg	J
					050305-EAP-014	380 U	µg/kg	UJ
					050305-EAP-030	18 J	µg/kg	J
SVOCs	05/16/05	Hexachlorocyclopentadiene	31	>0.050	050305-EAP-014	380 U	µg/kg	UJ
					050305-EAP-017	370 U	µg/kg	UJ
					050305-EAP-020	380 U	µg/kg	UJ
					050305-EAP-012	410 U	µg/kg	UJ
					050305-EAP-022	400 U	µg/kg	UJ
					050305-EAP-023	410 U	µg/kg	UJ
					050305-EAP-030	360 U	µg/kg	UJ
					050305-EAP-019	370 U	µg/kg	UJ
					050305-EAP-028	410 U	µg/kg	UJ
					050305-EAP-013	370 U	µg/kg	UJ
					050305-EAP-011	360 U	µg/kg	UJ

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLES
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 3-9, 2005

Parameter	*Calibration Date*	*Compound*	*%D*	*RF*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
SVOCs	05/16/05	Indeno(1,2,3-cd)pyrene	25.2	>0.050	050305-EAP-017	46	µg/kg	J
					050305-EAP-019	160	µg/kg	J
					050305-EAP-023	41 U	µg/kg	UJ
					050305-EAP-014	38 U	µg/kg	UJ
					050305-EAP-022	230	µg/kg	J
					050305-EAP-030	16 J	µg/kg	J
					050305-EAP-028	41 U	µg/kg	UJ
					050305-EAP-012	41 U	µg/kg	UJ
					050305-EAP-011	300	µg/kg	J
					050305-EAP-020	38 U	µg/kg	UJ
					050305-EAP-013	59	µg/kg	J
SVOCs	05/18/05	2,4-Dinitrophenol	38	>0.050	050305-EAP-031	1600 U	µg/kg	UJ
					050305-EAP-038	1600 U	µg/kg	UJ
					050305-EAP-016	1500 U	µg/kg	UJ
SVOCs	05/18/05	4,6-Dinitro-2-methylphenol	25.4	>0.050	050305-EAP-031	1600 U	µg/kg	UJ
					050305-EAP-016	1500 U	µg/kg	UJ
					050305-EAP-038	1600 U	µg/kg	UJ
SVOCs	05/18/05	Benzo(g,h,i)perylene	46	>0.050	050305-EAP-038	160 J	µg/kg	J
					050305-EAP-016	980	µg/kg	J
					050305-EAP-031	400 U	µg/kg	UJ
SVOCs	05/18/05	Benzo(k)fluoranthene	26	>0.050	050305-EAP-016	2900	µg/kg	J
					050305-EAP-038	450	µg/kg	J
					050305-EAP-031	40 U	µg/kg	UJ
SVOCs	05/18/05	Dibenz(a,h)anthracene	37	>0.050	050305-EAP-038	59	µg/kg	J
					050305-EAP-016	410	µg/kg	J
					050305-EAP-031	40 U	µg/kg	UJ
SVOCs	05/18/05	Di-n-octyl phthalate	93	>0.050	050305-EAP-031	400 U	µg/kg	UJ
					050305-EAP-016	370 U	µg/kg	UJ
					050305-EAP-038	400 U	µg/kg	UJ
SVOCs	05/18/05	Hexachlorocyclopentadiene	80	0.027	050305-EAP-016	370 U	µg/kg	R
					050305-EAP-038	400 U	µg/kg	R
					050305-EAP-031	400 U	µg/kg	R
SVOCs	05/18/05	Indeno(1,2,3-cd)pyrene	39	>0.050	050305-EAP-031	40 U	µg/kg	UJ
					050305-EAP-038	160	µg/kg	J
					050305-EAP-016	1000	µg/kg	J
SVOCs	05/18/05	Pentachlorophenol	30	>0.050	050305-EAP-016	1500 U	µg/kg	UJ
					050305-EAP-031	1600 U	µg/kg	UJ
					050305-EAP-038	1600 U	µg/kg	UJ
SVOCs	05/19/05	2,4-Dinitrophenol	38	>0.050	050305-EAP-040	1600 U	µg/kg	UJ
					050305-EAP-039	1500 U	µg/kg	UJ
SVOCs	05/19/05	4,6-Dinitro-2-methylphenol	32	>0.050	050305-EAP-040	1600 U	µg/kg	UJ
					050305-EAP-039	1500 U	µg/kg	UJ
SVOCs	05/19/05	Benzo(g,h,i)perylene	42	>0.050	050305-EAP-037	98 J	µg/kg	J
					WG050505-EAP-022	10 U	µg/L	UJ
SVOCs	05/19/05	Benzo(g,h,i)perylene	39	>0.050	050305-EAP-040	45 J	µg/kg	J
					050305-EAP-039	82 J	µg/kg	J

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLES
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 3-9, 2005

Parameter	*Calibration Date*	*Compound*	*%D*	*RF*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
SVOCs	05/19/05	Benzo(k)fluoranthene	25.3	>0.050	050305-EAP-037	270	µg/kg	J
					WG050505-EAP-022	1.0 U	µg/L	UJ
SVOCs	05/19/05	Benzo(k)fluoranthene	37	>0.050	050305-EAP-040	110	µg/kg	J
					050305-EAP-039	140	µg/kg	J
SVOCs	05/19/05	bis(2-Ethylhexyl)phthalate	91	>0.050	050305-EAP-040	1500	µg/kg	J
					050305-EAP-039	1300	µg/kg	J
SVOCs	05/19/05	Butyl benzylphthalate	83	>0.050	050305-EAP-040	110 J	µg/kg	J
					050305-EAP-039	340 J	µg/kg	J
SVOCs	05/19/05	Dibenz(a,h)anthracene	35	>0.050	050305-EAP-037	31 J	µg/kg	J
					WG050505-EAP-022	1.0 U	µg/L	UJ
SVOCs	05/19/05	Dibenz(a,h)anthracene	34	>0.050	050305-EAP-040	16 J	µg/kg	J
					050305-EAP-039	33 J	µg/kg	J
SVOCs	05/19/05	Di-n-octyl phthalate	230	>0.050	050305-EAP-040	400 U	µg/kg	UJ
					050305-EAP-039	380 U	µg/kg	UJ
SVOCs	05/19/05	Di-n-octyl phthalate	124	>0.050	050305-EAP-037	380 U	µg/kg	UJ
					WG050505-EAP-022	10 U	µg/L	UJ
SVOCs	05/19/05	Hexachlorocyclopentadiene	91	0.012	050305-EAP-040	400 U	µg/kg	R
					050305-EAP-039	380 U	µg/kg	R
SVOCs	05/19/05	Hexachlorocyclopentadiene	80	0.027	050305-EAP-037	380 U	µg/kg	R
					WG050505-EAP-022	10 U	µg/L	R
SVOCs	05/19/05	Indeno(1,2,3-cd)pyrene	38	>0.050	050305-EAP-037	100	µg/kg	J
					WG050505-EAP-022	1.0 U	µg/L	UJ
SVOCs	05/19/05	Indeno(1,2,3-cd)pyrene	34	>0.050	050305-EAP-039	82	µg/kg	J
					050305-EAP-040	44	µg/kg	J
SVOCs	05/19/05	Pyrene	26	>0.050	050305-EAP-039	280 J	µg/kg	J
					050305-EAP-040	170 J	µg/kg	J
SVOCs	05/22/05	2,4-Dinitrophenol	25.3	>0.050	050305-EAP-034	3200 U	µg/kg	UJ
					050305-EAP-027	3000 U	µg/kg	UJ
					050305-EAP-033	3000 U	µg/kg	UJ
					050305-EAP-036	3200 U	µg/kg	UJ
SVOCs	05/22/05	Hexachlorocyclopentadiene	62	>0.050	050305-EAP-033	740 U	µg/kg	UJ
					050305-EAP-034	800 U	µg/kg	UJ
					050305-EAP-027	760 U	µg/kg	UJ
					050305-EAP-036	800 U	µg/kg	UJ
SVOCs	05/24/05	2,4-Dinitrophenol	32	>0.050	050305-EAP-018	1500 U	µg/kg	UJ
					050305-EAP-035	1600 U	µg/kg	UJ
					050305-EAP-041	1600 U	µg/kg	UJ
SVOCs	05/24/05	Benzaldehyde	38	>0.050	050305-EAP-035	390 U	µg/kg	UJ
					050305-EAP-018	370 U	µg/kg	UJ
					050305-EAP-041	390 U	µg/kg	UJ

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLES
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 3-9, 2005

Parameter	*Calibration Date*	*Compound*	*%D*	*RF*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
SVOCs	05/24/05	Hexachlorocyclopentadiene	32	>0.050	050305-EAP-035	390 U	µg/kg	UJ
					050305-EAP-018	370 U	µg/kg	UJ
					050305-EAP-041	390 U	µg/kg	UJ

Notes:

%D	Percent Difference.
J	Estimted.
J	Estimated.
R	Rejected.
RF	Response Factor.
SVOCs	Semi-Volatile Organic Compounds.
U	Non-detect at associated value.
UJ	The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO VARIABILITY IN FIELD DUPLICATE RESULTS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLES
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 3-9, 2005

Parameter	*Analyte*	*Original Sample ID*	*Original Result*	*Duplicate Sample ID*	*Duplicate Result*	*RPD*	*Units*	*Qualifier* [(1)]
VOCs	Ethylbenzene	050505-EAP-014	36000	050505-EAP-015	12000	100	µg/kg	J
SVOCs	Benzo(a)anthracene	050305-EAP-033	620	050305-EAP-036	200	102	µg/kg	J

Notes:
(1) qualifier is associated with both original and duplicate results.
J Estimated.
RPD Relative Percent Difference.
SVOCs Semi-Volatile Organic Compounds.
VOCs Volatile Organic Compounds.

TABLE 6A

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLES
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 3-9, 2005

Sample Location	*Volatile Organics*	*Estimated Concentration (µg/Kg)*	*Semi-Volatile Organics*	*Estimated Concentration (µg/Kg)*
SO-17338-050505-EAP-010	C10H22 Alkane	1800 J	NA	
	C11H24 Alkane	2400 J		
	Trimethylbenzene isomer	840 J		
	Unknown Alkanes	6200 J		
	Unknown	1100 J		
	C12H26 Alkane	1300 J		
	C13H28 Alkane	1600 J		
	C11H14/C11H16 Aromatics	1200 J		
SO-17338-050505-EAP-011	None		NA	
SO-17338-050505-EAP-012	Trimethylbenzene isomer	50000 J	NA	
SO-17338-050505-EAP-013	Ethylmethylbenzene isomer	3300 J	NA	
SO-17338-050505-EAP-014	None		NA	
SO-17338-050505-EAP-015	None		NA	
SO-17338-050505-EAP-016	Trimethylbenzene isomer	640 J	NA	
	C11H24 Alkane	2500 J		
	C10H20 Cycloalkane	670 J		
	Unknowns	1300 J		
	Unknown Cycloalkane	820 J		
	C12H26 Alkane	1400 J		
	C13H28 Alkane	1500 J		
	2,3-dihydro-dimethyl-1H-Indene isomer	830 J		
SO-17338-050505-EAP-017	None		NA	
SO-17388-050505-EAP-018	None		NA	
SO-17338-050505-EAP-019	None		NA	
SO-17338-050305-EAP-011	NA		C20H12 PAH	580 J

TABLE 6A

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLES
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 3-9, 2005

Sample Location	*Volatile Organics*	*Estimated Concentration (µg/Kg)*	*Semi-Volatile Organics*	*Estimated Concentration (µg/Kg)*
			Unknown	320 J
SO-17338-050305-EAP-012	NA		None	
SO-17338-050305-EAP-013	NA		Unknown	440 J
SO-17338-050305-EAP-014	NA		None	
SO-17338-050305-EAP-016	NA		Dibenzothiophene	380 J
			C15H10 PAHs	1400 J
			Unknowns	2700 J
			C17H12 PAHs	1900 J
			Benzo(b)naphthothiophene isomer	430 J
			C18H10 PAH	460 J
			C19H14 PAH	450 J
			C20H12 PAHs	4400 J
			C22H14 PAH	320 J
			C22H12 PAH	370 J
SO-17338-050305-EAP-017	NA		Unknowns	760 J
SO-17338-050305-EAP-018	NA		Unknowns	770 J
SO-17338-050305-EAP-019	NA		None	
SO-17338-050305-EAP-020	NA		Unknown	1400 J
SO-17338-050305-EAP-022	NA		C20H12 PAH	330 J
SO-17338-050305-EAP-023	NA		None	
SO-17338-050305-EAP-027	NA		Unknown Alkane	620 J
			Unknowns	9600 J
			C20H12 PAH	1500 J

TABLE 6A

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLES
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 3-9, 2005

Sample Location	*Volatile Organics*	*Estimated Concentration (µg/Kg)*	*Semi-Volatile Organics*	*Estimated Concentration (µg/Kg)*
SO-17338-050305-EAP-028	NA		None	
SO-17338-050305-EAP-030	NA		Unknown	440 J
			Unknown Alkane	320 J
			C17H36 Alkane	350 J
SO-17338-050305-EAP-031	NA		Unknowns	8300 J
			Unknown Alkanes	2400 J
SO-17338-050305-EAP-033	NA		C20H12 PAH	600 J
			Unknowns	2400 J
SO-17338-050305-EAP-034	NA		Unknowns	33000 J
			Unknown Alkane	1400 J
SO-17338-050305-EAP-035	NA		Unknowns	850 J
SO-17338-050305-EAP-036	NA		Unknown Alkanes	1700 J
			Unknowns	4200 J
			Unknown Sterol	1200 J
SO-17338-050305-EAP-037	NA		None	
SO-17338-050305-EAP-038	NA		C15H10 PAH	430 J
			C17H12 PAH	340 J
			C20H12 PAH	410 J
SO-17338-050305-EAP-039	NA		Unknown	770 J
SO-17338-050305-EAP-040	NA		Unknown	670 J
SO-17338-050305-EAP-041	NA		Unknowns	920 J

Notes:
J Estimated.

TABLE 6A

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLES
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 3-9, 2005

Sample Location	*Volatile Organics*	*Estimated Concentration (µg/Kg)*	*Semi-Volatile Organics*	*Estimated Concentration (µg/Kg)*

NA Not Applicable.

TABLE 6B

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLES
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 3-9, 2005

Sample Location	*Volatile Organics*	*Estimated Concentration (µg/L)*	*Semi-Volatile Organics*	*Estimated Concentration (µg/L)*
WG-17338-050505-EAP-022	NA		Unknowns	330 J
			Ethyldimethylbenzene isomer	180J
			Methylpropylbenzene isomer	31 J
			Tetrahydromethylnaphthalene isomer	46 J
			2,3-dihydro-dimethyl-1H-Indene isomer	49 J
			Naphthalene, 1-methyl-	43 J
			Tetrahydrodimethylnaphthalene isomer	17 J
			Dimethylnaphthalene isomer	61 J
WG-17338-050905-EAP-001	Methylmethylethylbenzene isomer	15 J	NA	
	2,3-dihydromethyl-1H-Indene isomer	31 J		
	2,3-dihydrodimethyl-1H-Indene isomer	20 J		
	2,3-dihydrotrimethyl-1H-Indene isomer	16 J		
	C11H14 Aromatics	48 J		
	Tetrahydromethylnaphthalene isomer	17 J		
	C12H16 Aromatic	21 J		
	Methylnaphthalene isomer	39 J		
	Dimethylnaphthalene isomer	15 J		

Notes:
J Estimated.
NA Not Applicable.

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
www.stl-inc.com

12/05/2005

Conestoga-Rovers & Associates
2371 George Urban Blvd
Depew, NY 14043

Attention: Ms. Susan Scrocchi

Laboratory Results
Job No. I698 - GM Wilmington-17338

Dear Ms. Scrocchi:

Enclosed are the results you requested for the following sample(s) received at our laboratory on November 9, 2005.

Lab No.	Client ID	Analysis Required
685751	WG-17338-110905-RR-001	TCLVOA+10 4.2 Special
		TCL BNA+20
685752	WG-17338-110905-RR-002	TCLVOA+10 4.2 Special
		TCL BNA+20
685753	RB-17338-110905-RR-003	TCLVOA+10 4.2 Special
		TCL BNA+20
685754	TB-17338-110905-RR-004	TCLVOA+10 4.2 Special

If you have any questions please contact your Project Manager, Joy Kelly, at (732) 549-3900.

Very Truly Yours,

Michael J. Urban
Laboratory Manager

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Calibration Summary 370
Surrogate Compound Recovery Summary 464
Spike Recovery Summary 466
Internal Standard Area and RT Summary 516
Injection Log Book 521

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Analytical Results Summary

Client ID: **110905-RR-001**
Site: GM Wilmington-17338

Lab Sample No: **685751**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Analyzed: 11/15/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07506.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	9.6	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	20	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	*	5.0
Chlorobenzene	1.1J	5.0
Ethylbenzene	*	4.0
Styrene	ND	5.0

*See Dilution

Client ID: **110905-RR-001**
Site: GM Wilmington-17338

Lab Sample No: **685751**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Analyzed: 11/15/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07506.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	*	5.0
Freon TF	ND	5.0
MTBE	36	5.0
Cyclohexane	17	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	21	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	120	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

*See Dilution

Client ID: **110905-RR-001**
Site: GM Wilmington-17338

Lab Sample No: **685751**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Analyzed: 11/15/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07506.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Trimethylbenzene isomer/Unknown	7.56	470	
2. Coeluting Aromatics	7.62	620	
3. Methylpropylbenzene isomer/Unknown	7.65	420	
4. Coeluting Aromatics	7.68	610	
5. Coeluting Aromatics	7.82	840	
6. Coeluting Aromatics	7.87	740	
7. Coeluting Aromatics	8.06	620	
8. Unknown Aromatic	8.08	790	
9. Coeluting Aromatics	8.25	930	
10. Naphthalene/Unknown	8.59	1200	
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TOTAL ESTIMATED CONCENTRATION		7240	

Client ID: **110905-RR-001D1**
Site: GM Wilmington-17338

Lab Sample No: **685751D1**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Analyzed: 11/15/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07502.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 50.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Toluene	4700	250
Ethylbenzene	500	200
Xylene (Total)	2700	250

Client ID: **110905-RR-002**
Site: GM Wilmington-17338

Lab Sample No: **685752**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07507.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	8.0	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	20	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	*	5.0
Chlorobenzene	1.0J	5.0
Ethylbenzene	*	4.0
Styrene	ND	5.0

*See Dilution

Client ID: **110905-RR-002**
Site: GM Wilmington-17338

Lab Sample No: **685752**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07507.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	*	5.0
Freon TF	ND	5.0
MTBE	36	5.0
Cyclohexane	16	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	21	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	120	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

*See Dilution

Client ID: **110905-RR-002**
Site: GM Wilmington-17338

Lab Sample No: **685752**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07507.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Coeluting Aromatics	7.56	460	
2. Coeluting Aromatics	7.62	600	
3. Coeluting Aromatics	7.65	410	
4. Unknown Aromatic	7.68	600	
5. Coeluting Aromatics	7.82	810	
6. Coeluting Aromatics	7.87	700	
7. Coeluting Aromatics	8.06	580	
8. Coeluting Aromatics	8.08	780	
9. Coeluting Aromatics	8.25	890	
10. Naphthalene/Unknown	8.59	1100	
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TOTAL ESTIMATED CONCENTRATION	6930

Client ID: **110905-RR-002D1**
Site: GM Wilmington-17338

Lab Sample No: **685752D1**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Analyzed: 11/15/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07503.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 50.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Toluene	4500	250
Ethylbenzene	480	200
Xylene (Total)	2600	250

Client ID: **110905-RR-003**
Site: GM Wilmington-17338

Lab Sample No: **685753**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Analyzed: 11/15/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07504.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **110905-RR-003**
Site: GM Wilmington-17338

Lab Sample No: **685753**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Analyzed: 11/15/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07504.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **110905-RR-003**
Site: GM Wilmington-17338

Lab Sample No: **685753**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Analyzed: 11/15/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07504.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **110905-RR-004**
Site: GM Wilmington-17338

Lab Sample No: **685754**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Analyzed: 11/15/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07505.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **110905-RR-004**
Site: GM Wilmington-17338

Lab Sample No: **685754**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Analyzed: 11/15/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07505.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **110905-RR-004**
Site: GM Wilmington-17338

Lab Sample No: **685754**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Analyzed: 11/15/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07505.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
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30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **110905-RR-001**
Site: GM Wilmington-17338

Lab Sample No: **685751**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25420.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	200
2-Chlorophenol	ND	200
2-Methylphenol	24 J	200
4-Methylphenol	30 J	200
2-Nitrophenol	ND	200
2,4-Dimethylphenol	35 J	200
2,4-Dichlorophenol	ND	200
4-Chloro-3-methylphenol	ND	200
2,4,6-Trichlorophenol	ND	200
2,4,5-Trichlorophenol	ND	200
2,4-Dinitrophenol	ND	820
4-Nitrophenol	ND	820
4,6-Dinitro-2-methylphenol	ND	820
Pentachlorophenol	ND	820
bis(2-Chloroethyl)ether	ND	20
1,3-Dichlorobenzene	ND	200
1,4-Dichlorobenzene	ND	200
1,2-Dichlorobenzene	ND	200
bis(2-chloroisopropyl)ether	ND	200
N-Nitroso-di-n-propylamine	ND	20
Hexachloroethane	ND	20
Nitrobenzene	ND	20
Isophorone	ND	200
bis(2-Chloroethoxy)methane	ND	200
1,2,4-Trichlorobenzene	ND	20
Naphthalene	2100	200
4-Chloroaniline	ND	200
Hexachlorobutadiene	ND	41
2-Methylnaphthalene	69 J	200
Hexachlorocyclopentadiene	ND	200
2-Chloronaphthalene	ND	200
2-Nitroaniline	ND	410
Dimethylphthalate	ND	200
Acenaphthylene	ND	200

Client ID: **110905-RR-001**
Site: GM Wilmington-17338

Lab Sample No: **685751**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25420.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,6-Dinitrotoluene	ND	41
3-Nitroaniline	ND	410
Acenaphthene	ND	200
Dibenzofuran	ND	200
2,4-Dinitrotoluene	ND	41
Diethylphthalate	ND	200
4-Chlorophenyl-phenylether	ND	200
Fluorene	ND	200
4-Nitroaniline	ND	410
N-Nitrosodiphenylamine	ND	200
4-Bromophenyl-phenylether	ND	200
Hexachlorobenzene	ND	20
Phenanthrene	ND	200
Anthracene	ND	200
Carbazole	ND	200
Di-n-butylphthalate	ND	200
Fluoranthene	ND	200
Pyrene	ND	200
Butylbenzylphthalate	ND	200
3,3'-Dichlorobenzidine	ND	410
Benzo(a)anthracene	ND	20
Chrysene	ND	200
bis(2-Ethylhexyl)phthalate	ND	200
Di-n-octylphthalate	ND	200
Benzo(b)fluoranthene	ND	20
Benzo(k)fluoranthene	ND	20
Benzo(a)pyrene	ND	20
Indeno(1,2,3-cd)pyrene	ND	20
Dibenz(a,h)anthracene	ND	20
Benzo(g,h,i)perylene	ND	200
Benzaldehyde	ND	200
Caprolactam	ND	200
Atrazine	ND	200
Acetophenone	ND	200

Client ID: **110905-RR-001**
Site: GM Wilmington-17338

Lab Sample No: **685751**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25420.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Diphenyl	ND	200

Client ID: **110905-RR-001**
Site: GM Wilmington-17338

Lab Sample No: **685751**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25420.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Toluene	4.50	2000	
2. Benzene, ethyl-	5.74	200	
3. Xylene isomer	5.84	1400	
4. Xylene isomer	6.14	580	
5. Trimethylbenzene isomer	7.63	350	
6. 1H-Indene, 2,3-dihydro-	7.80	330	
7. Methylpropylbenzene isomer	7.89	380	
8. Ethyldimethylbenzene isomer	7.96	600	
9. Ethyldimethylbenzene isomer	8.17	510	
10. Ethyldimethylbenzene isomer	8.19	380	
11. Ethyldimethylbenzene isomer	8.26	710	
12. Ethyldimethylbenzene isomer	8.49	170	
13. Tetramethylbenzene isomer	8.58	420	
14. Tetramethylbenzene isomer	8.62	610	
15. C10H12 Aromatic	8.84	230	
16. 2,3-dihydro-methyl-1H-Indene isomer	8.96	610	
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30.			

TOTAL ESTIMATED CONCENTRATION	9480

Client ID: **110905-RR-002**
Site: GM Wilmington-17338

Lab Sample No: **685752**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Extracted: 11/21/05
Date Analyzed: 11/22/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25473.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	210
2-Chlorophenol	ND	210
2-Methylphenol	80 J	210
4-Methylphenol	40 J	210
2-Nitrophenol	ND	210
2,4-Dimethylphenol	62 J	210
2,4-Dichlorophenol	ND	210
4-Chloro-3-methylphenol	ND	210
2,4,6-Trichlorophenol	ND	210
2,4,5-Trichlorophenol	ND	210
2,4-Dinitrophenol	ND	820
4-Nitrophenol	ND	820
4,6-Dinitro-2-methylphenol	ND	820
Pentachlorophenol	ND	820
bis(2-Chloroethyl)ether	ND	21
1,3-Dichlorobenzene	ND	210
1,4-Dichlorobenzene	ND	210
1,2-Dichlorobenzene	ND	210
bis(2-chloroisopropyl)ether	ND	210
N-Nitroso-di-n-propylamine	ND	21
Hexachloroethane	ND	21
Nitrobenzene	ND	21
Isophorone	ND	210
bis(2-Chloroethoxy)methane	ND	210
1,2,4-Trichlorobenzene	ND	21
Naphthalene	2000	210
4-Chloroaniline	ND	210
Hexachlorobutadiene	ND	41
2-Methylnaphthalene	69 J	210
Hexachlorocyclopentadiene	ND	210
2-Chloronaphthalene	ND	210
2-Nitroaniline	ND	410
Dimethylphthalate	ND	210
Acenaphthylene	ND	210

Client ID: **110905-RR-002**
Site: GM Wilmington-17338

Lab Sample No: **685752**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Extracted: 11/21/05
Date Analyzed: 11/22/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25473.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,6-Dinitrotoluene	ND	41
3-Nitroaniline	ND	410
Acenaphthene	ND	210
Dibenzofuran	ND	210
2,4-Dinitrotoluene	ND	41
Diethylphthalate	ND	210
4-Chlorophenyl-phenylether	ND	210
Fluorene	ND	210
4-Nitroaniline	ND	410
N-Nitrosodiphenylamine	ND	210
4-Bromophenyl-phenylether	ND	210
Hexachlorobenzene	ND	21
Phenanthrene	ND	210
Anthracene	ND	210
Carbazole	ND	210
Di-n-butylphthalate	ND	210
Fluoranthene	ND	210
Pyrene	ND	210
Butylbenzylphthalate	ND	210
3,3'-Dichlorobenzidine	ND	410
Benzo(a)anthracene	ND	21
Chrysene	ND	210
bis(2-Ethylhexyl)phthalate	ND	210
Di-n-octylphthalate	ND	210
Benzo(b)fluoranthene	ND	21
Benzo(k)fluoranthene	ND	21
Benzo(a)pyrene	ND	21
Indeno(1,2,3-cd)pyrene	ND	21
Dibenz(a,h)anthracene	ND	21
Benzo(g,h,i)perylene	ND	210
Benzaldehyde	ND	210
Caprolactam	ND	210
Atrazine	ND	210
Acetophenone	ND	210

Client ID: **110905-RR-002**
Site: GM Wilmington-17338

Lab Sample No: **685752**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Extracted: 11/21/05
Date Analyzed: 11/22/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25473.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Diphenyl	ND	210

Client ID: **110905-RR-002**
Site: GM Wilmington-17338

Lab Sample No: **685752**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Extracted: 11/21/05
Date Analyzed: 11/22/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25473.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	4.47	1500	
2.	Xylene isomer	5.80	1400	
3.	Xylene isomer	6.11	600	
4.	Trimethylbenzene isomer	7.60	350	
5.	1H-Indene, 2,3-dihydro-	7.77	320	
6.	Methylpropylbenzene isomer	7.85	360	
7.	Ethyldimethylbenzene isomer	7.92	510	
8.	Ethyldimethylbenzene isomer	8.13	440	
9.	Unknown	8.15	480	
10.	Ethyldimethylbenzene isomer	8.21	690	
11.	Tetramethylbenzene isomer	8.54	400	
12.	Tetramethylbenzene isomer	8.58	580	
13.	2,3-dihydro-methyl-1H-Indene isomer	8.80	210	
14.	2,3-dihydro-methyl-1H-Indene isomer	8.91	590	
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16.				
17.				
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TOTAL ESTIMATED CONCENTRATION 8430

Client ID: **110905-RR-003**
Site: GM Wilmington-17338

Lab Sample No: **685753**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25421.d

Matrix: WATER
Level: LOW
Sample Volume: 890 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	ND	11
4-Methylphenol	ND	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	ND	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	45
4-Nitrophenol	ND	45
4,6-Dinitro-2-methylphenol	ND	45
Pentachlorophenol	ND	45
bis(2-Chloroethyl)ether	ND	1.1
1,3-Dichlorobenzene	ND	11
1,4-Dichlorobenzene	ND	11
1,2-Dichlorobenzene	ND	11
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
1,2,4-Trichlorobenzene	ND	1.1
Naphthalene	ND	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11

Client ID: **110905-RR-003**
Site: GM Wilmington-17338

Lab Sample No: **685753**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25421.d

Matrix: WATER
Level: LOW
Sample Volume: 890 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	6.0J	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	17	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Atrazine	ND	11
Acetophenone	ND	11

Client ID: **110905-RR-003**
Site: GM Wilmington-17338

Lab Sample No: **685753**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25421.d

Matrix: WATER
Level: LOW
Sample Volume: 890 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Diphenyl	ND	11

Client ID: **110905-RR-003**
Site: GM Wilmington-17338

Lab Sample No: **685753**
Lab Job No: I698

Date Sampled: 11/09/05
Date Received: 11/09/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25421.d

Matrix: WATER
Level: LOW
Sample Volume: 890 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
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TOTAL ESTIMATED CONCENTRATION	0.0

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
www.stl-inc.com

12/01/2005

Conestoga-Rovers & Associates
2371 George Urban Blvd
Depew, NY 14043

Attention: Ms. Susan Scrocchi

Laboratory Results
Job No. I784 - GM Wilmington-17338

Dear Ms. Scrocchi:

Enclosed are the results you requested for the following sample(s) received at our laboratory on November 10, 2005.

Lab No.	Client ID	Analysis Required
686285	WG-17338-111005-RR-005	TCLVOA+10 4.2 Special
		TCL BNA+20
686286	WG-17338-111005-RR-006	TCLVOA+10 4.2 Special
		TCL BNA+20
686287	WG-17338-111005-RR-007	TCLVOA+10 4.2 Special
		TCL BNA+20
686288	WG-17338-111005-RR-008	TCLVOA+10 4.2 Special
		TCL BNA+20
		Chrome VI
686289	WG-17338-111005-RR-009	TCLVOA+10 4.2 Special
		TCL BNA+20
		Chrome VI

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
www.stl-inc.com

Laboratory Results
Job No. I784 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
686290	WG-17338-111005-RR-010	TCLVOA+10 4.2 Special

If you have any questions please contact your Project Manager, Joy Kelly, at (732) 549-3900.

Very Truly Yours,

Michael J. Urban
Laboratory Manager

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Analytical Results Summary

Client ID: **111005-RR-005**
Site: GM Wilmington-17338

Lab Sample No: **686285**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07520.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	0.6J	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	25	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	3.6J	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	*	4.0
Styrene	ND	5.0

*See Dilution

Client ID: **111005-RR-005**
Site: GM Wilmington-17338

Lab Sample No: **686285**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07520.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	380	5.0
Freon TF	ND	5.0
MTBE	6.4	5.0
Cyclohexane	1.6J	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	9.4	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	3.6J	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **111005-RR-005**
Site: GM Wilmington-17338

Lab Sample No: **686285**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07520.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Ethylmethylbenzene isomer	7.05	35	
2. Trimethylbenzene isomer	7.11	18	
3. Trimethylbenzene isomer	7.33	35	
4. Trimethylbenzene isomer	7.55	17	
5. C9H10 Aromatic	7.61	13	
6. Methylmethylethylbenzene isomer	7.68	12	
7. Ethyldimethylbenzene isomer	7.82	12	
8. Methylmethylethylbenzene isomer	7.85	15	
9. 2,3-dihydro-methyl-1H-Indene isomer	8.24	14	
10. Naphthalene	8.57	14	
11.			
12.			
13.			
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30.			

TOTAL ESTIMATED CONCENTRATION	185

Client ID: **111005-RR-005D1**
Site: GM Wilmington-17338

Lab Sample No: **686285D1**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/17/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07566.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 2.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Ethylbenzene	150	8.0

Client ID: **111005-RR-006**
Site: GM Wilmington-17338

Lab Sample No: **686286**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07532.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	25
Bromomethane	ND	25
Vinyl Chloride	ND	25
Chloroethane	ND	25
Methylene Chloride	ND	15
Acetone	300	25
Carbon Disulfide	ND	25
Trichlorofluoromethane	ND	25
1,1-Dichloroethene	ND	10
1,1-Dichloroethane	ND	25
trans-1,2-Dichloroethene	ND	25
cis-1,2-Dichloroethene	ND	25
Chloroform	ND	25
1,2-Dichloroethane	ND	10
2-Butanone	170	25
1,1,1-Trichloroethane	ND	25
Carbon Tetrachloride	ND	10
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	25
Trichloroethene	ND	5.0
Dibromochloromethane	ND	25
1,1,2-Trichloroethane	ND	15
Benzene	300	5.0
trans-1,3-Dichloropropene	ND	25
Bromoform	ND	20
4-Methyl-2-Pentanone	21 J	25
2-Hexanone	ND	25
Tetrachloroethene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Toluene	*	25
Chlorobenzene	ND	25
Ethylbenzene	*	20
Styrene	ND	25

*See Dilution

Client ID: **111005-RR-006**
Site: GM Wilmington-17338

Lab Sample No: **686286**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07532.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	*	25
Freon TF	ND	25
MTBE	480	25
Cyclohexane	4.0J	25
1,2-Dibromoethane	ND	25
1,3-Dichlorobenzene	ND	25
1,4-Dichlorobenzene	ND	25
1,2-Dichlorobenzene	ND	25
Dichlorodifluoromethane	ND	25
Isopropylbenzene	2.0J	25
1,2,4-Trichlorobenzene	ND	25
Methyl Acetate	ND	25
Methyl Cyclohexane	ND	25
1,2-Dibromo-3-chloropropane	ND	25

*See Dilution

Client ID: **111005-RR-006**
Site: GM Wilmington-17338

Lab Sample No: **686286**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07532.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown Alcohol	1.11	36	
2.	Butanal	2.25	62	
3.	Unknown Alcohol	3.86	430	
4.	Unknown Alcohol	7.00	83	
5.	Unknown Organic Acid	7.42	70	
6.	Unknown Alcohol	7.97	38	
7.				
8.				
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28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	719

Client ID: **111005-RR-006D1**
Site: GM Wilmington-17338

Lab Sample No: **686286D1**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07524.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 50.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Toluene	3100	250
Ethylbenzene	3800	200
Xylene (Total)	4100	250

Client ID: **111005-RR-007**
Site: GM Wilmington-17338

Lab Sample No: **686287**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07521.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	6.3	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	1.3J	4.0
Styrene	ND	5.0

Client ID: **111005-RR-007**
Site: GM Wilmington-17338

Lab Sample No: **686287**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07521.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	6.3	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **111005-RR-007**
Site: GM Wilmington-17338

Lab Sample No: **686287**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07521.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Naphthalene	8.57	5.9	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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28.				
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30.				

TOTAL ESTIMATED CONCENTRATION	5.9

Client ID: **111005-RR-008**
Site: GM Wilmington-17338

Lab Sample No: **686288**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07522.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	25
Bromomethane	ND	25
Vinyl Chloride	ND	25
Chloroethane	ND	25
Methylene Chloride	ND	15
Acetone	*	25
Carbon Disulfide	ND	25
Trichlorofluoromethane	ND	25
1,1-Dichloroethene	ND	10
1,1-Dichloroethane	ND	25
trans-1,2-Dichloroethene	ND	25
cis-1,2-Dichloroethene	ND	25
Chloroform	ND	25
1,2-Dichloroethane	ND	10
2-Butanone	ND	25
1,1,1-Trichloroethane	ND	25
Carbon Tetrachloride	ND	10
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	25
Trichloroethene	ND	5.0
Dibromochloromethane	ND	25
1,1,2-Trichloroethane	ND	15
Benzene	12	5.0
trans-1,3-Dichloropropene	ND	25
Bromoform	ND	20
4-Methyl-2-Pentanone	ND	25
2-Hexanone	ND	25
Tetrachloroethene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Toluene	300	25
Chlorobenzene	ND	25
Ethylbenzene	310	20
Styrene	ND	25

*See Dilution

Client ID: **111005-RR-008**
Site: GM Wilmington-17338

Lab Sample No: **686288**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07522.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	570	25
Freon TF	ND	25
MTBE	5.0J	25
Cyclohexane	ND	25
1,2-Dibromoethane	ND	25
1,3-Dichlorobenzene	ND	25
1,4-Dichlorobenzene	ND	25
1,2-Dichlorobenzene	ND	25
Dichlorodifluoromethane	ND	25
Isopropylbenzene	7.7J	25
1,2,4-Trichlorobenzene	ND	25
Methyl Acetate	ND	25
Methyl Cyclohexane	25	25
1,2-Dibromo-3-chloropropane	ND	25

Client ID: **111005-RR-008**
Site: GM Wilmington-17338

Lab Sample No: **686288**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07522.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Ethylmethylbenzene isomer	7.05	31	
2.	Trimethylbenzene isomer	7.33	37	
3.				
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TOTAL ESTIMATED CONCENTRATION	68

Client ID: **111005-RR-008D1**
Site: GM Wilmington-17338

Lab Sample No: **686288D1**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07531.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 20.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Acetone	3000	100

Client ID: **111005-RR-009**
Site: GM Wilmington-17338

Lab Sample No: **686289**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07523.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 200.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	1000
Bromomethane	ND	1000
Vinyl Chloride	ND	1000
Chloroethane	ND	1000
Methylene Chloride	ND	600
Acetone	*	1000
Carbon Disulfide	ND	1000
Trichlorofluoromethane	ND	1000
1,1-Dichloroethene	ND	400
1,1-Dichloroethane	ND	1000
trans-1,2-Dichloroethene	ND	1000
cis-1,2-Dichloroethene	ND	1000
Chloroform	ND	1000
1,2-Dichloroethane	ND	400
2-Butanone	570 J	1000
1,1,1-Trichloroethane	ND	1000
Carbon Tetrachloride	ND	400
Bromodichloromethane	ND	200
1,2-Dichloropropane	ND	200
cis-1,3-Dichloropropene	ND	1000
Trichloroethene	ND	200
Dibromochloromethane	ND	1000
1,1,2-Trichloroethane	ND	600
Benzene	920	200
trans-1,3-Dichloropropene	ND	1000
Bromoform	ND	800
4-Methyl-2-Pentanone	580 J	1000
2-Hexanone	ND	1000
Tetrachloroethene	ND	200
1,1,2,2-Tetrachloroethane	ND	200
Toluene	*	1000
Chlorobenzene	ND	1000
Ethylbenzene	14000	800
Styrene	ND	1000

*See Dilution

Client ID: **111005-RR-009**
Site: GM Wilmington-17338

Lab Sample No: **686289**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07523.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 200.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	23000	1000
Freon TF	ND	1000
MTBE	560 J	1000
Cyclohexane	ND	1000
1,2-Dibromoethane	ND	1000
1,3-Dichlorobenzene	ND	1000
1,4-Dichlorobenzene	ND	1000
1,2-Dichlorobenzene	ND	1000
Dichlorodifluoromethane	ND	1000
Isopropylbenzene	ND	1000
1,2,4-Trichlorobenzene	ND	1000
Methyl Acetate	ND	1000
Methyl Cyclohexane	ND	1000
1,2-Dibromo-3-chloropropane	ND	1000

Client ID: **111005-RR-009**
Site: GM Wilmington-17338

Lab Sample No: **686289**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07523.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 200.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Isopropyl Alcohol	1.33	2100	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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13.				
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15.				
16.				
17.				
18.				
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21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	2100

Client ID: **111005-RR-009D1**
Site: GM Wilmington-17338

Lab Sample No: **686289D1**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07533.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1000.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l		Quantitation Limit Units: ug/l
Acetone	510000	E *	5000
Toluene	180000		5000

* See Dilution

Client ID: **111005-RR-009D2**
Site: GM Wilmington-17338

Lab Sample No: **686289D2**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/30/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07767.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5000.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Acetone	470000	25000
Toluene	180000	25000

Client ID: **111005-RR-010**
Site: GM Wilmington-17338

Lab Sample No: **686290**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07519.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **111005-RR-010**
Site: GM Wilmington-17338

Lab Sample No: **686290**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07519.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **111005-RR-010**
Site: GM Wilmington-17338

Lab Sample No: **686290**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07519.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **111005-RR-005**
Site: GM Wilmington-17338

Lab Sample No: **686285**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25433.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	2.1J	11
2-Chlorophenol	ND	11
2-Methylphenol	ND	11
4-Methylphenol	0.9J	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	21	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	44
4-Nitrophenol	ND	44
4,6-Dinitro-2-methylphenol	ND	44
Pentachlorophenol	ND	44
bis(2-Chloroethyl)ether	ND	1.1
1,3-Dichlorobenzene	ND	11
1,4-Dichlorobenzene	ND	11
1,2-Dichlorobenzene	ND	11
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
1,2,4-Trichlorobenzene	ND	1.1
Naphthalene	5.3J	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11

Client ID: **111005-RR-005**
Site: GM Wilmington-17338

Lab Sample No: **686285**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25433.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	6.7J	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	19	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Atrazine	ND	11
Acetophenone	ND	11

Client ID: **111005-RR-005**
Site: GM Wilmington-17338

Lab Sample No: **686285**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25433.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Diphenyl	ND	11

Client ID: **111005-RR-005**
Site: GM Wilmington-17338

Lab Sample No: **686285**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25433.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Benzene, ethyl-	5.70	71	
2. Xylene isomer	5.81	220	
3. Unknown	7.62	110	
4. Unknown	8.03	27	
5. Unknown	8.41	710	
6. Unknown	8.82	17	
7. Unknown	8.88	32	
8. C10H12 Aromatic	8.92	20	
9. Unknown	9.52	43	
10. Methylbenzoic acid isomer	9.83	39	
11. Methylbenzoic acid isomer	9.96	89	
12. Unknown	10.77	360	
13. Unknown Organic Acid	11.13	27	
14. Unknown	11.22	17	
15. Unknown	11.25	26	
16. Unknown	11.31	28	
17. Unknown	11.35	14	
18. Unknown	11.53	26	
19. Unknown	11.61	41	
20. Unknown	11.69	13	
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION	1930

Client ID: **111005-RR-006**
Site: GM Wilmington-17338

Lab Sample No: **686286**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25434.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	100
2-Chlorophenol	ND	100
2-Methylphenol	3.7J	100
4-Methylphenol	17 J	100
2-Nitrophenol	ND	100
2,4-Dimethylphenol	11 J	100
2,4-Dichlorophenol	ND	100
4-Chloro-3-methylphenol	ND	100
2,4,6-Trichlorophenol	ND	100
2,4,5-Trichlorophenol	ND	100
2,4-Dinitrophenol	ND	420
4-Nitrophenol	ND	420
4,6-Dinitro-2-methylphenol	ND	420
Pentachlorophenol	ND	420
bis(2-Chloroethyl)ether	ND	10
1,3-Dichlorobenzene	ND	100
1,4-Dichlorobenzene	ND	100
1,2-Dichlorobenzene	ND	100
bis(2-chloroisopropyl)ether	ND	100
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	100
bis(2-Chloroethoxy)methane	ND	100
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	100
4-Chloroaniline	ND	100
Hexachlorobutadiene	ND	21
2-Methylnaphthalene	ND	100
Hexachlorocyclopentadiene	ND	100
2-Chloronaphthalene	ND	100
2-Nitroaniline	ND	210
Dimethylphthalate	ND	100
Acenaphthylene	ND	100

Client ID: **111005-RR-006**
Site: GM Wilmington-17338

Lab Sample No: **686286**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25434.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,6-Dinitrotoluene	ND	21
3-Nitroaniline	ND	210
Acenaphthene	ND	100
Dibenzofuran	ND	100
2,4-Dinitrotoluene	ND	21
Diethylphthalate	ND	100
4-Chlorophenyl-phenylether	ND	100
Fluorene	ND	100
4-Nitroaniline	ND	210
N-Nitrosodiphenylamine	ND	100
4-Bromophenyl-phenylether	ND	100
Hexachlorobenzene	ND	10
Phenanthrene	ND	100
Anthracene	ND	100
Carbazole	ND	100
Di-n-butylphthalate	ND	100
Fluoranthene	ND	100
Pyrene	ND	100
Butylbenzylphthalate	ND	100
3,3'-Dichlorobenzidine	ND	210
Benzo(a)anthracene	ND	10
Chrysene	ND	100
bis(2-Ethylhexyl)phthalate	33 J	100
Di-n-octylphthalate	ND	100
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	100
Benzaldehyde	ND	100
Caprolactam	ND	100
Atrazine	ND	100
Acetophenone	ND	100

Client ID: **111005-RR-006**
Site: GM Wilmington-17338

Lab Sample No: **686286**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25434.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Diphenyl	ND	100

Client ID: **111005-RR-006**
Site: GM Wilmington-17338

Lab Sample No: **686286**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25434.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Toluene	4.47	1000	
2. Butanoic acid	5.03	620	
3. Unknown	5.65	97	
4. Benzene, ethyl-	5.71	1900	
5. Xylene isomer	5.80	1800	
6. Xylene isomer	6.11	140	
7. Ethanol, 2-butoxy-	6.27	11000	
8. 1-Octanol	7.96	150	
9. Unknown	8.58	2600	
10. Unknown	9.15	840	
11. Unknown	9.25	3100	
12. Unknown	10.93	22000	
13. Unknown	11.49	100	
14. Unknown	13.82	94	
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			
TOTAL ESTIMATED CONCENTRATION		45441	

Client ID: **111005-RR-007**
Site: GM Wilmington-17338

Lab Sample No: **686287**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25424.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	42
4-Nitrophenol	ND	42
4,6-Dinitro-2-methylphenol	ND	42
Pentachlorophenol	ND	42
bis(2-Chloroethyl)ether	ND	1.0
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
1,2,4-Trichlorobenzene	ND	1.0
Naphthalene	5.2J	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10

Client ID: **111005-RR-007**
Site: GM Wilmington-17338

Lab Sample No: **686287**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25424.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	7.5J	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	24	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10
Acetophenone	ND	10

Client ID: **111005-RR-007**
Site: GM Wilmington-17338

Lab Sample No: **686287**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25424.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Diphenyl	ND	10

Client ID: **111005-RR-007**
Site: GM Wilmington-17338

Lab Sample No: **686287**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25424.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	4.50	14	
2.	Unknown	5.99	15	
3.	Unknown	6.21	14	
4.	Unknown	7.85	10	
5.	Unknown	15.66	12	
6.	Unknown	18.38	35	
7.	Unknown	19.18	180	
8.	Unknown	22.67	47	
9.				
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TOTAL ESTIMATED CONCENTRATION 327

Client ID: **111005-RR-008**
Site: GM Wilmington-17338

Lab Sample No: **686288**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25435.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	2.8J	11
4-Methylphenol	3.4J	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	8.2J	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	44
4-Nitrophenol	ND	44
4,6-Dinitro-2-methylphenol	ND	44
Pentachlorophenol	ND	44
bis(2-Chloroethyl)ether	ND	1.1
1,3-Dichlorobenzene	ND	11
1,4-Dichlorobenzene	ND	11
1,2-Dichlorobenzene	ND	11
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
1,2,4-Trichlorobenzene	ND	1.1
Naphthalene	4.6J	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	2.6J	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11

Client ID: **111005-RR-008**
Site: GM Wilmington-17338

Lab Sample No: **686288**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25435.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	0.3J	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	0.4J	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	10 J	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	26	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Atrazine	ND	11
Acetophenone	ND	11

Client ID: **111005-RR-008**
Site: GM Wilmington-17338

Lab Sample No: **686288**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25435.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Diphenyl	ND	11

Client ID: **111005-RR-008**
Site: GM Wilmington-17338

Lab Sample No: **686288**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25435.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	4.47	110	
2.	Benzene, ethyl-	5.70	140	
3.	Unknown	5.96	9.8	
4.	Xylene isomer	6.11	70	
5.	Unknown	6.18	13	
6.	Ethylmethylbenzene isomer	6.89	15	
7.	Trimethylbenzene isomer	7.26	20	
8.	Trimethylbenzene isomer	7.60	11	
9.	2,3-dihydro-methyl-1H-Indene isomer	7.77	9.7	
10.	Unknown	7.83	19	
11.	Unknown	8.04	50	
12.	Unknown	8.27	260	
13.	Unknown	8.92	9.5	
14.	Unknown	10.83	1200	
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TOTAL ESTIMATED CONCENTRATION 1937

Client ID: **111005-RR-009**
Site: GM Wilmington-17338

Lab Sample No: **686289**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25428.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	38 J	110
2-Chlorophenol	ND	110
2-Methylphenol	290	110
4-Methylphenol	770	110
2-Nitrophenol	ND	110
2,4-Dimethylphenol	510	110
2,4-Dichlorophenol	ND	110
4-Chloro-3-methylphenol	ND	110
2,4,6-Trichlorophenol	ND	110
2,4,5-Trichlorophenol	ND	110
2,4-Dinitrophenol	ND	440
4-Nitrophenol	ND	440
4,6-Dinitro-2-methylphenol	ND	440
Pentachlorophenol	ND	440
bis(2-Chloroethyl)ether	ND	11
1,3-Dichlorobenzene	ND	110
1,4-Dichlorobenzene	ND	110
1,2-Dichlorobenzene	ND	110
bis(2-chloroisopropyl)ether	ND	110
N-Nitroso-di-n-propylamine	ND	11
Hexachloroethane	ND	11
Nitrobenzene	ND	11
Isophorone	ND	110
bis(2-Chloroethoxy)methane	ND	110
1,2,4-Trichlorobenzene	ND	11
Naphthalene	ND	110
4-Chloroaniline	ND	110
Hexachlorobutadiene	ND	22
2-Methylnaphthalene	ND	110
Hexachlorocyclopentadiene	ND	110
2-Chloronaphthalene	ND	110
2-Nitroaniline	ND	220
Dimethylphthalate	ND	110
Acenaphthylene	ND	110

Client ID: **111005-RR-009**
Site: GM Wilmington-17338

Lab Sample No: **686289**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25428.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,6-Dinitrotoluene	ND	22
3-Nitroaniline	ND	220
Acenaphthene	ND	110
Dibenzofuran	ND	110
2,4-Dinitrotoluene	ND	22
Diethylphthalate	ND	110
4-Chlorophenyl-phenylether	ND	110
Fluorene	ND	110
4-Nitroaniline	ND	220
N-Nitrosodiphenylamine	ND	110
4-Bromophenyl-phenylether	ND	110
Hexachlorobenzene	ND	11
Phenanthrene	ND	110
Anthracene	ND	110
Carbazole	ND	110
Di-n-butylphthalate	ND	110
Fluoranthene	ND	110
Pyrene	ND	110
Butylbenzylphthalate	ND	110
3,3'-Dichlorobenzidine	ND	220
Benzo(a)anthracene	ND	11
Chrysene	ND	110
bis(2-Ethylhexyl)phthalate	29 J	110
Di-n-octylphthalate	ND	110
Benzo(b)fluoranthene	ND	11
Benzo(k)fluoranthene	ND	11
Benzo(a)pyrene	ND	11
Indeno(1,2,3-cd)pyrene	ND	11
Dibenz(a,h)anthracene	ND	11
Benzo(g,h,i)perylene	ND	110
Benzaldehyde	120	110
Caprolactam	ND	110
Atrazine	ND	110
Acetophenone	ND	110

Client ID: **111005-RR-009**
Site: GM Wilmington-17338

Lab Sample No: **686289**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25428.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Diphenyl	ND	110

Client ID: **111005-RR-009**
Site: GM Wilmington-17338

Lab Sample No: **686289**
Lab Job No: I784

Date Sampled: 11/10/05
Date Received: 11/10/05
Date Extracted: 11/15/05
Date Analyzed: 11/18/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25428.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Toluene	4.56	21000	
2. Butanoic acid, 2-methyl-	5.61	110	
3. Benzene, ethyl-	5.76	5200	
4. Xylene isomer	5.86	5900	
5. Xylene isomer	6.15	3200	
6. Unknown	6.23	520	
7. Unknown	6.30	220	
8. Unknown	6.66	180	
9. Dimethylphenol Isomer	8.45	220	
10. Octanoic acid	8.94	510	
11. Dimethylphenol Isomer	9.09	96	
12. Ethanol, 2-(2-butoxyethoxy)-	9.17	540	
13. Unknown	9.55	150	
14. Benzeneacetic acid	9.70	610	
15. Benzoic acid, 3-methyl-	9.84	140	
16. Benzoic acid, 4-methyl-	9.92	240	
17. 1H-Inden-1-one, 2,3-dihydro-	10.18	180	
18. Unknown	10.48	160	
19. Unknown	10.56	140	
20. Unknown	10.88	12000	
21.			
22.			
23.			
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TOTAL ESTIMATED CONCENTRATION 51316

Site: GM Wilmington-17338 Lab Job No: I784

Matrix: WATER QA Batch: 3786

Chromium VI

STL Edison Sample #	Client ID	Date Sampled	Date Extracted	Date Analyzed	Dilution Factor	Analytical Result Units: ug/l
686288	111005-RR-008	11/10/05	11/11/05	11/11/05	1.0	ND
686289	111005-RR-009	11/10/05	11/11/05	11/11/05	1.0	ND

Quantitation Limit for Chromium VI is 10.0 ug/l.

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
www.stl-inc.com

12/06/2005

Conestoga-Rovers & Associates
2371 George Urban Blvd
Depew, NY 14043

Attention: Ms. Susan Scrocchi

Laboratory Results
Job No. I865 - GM Wilmington-17338

Dear Ms. Scrocchi:

Enclosed are the results you requested for the following sample(s) received at our laboratory on November 11, 2005.

Lab No.	Client ID	Analysis Required
686719	WG-17338-111105-RR-011	TCL VOA+10
		TCL BNA+20
		Chrome VI
686720	WG-17338-111105-RR-012	TCL VOA+10
		TCL BNA+20
		Chrome VI
686721	WG-17338-111105-RR-013	TCL VOA+10
		TCL BNA+20
686722	TB-17338-111105-RR-014	TCL VOA+10

If you have any questions please contact your Project Manager, Joy Kelly, at (732) 549-3900.

Very Truly Yours,

Michael J. Urban
Laboratory Manager

Analytical Results Summary **1**

General Information **29**
Chain of Custody 29

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Analytical Results Summary

Client ID: **111105-RR-011**
Site: GM Wilmington-17338

Lab Sample No: **686719**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07535.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	25
Bromomethane	ND	25
Vinyl Chloride	ND	25
Chloroethane	ND	25
Methylene Chloride	ND	15
Acetone	ND	25
Carbon Disulfide	ND	25
Trichlorofluoromethane	ND	25
1,1-Dichloroethene	ND	10
1,1-Dichloroethane	ND	25
trans-1,2-Dichloroethene	ND	25
cis-1,2-Dichloroethene	ND	25
Chloroform	ND	25
1,2-Dichloroethane	ND	10
2-Butanone	ND	25
1,1,1-Trichloroethane	ND	25
Carbon Tetrachloride	ND	10
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	25
Trichloroethene	ND	5.0
Dibromochloromethane	ND	25
1,1,2-Trichloroethane	ND	15
Benzene	68	5.0
trans-1,3-Dichloropropene	ND	25
Bromoform	ND	20
4-Methyl-2-Pentanone	ND	25
2-Hexanone	ND	25
Tetrachloroethene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Toluene	*	25
Chlorobenzene	ND	25
Ethylbenzene	*	20
Styrene	ND	25

*See Dilution

Client ID: **111105-RR-011**
Site: GM Wilmington-17338

Lab Sample No: **686719**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07535.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	*	25
Freon TF	ND	25
MTBE	ND	25
Cyclohexane	14 J	25
1,2-Dibromoethane	ND	25
1,3-Dichlorobenzene	ND	25
1,4-Dichlorobenzene	ND	25
1,2-Dichlorobenzene	ND	25
Dichlorodifluoromethane	ND	25
Isopropylbenzene	79	25
1,2,4-Trichlorobenzene	ND	25
Methyl Acetate	ND	25
Methyl Cyclohexane	20 J	25
1,2-Dibromo-3-chloropropane	ND	25

*See Dilution

Client ID: **111105-RR-011**
Site: GM Wilmington-17338

Lab Sample No: **686719**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07535.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Diisopropyl ether	1.67	44	
2.	Benzene, propyl-	6.98	45	
3.				
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TOTAL ESTIMATED CONCENTRATION 89

Client ID: **111105-RR-011D1**
Site: GM Wilmington-17338

Lab Sample No: **686719D1**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07530.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 50.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Toluene	5100	250
Ethylbenzene	2400	200
Xylene (Total)	4000	250

Client ID: **111105-RR-012**
Site: GM Wilmington-17338

Lab Sample No: **686720**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07534.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	5.9	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	*	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	*	4.0
Styrene	ND	5.0

*See Dilution

Client ID: **111105-RR-012**
Site: GM Wilmington-17338

Lab Sample No: **686720**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07534.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	540	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	2.3J	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	2.5J	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	4.0J	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **111105-RR-012**
Site: GM Wilmington-17338

Lab Sample No: **686720**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07534.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	C9H10 Aromatic	7.61	8.9	
2.	Diethylbenzene isomer	7.65	30	
3.	Naphthalene	8.57	6.1	
4.				
5.				
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TOTAL ESTIMATED CONCENTRATION 45

Client ID: **111105-RR-012D1**
Site: GM Wilmington-17338

Lab Sample No: **686720D1**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07529.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 10.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Toluene	1500	50
Ethylbenzene	320	40

Client ID: **111105-RR-013**
Site: GM Wilmington-17338

Lab Sample No: **686721**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07527.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	1.6	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **111105-RR-013**
Site: GM Wilmington-17338

Lab Sample No: **686721**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07527.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **111105-RR-013**
Site: GM Wilmington-17338

Lab Sample No: **686721**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07527.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
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28.			
29.			
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **111105-RR-014**
Site: GM Wilmington-17338

Lab Sample No: **686722**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07528.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **111105-RR-014**
Site: GM Wilmington-17338

Lab Sample No: **686722**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07528.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **111105-RR-014**
Site: GM Wilmington-17338

Lab Sample No: **686722**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Analyzed: 11/16/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07528.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **111105-RR-011**
Site: GM Wilmington-17338

Lab Sample No: **686719**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25417.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	21
2-Chlorophenol	ND	21
2-Methylphenol	16 J	21
4-Methylphenol	22	21
2-Nitrophenol	ND	21
2,4-Dimethylphenol	10 J	21
2,4-Dichlorophenol	ND	21
4-Chloro-3-methylphenol	ND	21
2,4,6-Trichlorophenol	ND	21
2,4,5-Trichlorophenol	ND	21
2,4-Dinitrophenol	ND	84
4-Nitrophenol	ND	84
4,6-Dinitro-2-methylphenol	ND	84
Pentachlorophenol	ND	84
bis(2-Chloroethyl)ether	ND	2.1
1,3-Dichlorobenzene	ND	21
1,4-Dichlorobenzene	ND	21
1,2-Dichlorobenzene	ND	21
bis(2-chloroisopropyl)ether	ND	21
N-Nitroso-di-n-propylamine	ND	2.1
Hexachloroethane	ND	2.1
Nitrobenzene	ND	2.1
Isophorone	ND	21
bis(2-Chloroethoxy)methane	ND	21
1,2,4-Trichlorobenzene	ND	2.1
Naphthalene	5.1J	21
4-Chloroaniline	1.7J	21
Hexachlorobutadiene	ND	4.2
2-Methylnaphthalene	1.9J	21
Hexachlorocyclopentadiene	ND	21
2-Chloronaphthalene	ND	21
2-Nitroaniline	ND	42
Dimethylphthalate	ND	21
Acenaphthylene	ND	21

Client ID: **111105-RR-011**
Site: GM Wilmington-17338

Lab Sample No: **686719**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25417.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,6-Dinitrotoluene	ND	4.2
3-Nitroaniline	ND	42
Acenaphthene	ND	21
Dibenzofuran	ND	21
2,4-Dinitrotoluene	ND	4.2
Diethylphthalate	ND	21
4-Chlorophenyl-phenylether	ND	21
Fluorene	ND	21
4-Nitroaniline	ND	42
N-Nitrosodiphenylamine	ND	21
4-Bromophenyl-phenylether	ND	21
Hexachlorobenzene	ND	2.1
Phenanthrene	ND	21
Anthracene	ND	21
Carbazole	ND	21
Di-n-butylphthalate	10 J	21
Fluoranthene	ND	21
Pyrene	ND	21
Butylbenzylphthalate	ND	21
3,3'-Dichlorobenzidine	ND	42
Benzo(a)anthracene	ND	2.1
Chrysene	ND	21
bis(2-Ethylhexyl)phthalate	24	21
Di-n-octylphthalate	ND	21
Benzo(b)fluoranthene	ND	2.1
Benzo(k)fluoranthene	ND	2.1
Benzo(a)pyrene	ND	2.1
Indeno(1,2,3-cd)pyrene	ND	2.1
Dibenz(a,h)anthracene	ND	2.1
Benzo(g,h,i)perylene	ND	21
Benzaldehyde	13 J	21
Caprolactam	17 J	21
Atrazine	ND	21
Acetophenone	8.7J	21

Client ID: **111105-RR-011**
Site: GM Wilmington-17338

Lab Sample No: **686719**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25417.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Diphenyl	ND	21

Client ID: **111105-RR-011**
Site: GM Wilmington-17338

Lab Sample No: **686719**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25417.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 2.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	4.52	1400	
2.	Benzene, ethyl-	5.75	950	
3.	Xylene isomer	5.86	1100	
4.	Xylene isomer	6.15	490	
5.	Ethylmethylbenzene isomer	6.51	60	
6.	Benzene, propyl-	6.85	27	
7.	Ethyldimethylbenzene isomer	8.25	18	
8.	C10H12 Aromatic	8.96	22	
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29.				
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TOTAL ESTIMATED CONCENTRATION 4067

Client ID: **111105-RR-012**
Site: GM Wilmington-17338

Lab Sample No: **686720**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25418.d

Matrix: WATER
Level: LOW
Sample Volume: 920 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	9.3J	11
4-Methylphenol	15	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	2.5J	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	43
4-Nitrophenol	ND	43
4,6-Dinitro-2-methylphenol	ND	43
Pentachlorophenol	ND	43
bis(2-Chloroethyl)ether	ND	1.1
1,3-Dichlorobenzene	ND	11
1,4-Dichlorobenzene	ND	11
1,2-Dichlorobenzene	ND	11
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
1,2,4-Trichlorobenzene	ND	1.1
Naphthalene	5.4J	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11

Client ID: **111105-RR-012**
Site: GM Wilmington-17338

Lab Sample No: **686720**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25418.d

Matrix: WATER
Level: LOW
Sample Volume: 920 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	0.7J	11
Dibenzofuran	ND	11
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	8.6J	11
Fluoranthene	1.7J	11
Pyrene	0.8J	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	24	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Benzaldehyde	5.8J	11
Caprolactam	ND	11
Atrazine	ND	11
Acetophenone	ND	11

Client ID: **111105-RR-012**
Site: GM Wilmington-17338

Lab Sample No: **686720**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25418.d

Matrix: WATER
Level: LOW
Sample Volume: 920 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Diphenyl	ND	11

Client ID: **111105-RR-012**
Site: GM Wilmington-17338

Lab Sample No: **686720**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25418.d

Matrix: WATER
Level: LOW
Sample Volume: 920 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	4.52	540	
2.	Benzene, ethyl-	5.74	190	
3.	Xylene isomer	5.85	250	
4.	Unknown	5.99	12	
5.	Xylene isomer	6.14	100	
6.	Diethylbenzene isomer	7.95	20	
7.	Phenol, 4,4'-(1-methylethylidene)bis-	16.21	320	
8.	Unknown	21.74	52	
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TOTAL ESTIMATED CONCENTRATION 1484

Client ID: **111105-RR-013**
Site: GM Wilmington-17338

Lab Sample No: **686721**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25419.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	ND	11
4-Methylphenol	ND	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	ND	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	44
4-Nitrophenol	ND	44
4,6-Dinitro-2-methylphenol	ND	44
Pentachlorophenol	ND	44
bis(2-Chloroethyl)ether	ND	1.1
1,3-Dichlorobenzene	ND	11
1,4-Dichlorobenzene	ND	11
1,2-Dichlorobenzene	ND	11
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
1,2,4-Trichlorobenzene	ND	1.1
Naphthalene	ND	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11

Client ID: **111105-RR-013**
Site: GM Wilmington-17338

Lab Sample No: **686721**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25419.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	6.7J	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	17	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Atrazine	ND	11
Acetophenone	ND	11

Client ID: **111105-RR-013**
Site: GM Wilmington-17338

Lab Sample No: **686721**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25419.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Diphenyl	ND	11

Client ID: **111105-RR-013**
Site: GM Wilmington-17338

Lab Sample No: **686721**
Lab Job No: I865

Date Sampled: 11/11/05
Date Received: 11/11/05
Date Extracted: 11/15/05
Date Analyzed: 11/17/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25419.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
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29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Site: GM Wilmington-17338 Lab Job No: I865

Matrix: WATER QA Batch: 3786

Chromium VI

STL Edison Sample #	Client ID	Date Sampled	Date Extracted	Date Analyzed	Dilution Factor	Analytical Result Units: ug/l
686719	111105-RR-011	11/11/05	11/13/05	11/13/05	1.0	ND
686720	111105-RR-012	11/11/05	11/13/05	11/13/05	1.0	ND

Quantitation Limit for Chromium VI is 10.0 ug/l.

General Information

Chain of Custody

I865

CONESTOGA-ROVERS & ASSOCIATES

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE 1 OF 1

ID # Nº D 0486

SSOW Ref. Code: E691004

Required Client Information:

Company: CRA, Inc.	Report To: Chris Barton
Address: 14496 Sheldon Rd.	Copy To: Susan Schrecci
Suite 200	Invoice To: Dana Stewart
Plymouth, MI 48170	P.O.: 412505
Phone: 734-453-5123	Project Name: Gimple Plant Cuyahoga Falls
Fax: 734-453-5201	Project Number: 17335-20
Email: CBarton@CRAworld.com	

Laboratory: STL Edison	
Laboratory Location: 777 New Durham Rd	
Laboratory Contact: Jay Kelly	
Requested Due Date:	TAT: Rush
QA/QC Requirements:	

JOB # I865

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	Analysis and Method: VOC 770	SVOC 625	Her Chrom								Remarks/Lab ID
1.	GWa-17335-111105-RR-011	GW	111105	925	5	X	X					X	X	X			086719					x GW Heavchrom collected @ 1105 Am
2.	GWa-17335-111105-RR-012	GW	111105	1035	5	X	X					X	X	X			086720					
3.	GWa-17335-111105-RR-013	GW	111105	1145	4	X	X					X	X				086721					
4.	TB-17335-111105-RR-014	TB	111005	715	2	X	X					X					086722					
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						
11.																						
12.																						
13.																						
14.																						
15.																						
	TOTAL NUMBER OF CONTAINERS																					

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
Courier	1	Rob Redmer / CRA	11/11/05	1310	[signature] STL	11/11/05	14:15
AIRBILL NO.		[signature] STL	11/11/05	1706	[signature] STL	11/11/05	12:00
		[signature] STL	11/11/05	18:40			

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name: Rob Redmer

Sampler Signature: [signature] Date: 11/11/05

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampler Copy

REV. 0 (6/04)

STL Edison

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This is the Last Page of the Document

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
www.stl-inc.com

12/02/2005

Conestoga-Rovers & Associates
2371 George Urban Blvd
Depew, NY 14043

Attention: Ms. Susan Scrocchi

Laboratory Results
Job No. I932 - GM Wilmington-17338

Dear Ms. Scrocchi:

Enclosed are the results you requested for the following sample(s) received at our laboratory on November 14, 2005.

Lab No.	Client ID	Analysis Required
687028	WG-17338-111405-RR-015	TCL VOA+10
		TCL BNA+20
		Chrome VI
687029	WG-17338-111405-RR-016	TCL VOA+10
		TCL BNA+20
		Chrome VI
687030	WG-17338-111405-RR-017	TCL VOA+10
		TCL BNA+20
		Chrome VI
687031	TB-17338-111405-RR-018	TCL VOA+10

If you have any questions please contact your Project Manager, Joy Kelly, at (732) 549-3900.

Very Truly Yours,

Michael J. Urban
Laboratory Manager

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Analytical Results Summary

Client ID: **111405-RR-015**
Site: GM Wilmington-17338

Lab Sample No: **687028**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07582.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	7.6	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	0.9J	5.0
Chlorobenzene	*	5.0
Ethylbenzene	0.9J	4.0
Styrene	ND	5.0

*See Dilution

Client ID: **111405-RR-015**
Site: GM Wilmington-17338

Lab Sample No: **687028**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07582.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	1.6J	5.0
Freon TF	ND	5.0
MTBE	2.2J	5.0
Cyclohexane	1.7J	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	1.3J	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	7.8	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	1.9J	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **111405-RR-015**
Site: GM Wilmington-17338

Lab Sample No: **687028**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07582.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	C9H10 Aromatic	7.61	60	
2.	Diethylbenzene isomer	7.65	11	
3.	C10H12 Aromatic/C10H14 Aromatic	7.86	9.4	
4.	C10H12 Aromatic	7.89	8.0	
5.	Tetramethylbenzene isomer	8.05	9.8	
6.	2,3-dihydro-methyl-1H-Indene isomer	8.24	10	
7.	2,3-dihydro-dimethyl-1H-Indene isomer	8.44	7.8	
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TOTAL ESTIMATED CONCENTRATION	116

Client ID: **111405-RR-015D1**
Site: GM Wilmington-17338

Lab Sample No: **687028D1**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07583.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 2.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chlorobenzene	250	10

Client ID: **111405-RR-016**
Site: GM Wilmington-17338

Lab Sample No: **687029**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07581.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	12	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	8.0	4.0
Styrene	ND	5.0

Client ID: **111405-RR-016**
Site: GM Wilmington-17338

Lab Sample No: **687029**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07581.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	11	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **111405-RR-016**
Site: GM Wilmington-17338

Lab Sample No: **687029**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07581.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **111405-RR-017**
Site: GM Wilmington-17338

Lab Sample No: **687030**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07584.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	28	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	0.4J	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	5.1	4.0
Styrene	ND	5.0

Client ID: **111405-RR-017**
Site: GM Wilmington-17338

Lab Sample No: **687030**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07584.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	110	5.0
Freon TF	ND	5.0
MTBE	33	5.0
Cyclohexane	44	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	22	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	24	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **111405-RR-017**
Site: GM Wilmington-17338

Lab Sample No: **687030**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07584.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	C5H12 Alkane	0.85	8.3	
2.	Diisopropyl ether	1.67	8.3	
3.	C6H12 Cycloalkane	1.76	5.6	
4.	Dimethylcyclohexane isomer	4.31	9.9	
5.	Benzene, propyl-	6.98	11	
6.	C9H10 Aromatic	7.61	7.7	
7.				
8.				
9.				
10.				
11.				
12.				
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TOTAL ESTIMATED CONCENTRATION	51

Client ID: **111405-RR-018**
Site: GM Wilmington-17338

Lab Sample No: **687031**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07580.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **111405-RR-018**
Site: GM Wilmington-17338

Lab Sample No: **687031**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07580.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **111405-RR-018**
Site: GM Wilmington-17338

Lab Sample No: **687031**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07580.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **111405-RR-015**
Site: GM Wilmington-17338

Lab Sample No: **687028**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25490.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	1.0J	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	5.6J	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	41
4-Nitrophenol	ND	41
4,6-Dinitro-2-methylphenol	ND	41
Pentachlorophenol	ND	41
bis(2-Chloroethyl)ether	ND	1.0
1,3-Dichlorobenzene	0.2J	10
1,4-Dichlorobenzene	0.8J	10
1,2-Dichlorobenzene	ND	10
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
1,2,4-Trichlorobenzene	ND	1.0
Naphthalene	0.4J	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10

Client ID: **111405-RR-015**
Site: GM Wilmington-17338

Lab Sample No: **687028**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25490.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,6-Dinitrotoluene	0.4J	2.1
3-Nitroaniline	ND	21
Acenaphthene	0.4J	10
Dibenzofuran	0.3J	10
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	0.5J	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	0.4J	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10
Acetophenone	ND	10

Client ID: **111405-RR-015**
Site: GM Wilmington-17338

Lab Sample No: **687028**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25490.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Diphenyl	ND	10

Client ID: **111405-RR-015**
Site: GM Wilmington-17338

Lab Sample No: **687028**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25490.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	4.24	47	
2.	Benzene, chloro-	5.49	130	
3.	1H-Indene, 2,3-dihydro-	7.72	34	
4.	Diethylbenzene isomer	7.86	9.3	
5.	2,3-dihydro-methyl-1H-Indene isomer	8.87	8.8	
6.	Ethylmethylphenol isomer	9.29	9.4	
7.	Trimethylbenzoic acid isomer	11.06	18	
8.	1H-Indol-5-ol	11.97	8.9	
9.	Phenol, 4,4'-(1-methylethylidene)bis-	16.09	52	
10.	Unknown	21.53	12	
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
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21.				
22.				
23.				
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26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 329

Client ID: **111405-RR-016**
Site: GM Wilmington-17338

Lab Sample No: **687029**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25491.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	ND	11
4-Methylphenol	ND	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	ND	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	43
4-Nitrophenol	ND	43
4,6-Dinitro-2-methylphenol	ND	43
Pentachlorophenol	ND	43
bis(2-Chloroethyl)ether	ND	1.1
1,3-Dichlorobenzene	ND	11
1,4-Dichlorobenzene	ND	11
1,2-Dichlorobenzene	ND	11
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
1,2,4-Trichlorobenzene	ND	1.1
Naphthalene	ND	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11

Client ID: **111405-RR-016**
Site: GM Wilmington-17338

Lab Sample No: **687029**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25491.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Atrazine	ND	11
Acetophenone	ND	11

Client ID: **111405-RR-016**
Site: GM Wilmington-17338

Lab Sample No: **687029**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25491.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Diphenyl	ND	11

Client ID: **111405-RR-016**
Site: GM Wilmington-17338

Lab Sample No: **687029**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25491.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **111405-RR-017**
Site: GM Wilmington-17338

Lab Sample No: **687030**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25492.d

Matrix: WATER
Level: LOW
Sample Volume: 910 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	ND	11
4-Methylphenol	ND	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	0.7J	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	44
4-Nitrophenol	ND	44
4,6-Dinitro-2-methylphenol	ND	44
Pentachlorophenol	ND	44
bis(2-Chloroethyl)ether	ND	1.1
1,3-Dichlorobenzene	ND	11
1,4-Dichlorobenzene	ND	11
1,2-Dichlorobenzene	ND	11
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
1,2,4-Trichlorobenzene	ND	1.1
Naphthalene	1.0J	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	0.3J	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11

Client ID: **111405-RR-017**
Site: GM Wilmington-17338

Lab Sample No: **687030**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25492.d

Matrix: WATER
Level: LOW
Sample Volume: 910 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	0.3J	11
Pyrene	0.3J	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Benzaldehyde	ND	11
Caprolactam	2.4J	11
Atrazine	ND	11
Acetophenone	ND	11

Client ID: **111405-RR-017**
Site: GM Wilmington-17338

Lab Sample No: **687030**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25492.d

Matrix: WATER
Level: LOW
Sample Volume: 910 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Diphenyl	ND	11

Client ID: **111405-RR-017**
Site: GM Wilmington-17338

Lab Sample No: **687030**
Lab Job No: I932

Date Sampled: 11/14/05
Date Received: 11/14/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25492.d

Matrix: WATER
Level: LOW
Sample Volume: 910 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Xylene isomer	5.75	160	
2.	Ethylmethylbenzene isomer	6.42	25	
3.	Unknown	10.63	17	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
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17.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 202

Site: GM Wilmington-17338 Lab Job No: I932

Matrix: WATER QA Batch: 3787

Chromium VI

STL Edison Sample #	Client ID	Date Sampled	Date Extracted	Date Analyzed	Dilution Factor	Analytical Result Units: ug/l
687028	111405-RR-015	11/14/05	11/15/05	11/15/05	1.0	ND
687029	111405-RR-016	11/14/05	11/15/05	11/15/05	1.0	ND
687030	111405-RR-017	11/14/05	11/15/05	11/15/05	1.0	ND

Quantitation Limit for Chromium VI is 10.0 ug/l.

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
www.stl-inc.com

12/06/2005

Conestoga-Rovers & Associates
2371 George Urban Blvd
Depew, NY 14043

Attention: Ms. Susan Scrocchi

Laboratory Results
Job No. J013 - GM Wilmington-17338

Dear Ms. Scrocchi:

Enclosed are the results you requested for the following sample(s) received at our laboratory on November 15, 2005.

Lab No.	Client ID	Analysis Required
687425	WG-17338-111505-RR-023	TCL VOA+10 Special
		TCLBNA+20 Special
		Chrome VI
687426	WG-17338-111505-RR-024	TCL VOA+10 Special
		TCLBNA+20 Special
		Chrome VI
687427	TB-17338-111505-RR-025	TCL VOA+10 Special

If you have any questions please contact your Project Manager, Joy Kelly, at (732) 549-3900.

Very Truly Yours,

Michael J. Urban
Laboratory Manager

Analytical Results Summary **1**

General Information **18**
Chain of Custody 18

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Analytical Results Summary

Client ID: **111505-RR-023**
Site: GM Wilmington-17338

Lab Sample No: **687425**
Lab Job No: J013

Date Sampled: 11/15/05
Date Received: 11/15/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07579.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	0.4J	5.0
Chlorobenzene	49	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **111505-RR-023**
Site: GM Wilmington-17338

Lab Sample No: **687425**
Lab Job No: J013

Date Sampled: 11/15/05
Date Received: 11/15/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07579.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **111505-RR-023**
Site: GM Wilmington-17338

Lab Sample No: **687425**
Lab Job No: J013

Date Sampled: 11/15/05
Date Received: 11/15/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07579.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **111505-RR-024**
Site: GM Wilmington-17338

Lab Sample No: **687426**
Lab Job No: J013

Date Sampled: 11/15/05
Date Received: 11/15/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07578.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	13	5.0
Carbon Disulfide	3.1J	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	0.6J	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	7.8	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	1.0J	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **111505-RR-024**
Site: GM Wilmington-17338

Lab Sample No: **687426**
Lab Job No: J013

Date Sampled: 11/15/05
Date Received: 11/15/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07578.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	1.4J	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **111505-RR-024**
Site: GM Wilmington-17338

Lab Sample No: **687426**
Lab Job No: J013

Date Sampled: 11/15/05
Date Received: 11/15/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07578.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
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TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **111505-RR-025**
Site: GM Wilmington-17338

Lab Sample No: **687427**
Lab Job No: J013

Date Sampled: 11/15/05
Date Received: 11/15/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07577.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **111505-RR-025**
Site: GM Wilmington-17338

Lab Sample No: **687427**
Lab Job No: J013

Date Sampled: 11/15/05
Date Received: 11/15/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07577.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **111505-RR-025**
Site: GM Wilmington-17338

Lab Sample No: **687427**
Lab Job No: J013

Date Sampled: 11/15/05
Date Received: 11/15/05
Date Analyzed: 11/18/05
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca07577.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **111505-RR-023**
Site: GM Wilmington-17338

Lab Sample No: **687425**
Lab Job No: J013

Date Sampled: 11/15/05
Date Received: 11/15/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25493.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	40
4-Nitrophenol	ND	40
4,6-Dinitro-2-methylphenol	ND	40
Pentachlorophenol	ND	40
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **111505-RR-023**
Site: GM Wilmington-17338

Lab Sample No: **687425**
Lab Job No: J013

Date Sampled: 11/15/05
Date Received: 11/15/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25493.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	0.3J	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	0.4J	10
Pyrene	0.3J	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Benzaldehyde	ND	10
Caprolactam	0.3J	10
Atrazine	ND	10
Acetophenone	ND	10
Diphenyl	ND	10

Client ID: **111505-RR-023**
Site: GM Wilmington-17338

Lab Sample No: **687425**
Lab Job No: J013

Date Sampled: 11/15/05
Date Received: 11/15/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25493.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	4.24	33	
2.	Benzene, chloro-	5.48	24	
3.	Unknown	11.52	20	
4.	1H-Indol-5-ol	11.97	18	
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TOTAL ESTIMATED CONCENTRATION	95

Client ID: **111505-RR-024**
Site: GM Wilmington-17338

Lab Sample No: **687426**
Lab Job No: J013

Date Sampled: 11/15/05
Date Received: 11/15/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25494.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	40
4-Nitrophenol	ND	40
4,6-Dinitro-2-methylphenol	ND	40
Pentachlorophenol	ND	40
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **111505-RR-024**
Site: GM Wilmington-17338

Lab Sample No: **687426**
Lab Job No: J013

Date Sampled: 11/15/05
Date Received: 11/15/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25494.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10
Acetophenone	ND	10
Diphenyl	ND	10

Client ID: **111505-RR-024**
Site: GM Wilmington-17338

Lab Sample No: **687426**
Lab Job No: J013

Date Sampled: 11/15/05
Date Received: 11/15/05
Date Extracted: 11/17/05
Date Analyzed: 11/23/05
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r25494.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	5.60	49	
2.	2-Propanol, 1-butoxy-	6.54	20	
3.	Unknown	7.18	10	
4.	Unknown	7.33	25	
5.	Unknown	7.47	9.8	
6.	Unknown	9.52	13	
7.	Unknown	9.56	13	
8.	Unknown	17.57	68	
9.	Unknown	18.39	10	
10.				
11.				
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29.				
30.				

TOTAL ESTIMATED CONCENTRATION 218

Site: GM Wilmington-17338 Lab Job No: J013

Matrix: WATER QA Batch: 3788

Chromium VI

STL Edison Sample #	Client ID	Date Sampled	Date Extracted	Date Analyzed	Dilution Factor	Analytical Result Units: ug/l
687425	111505-RR-023	11/15/05	11/16/05	11/16/05	50.0	ND
687426	111505-RR-024	11/15/05	11/16/05	11/16/05	1.0	ND

Quantitation Limit for Chromium VI is 10.0 ug/l.

General Information

Chain of Custody

J013

STL Edison

19

CONESTOGA-ROVERS & ASSOCIATES

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE OF

ID # Nº D 0460

SSOW Ref. Code: EQ1004

Required Client Information:

Company: CRA, Inc.	Report To: Chas Boston
Address: 14496 Sheldon Rd.	Copy To: Susan Shearer
Suite 200	Invoice To: Dana Stewart
Plymouth, MI 48170	P.O.: 412805
Phone: 734-453-5123	Project Name: CU-2 Site Investigation
Fax: 734-453-5201	Project Number: 173338-20
Email: CBoston@CRAworld.com	

Laboratory: STL Edison	
Laboratory Location: 777 New Durham Rd	
Laboratory Contact: Jay Kelly	
Requested Due Date:	TAT: Rush 5 TD per S. Shearer
QA/QC Requirements:	

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

Analysis and Method

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	BNA+20	VOC+10	Keo Chrome	Remarks/Lab ID
1.	LWG-17338-[illegible]-111505-RR-023	LW	111505	1235	5	X	X					1	1	1	687425
2.	LWG-17338-[illegible]-111505-RR-024	LW	111505	1310	5	X	X					1	1	1	426
3.	TB-17338-111505-RR-025	TB	111405	1230	2		X					1		1	427
4.															
5.															
6.															
7.															
8.															
9.															
10.															
11.															
12.															
13.															
14.															
15.															
	TOTAL NUMBER OF CONTAINERS														

J013

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
Courier	1	[signature] CRA	11/05	1430	[signature] STL	11/5/05	1530
AIRBILL NO.		[signature] CRA	11/15/05	17:00	Barry O'Mara STL	11/15/05	17:00
		[signature] STL	11/15/05	18:30	[signature] STL	11-15-05	18 30

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name:

Sampler Signature: Date:

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampler Copy

REV. 0 (6/04)

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CONESTOGA-ROVERS & ASSOCIATES

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Niagara Falls, New York 14304
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MEMORANDUM

TO: Greg Carli

REF. NO.: 17307-091004

FROM: Susan C. Scrocchi/jbh/4

DATE: December 22, 2005

Via E-Mail and U.S. Mail

C.C.: Chris Barton

RE: Data Quality Assessment and Validation
OU-2 Area Investigation - Groundwater Samples
Wilmington, Delaware

The following details a quality assessment and validation of the analytical data resulting from the November 8-15, 2005, collection of 14 samples and seven quality control (QC) samples from the General Motors (GM) Assembly Plant Site in Wilmington, Delaware. The sample summary detailing sample identification, sample location, QC samples, and analytical parameters is presented in Table 1. Sample analysis was completed at Severn Trent Laboratory in Edison, New Jersey (STL), in accordance with the methodologies presented in Table 2.

The QC criteria used to assess the data were established by the methods and the Quality Assurance Project Plan (QAPP). Application of quality assurance criteria was consistent with following guidance documents:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99/008, October 1999; and

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Review", USEPA 540/R-94/013, February 1994.

These guidelines are collectively referred to as "Guidelines" in this memorandum.

Sample Quantitation

The laboratory reported detected concentrations of volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), and inorganics below the laboratory's practical quantitation limit (PQL)/report limit (RL) but above the laboratory's method detection limit (MDL). The laboratory flagged these sample concentrations with a "J" or a "B" for organics and inorganics respectively. These concentrations should be qualified as estimated (J) values unless qualified otherwise in this memorandum. The laboratory "B" flags may be disregarded.

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Sample Preservation and Holding Times

Sample holding time periods and preservation requirements are summarized in the analytical methods. All sample extractions and/or analyses were performed within the specified holding times with the following exceptions:

i) the SVOC extraction of sample WG-17338-110905-RR-002 was performed 5 days past the required holding time. All SVOC results for this sample were qualified as estimated (see Table 3); and

ii) the dilution of sample WG-17338-111005-RR-009 was analyzed for VOCs 6 days past the required holding time. The VOCs reported from the diluted analysis were qualified as estimated (see Table 3).

All samples were properly preserved and cooled to 4°C(±2°C) after collection.

Gas Chromatography/Mass Spectrometer (GC/MS) – Tuning and Mass Calibration (Instrument Performance Check) – Organic Analyses

To ensure adequate mass resolution, identification, and to some degree, sensitivity; the performance of each GC/MS instrument used for VOC and SVOC analyses was checked at the beginning of each 12-hour period using bromofluorobenzene (BFB) and decafluorotriphenylphosphine (DFTPP), respectively. The resulting spectra must meet the criteria cited in the "Guidelines" before initiating an analysis sequence.

Instrument performance check data were reviewed. These tuning compounds were analyzed at the required frequency throughout the VOC and SVOC analyses. The results of all instrument performance checks were within the acceptance criteria, indicating acceptable instrument performance.

Initial Calibration – Organic Analyses

Initial calibration data are used to demonstrate that each instrument is capable of generating acceptable quantitative data. A five point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each over a specific concentration range.

Initial calibration criteria for organic analyses are evaluated against the following criteria:

i) GC/MS (all compounds) – must meet a minimum mean relative response factor (RRF) of 0.05; and

ii) GC/MS (all compounds) – the percent relative standard deviation (%RSD) values must not exceed 30.0 percent or a minimum coefficient of determination of 0.99 if quadratic equation calibration curves are used.

Calibration standards were analyzed at the required frequency and the results met the above criteria for linearity and sensitivity with the following exceptions:

i) the response factor of 2-butanone was less than 0.05. All associated positive sample results were qualified as estimated and all non-detect results were rejected due to poor analyte sensitivity; and

ii) the benzaldehyde and atrazine curves yielded standard deviations greater than 30 percent. All associated sample results were qualified as estimated.

A summary of the qualified samples is presented in Table 4.

Continuing Calibration – Organic Analyses

To ensure that each instrument was capable of producing acceptable quantitative data over the analysis period, continuing calibration standards must be analyzed every 12 hours for GC/MS analyses. The following criteria are employed to evaluate the continuing calibration data:

i) GC/MS (all compounds) – must meet a minimum mean RRF of 0.05;

ii) GC/MS (all compounds) – the percent difference between the mean initial calibration RRF and the continuing calibration RRF must not exceed 25 percent; and

iii) GC/MS (compounds determined by quadratic curve) – the percent drift between the true value and the continuing calibration value must not exceed 25 percent.

Calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity and linearity of response for all analytes of interest with the following exceptions:

i) the response factor of 2-butanone was less than 0.05. All associated positive sample results were qualified as estimated and all non-detect results were rejected due to poor analyte sensitivity; and

ii) an atrazine and 2,4-dinitrophenol response varied from the %RSD of curve by greater than 25 percent. All associated sample results were qualified as estimated.

A summary of the qualifications is presented in Table 5.

Initial Calibration – Inorganic Analyses

The initial calibration for hexavalent chromium includes a blank and a minimum of five standards to establish the calibration curve. The coefficient of variation for calibration curves must exceed 0.995.

Initial calibration is verified with an initial calibration verification (ICV) standard which must recover within 90 to 110 percent .

A review of the laboratory data showed that all inorganic initial calibration curves and ICVs were analyzed at the appropriate frequency and were within the acceptance criteria.

Continuing Calibration – Inorganic Analyses

Continuing calibration verification (CCV) standards are analyzed at method specified frequency (one every 10 samples). The CCVs must meet the percent recovery control limits specified above for the ICVs. Criteria for inorganic analyses are the same criteria as used for assessing the initial calibration data.

A review of the laboratory data showed that CCVs were analyzed at the appropriate frequency and the data were within the acceptance criteria.

Method Blank Samples

Method blank samples are prepared from a purified sample matrix and are processed concurrently with investigative samples to assess the presence and the magnitude of sample contamination introduced during sample analysis. Method blank samples are analyzed at a minimum frequency of one per analytical batch and target analytes should be non-detect.

Method blanks were analyzed at the recommended frequency and the results were non-detect for all analytes of interest.

Laboratory Blank Samples – Inorganic Analyses

Metals analyses include the analysis of initial calibration blanks (ICB) and continuing calibration blanks (CCB) to assess the presence and the magnitude of sample contamination introduced during sample analysis. The CCBs are analyzed at a minimum frequency of one every 10 samples and target analytes should be non-detect.

All ICBs and CCBs were non-detect.

Surrogate Compounds – Organic Analyses

Individual sample performance for organic analyses was monitored by assessing the results of surrogate compound percent recoveries. Surrogate percent recoveries are reviewed against the laboratory developed control limits provided in the analytical report.

All surrogate recoveries met the method criteria, demonstrating acceptable analytical efficiency for these analyses.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)Analyses and
Matrix Spike/Laboratory Duplicate Analyses (MS/Dup)

To assess the long term accuracy and precision of the analytical methods on various matrices, MS/MSD or MS/Dup percent recoveries and relative percent differences (RPD) of the concentrations were determined. The organic MS/MSD percent recovery and RPD control limits are established by the laboratory. The inorganic control limits are defined by the methods and the "Guidelines", which require recoveries between 75 to 125 percent with RPDs less than 20 percent for water samples and 30 percent for soil samples. The samples selected for MS/MSD analysis are identified in Table 1.

All MS/MSD or MS/Dup recoveries were acceptable with the exception of a hexavalent chromium spike yielding no recovery. All associated sample results were non-detect and were rejected due to the poor analytical efficiency (see Table 6).

Laboratory Control Sample (LCS)

The LCS analysis serves as a monitor of the overall performance in all steps of the sample analysis and are analyzed with each sample batch. The LCS percent recoveries were evaluated against method and laboratory established control limits.

The LCS percent recoveries were all within the laboratory control limits indicating acceptable analytical accuracy.

Internal Standard (IS) Summaries – Organic Analyses

To correct for variability in the GC/MS response and sensitivity, IS compounds are added to all samples. All results are calculated as a ratio of the compound and associated IS response. Overall instrument stability and performance for VOC and SVOC analyses were monitored using IS peak area and retention time (RT) data. The IS peak areas and RTs of the samples are required to meet the following criteria:

i) IS area counts must not vary by more than a factor of two (-50 percent to +100 percent) from the associated continuing calibration standard IS area counts; and

ii) the RT of the IS must not vary by more than plus or minus 30 seconds from the associated continuing calibration standard.

A review of the VOC and SVOC internal standard data showed that the IS area counts and retention time data were within the acceptance criteria for all samples.

Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and mass spectra (if applicable) were evaluated according to identification criteria established by the methods. The organic compounds reported adhered to the specified identification criteria.

Target Compound Quantitation

The reported quantitation results and detection limits were checked to ensure results reported were accurate. No discrepancies were found between the raw data and the sample results reported by the laboratory.

Field Quality Assurance/Quality Control (QA/QC)

The field quality assurance/quality control consisted of one field blank sample, one field duplicate sample set, and five trip blank samples.

To assess the cleanliness of sample containers and the presence of field contamination, the field blank sample identified in Table 1 was collected and analyzed.

Most field blank results were non-detect with the exception of low level concentrations of bis(2-ethylhexyl)phthalate and di-n-butylphthalate. All associated sample results with similar concentrations were qualified as non-detect (see Table 7).

Overall precision for the sampling event and laboratory procedures was monitored using the results of the field duplicate sample sets. The RPDs associated with these duplicate samples must be less than 50 percent for water. If the reported concentration in either the investigative sample or its duplicate is less than five times the report limit (RL), the evaluation criteria is one times the RL value for water.

All field duplicate results were acceptable.

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, a trip blank was submitted to the laboratory for VOC analysis with each shipping cooler containing multiple samples.

All trip blank results were non-detect for the compounds of interest.

System Performance

System performance between various quality control checks was evaluated to monitor for changes that may have caused the degradation of data quality. No technical problems or chromatographic anomalies were observed which would require qualification of the data.

Tentatively Identified Compounds (TICs)

TICs were evaluated for all samples submitted for volatile and semi-volatile analyses. A summary of the TICs reported and the estimated concentrations is presented in Table 8. TICs which were present in the blanks or which were identified as aldol condensation products and/or siloxanes have been eliminated.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted with the exception of 2-butanone data being rejected in several samples due to an initial calibration violation and hexavalent chromium data rejected due to no matrix spike recovery.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
NOVEMBER 8-15, 2005

				Analysis/Parameters			
Sample I.D.	*Location I.D.*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*VOCs*	*SVOCs*	*Hexavalent Chromium*	*Comments*
TB-17338-110905-RR-004	Trip Blank	11/08/05	7:00	X			
RB-17338-110905-RR-003	Equipment Blank	11/09/05	13:15	X	X		
WG-17338-110905-RR-001	MW13	11/09/05	10:10	X	X		
WG-17338-110905-RR-002	MW13	11/09/05	10:35	X	X		Field duplicate of WG-17338-110905-RR-001
TB-17338-111005-RR-010	Trip Blank	11/10/05	7:10	X			
WG-17338-111005-RR-005	MW12	11/10/05	8:45	X	X		
WG-17338-111005-RR-006	MW11	11/10/05	11:00	X	X		
WG-17338-111005-RR-007	MW11R	11/10/05	12:30	X	X		
WG-17338-111005-RR-008	MW3D	11/10/05	13:55	X	X	X	
WG-17338-111005-RR-009	MW3	11/10/05	15:25	X	X	X	
TB-17338-111105-RR-014	Trip Blank	11/11/05	7:15	X			
WG-17338-111105-RR-011	MW10	11/11/05	9:25	X	X	X	
WG-17338-111105-RR-012	MW6	11/11/05	10:35	X	X	X	
WG-17338-111105-RR-013	MW14	11/11/05	1:45	X	X		
TB -17338-111405-RR-018	Trip Blank	11/14/05	12:30	X			
WG -17338-111405-RR-015	MW8	11/14/05	13:35	X	X	X	
WG- 17338-111405-RR-016	MW9	11/14/05	13:55	X	X	X	
WG -17338-111405-RR-017	MW2	11/14/05	15:15	X	X	X	
TB-17338-111505-RR-025	Trip Blank	11/15/05	12:30	X			
WG-17338-111505-RR-023	MW7	11/15/05	12:35	X	X	X	
WG-17338-111505-RR-024	Sump	11/15/05	13:10	X	X	X	

Notes:
SVOCs Semi-Volatile Organic Compounds.
VOCs Volatile Organic Compounds.

TABLE 2

SUMMARY OF ANALYTICAL METHODS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
NOVEMBER 8-15, 2005

Parameter	*Method* [1]
TCL VOCs plus TICs	SW-846 8260B
TCL SVOCs plus TICs	SW-846 8270C
Hexavalent Chromium	SW-846 7196

Notes:

[1] "Test Methods for Solid Waste/Physical Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

SVOCs Semi-Volatile Organic Compounds.
TCL Target Compound List.
TICs Tentatively Identified Compounds.
VOC Volatile Organic Compounds.

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO HOLDING TIME EXCEEDANCES
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
NOVEMBER 8-15, 2005

Parameter	*Sample ID*	*Holding Time (days)*	*Holding Time Criteria (days)*	*Compound*	*Sample Results*	*Units*	*Qualifier*
SVOCs	WG-17338-110905-RR-002	12	7	2,4-Dimethylphenol	62 J	µg/L	J
				2-Methylnaphthalene	69 J	µg/L	J
				2-Methylphenol	80 J	µg/L	J
				4-Methylphenol	40 J	µg/L	J
				4-Nitroaniline	410 U	µg/L	UJ
				4-Nitrophenola	820 U	µg/L	UJ
				Benzaldehyde	210 U	µg/L	UJ
				4-Bromophenyl phenyl ether	210 U	µg/L	UJ
				Caprolactam	210 U	µg/L	UJ
				1,4-Dichlorobenzene	210 U	µg/L	UJ
				4-Chloroaniline	210 U	µg/L	UJ
				2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	210 U	µg/L	UJ
				Phenol	210 U	µg/L	UJ
				bis(2-Chloroethyl)ether	21 U	µg/L	UJ
				bis(2-Chloroethoxy)methane	210 U	µg/L	UJ
				bis(2-Ethylhexyl)phthalate	210 U	µg/L	UJ
				Di-n-octyl phthalate	210 U	µg/L	UJ
				Hexachlorobenzene	21 U	µg/L	UJ
				Anthracene	210 U	µg/L	UJ
				1,2,4-Trichlorobenzene	21 U	µg/L	UJ
				2,4-Dichlorophenol	210 U	µg/L	UJ
				2,4-Dinitrotoluene	41 U	µg/L	UJ
				Pyrene	210 U	µg/L	UJ
				Dimethyl phthalate	210 U	µg/L	UJ
				Dibenzofuran	210 U	µg/L	UJ
				Atrazine	210 U	µg/L	UJ
				Benzo(g,h,i)perylene	210 U	µg/L	UJ
				Indeno(1,2,3-cd)pyrene	21 U	µg/L	UJ
				Benzo(b)fluoranthene	21 U	µg/L	UJ
				Fluoranthene	210 U	µg/L	UJ
				Benzo(k)fluoranthene	21 U	µg/L	UJ
				Acenaphthylene	210 U	µg/L	UJ
				Chrysene	210 U	µg/L	UJ
				Naphthalene	2000	µg/L	J
				Benzo(a)pyrene	21 U	µg/L	UJ
				2,4-Dinitrophenol	820 U	µg/L	UJ
				4,6-Dinitro-2-methylphenol	820 U	µg/L	UJ
				Dibenz(a,h)anthracene	21 U	µg/L	UJ
				1,3-Dichlorobenzene	210 U	µg/L	UJ
				Benzo(a)anthracene	21 U	µg/L	UJ
				4-Chloro-3-methylphenol	210 U	µg/L	UJ

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO HOLDING TIME EXCEEDANCES
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
NOVEMBER 8-15, 2005

Parameter	*Sample ID*	*Holding Time (days)*	*Holding Time Criteria (days)*	*Compound*	*Sample Results*	*Units*	*Qualifier*
				2,6-Dinitrotoluene	41 U	µg/L	UJ

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO HOLDING TIME EXCEEDANCES
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
NOVEMBER 8-15, 2005

Parameter	*Sample ID*	*Holding Time (days)*	*Holding Time Criteria (days)*	*Compound*	*Sample Results*	*Units*	*Qualifier*
SVOCs	WG-17338-110905-RR-002	12	7	N-Nitrosodi-n-propylamine	21 U	µg/L	UJ
				Hexachloroethane	21 U	µg/L	UJ
				4-Chlorophenyl phenyl ether	210 U	µg/L	UJ
				Hexachlorocyclopentadiene	210 U	µg/L	UJ
				Isophorone	210 U	µg/L	UJ
				Acenaphthene	210 U	µg/L	UJ
				Diethyl phthalate	210 U	µg/L	UJ
				Di-n-butylphthalate	210 U	µg/L	UJ
				Phenanthrene	210 U	µg/L	UJ
				Butyl benzylphthalate	210 U	µg/L	UJ
				N-Nitrosodiphenylamine	210 U	µg/L	UJ
				Fluorene	210 U	µg/L	UJ
				Carbazole	210 U	µg/L	UJ
				Hexachlorobutadiene	41 U	µg/L	UJ
				Pentachlorophenol	820 U	µg/L	UJ
				2,4,6-Trichlorophenol	210 U	µg/L	UJ
				2-Nitroaniline	410 U	µg/L	UJ
				2-Nitrophenol	210 U	µg/L	UJ
				2-Chloronaphthalene	210 U	µg/L	UJ
				3,3'-Dichlorobenzidine	410 U	µg/L	UJ
				Biphenyl	210 U	µg/L	UJ
				1,2-Dichlorobenzene	210 U	µg/L	UJ
				2-Chlorophenol	210 U	µg/L	UJ
				2,4,5-Trichlorophenol	210 U	µg/L	UJ
				Acetophenone	210 U	µg/L	UJ
				Nitrobenzene	21 U	µg/L	UJ
				3-Nitroaniline	410 U	µg/L	UJ
VOCs	WG-17338-111005-RR-009	20	14	Acetone	470000	µg/L	J

Notes:
J Estimated.
SVOCs Semi-Volatile Organic Compounds.
U Non-detect at associated value.
UJ The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.
VOCs Volatile Organic Compounds.

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INITIAL CALIBRATION RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
NOVEMBER 8-15, 2005

Parameter	*Compound*	*Calibration Date*	*RRF*	*%RSD*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
VOCs	2-Butanone (Methyl Ethyl Ketone)	11/15/05	0.033	14.7	WG-17338-110905-RR-001	5.0 U	µg/L	R
					WG-17338-110905-RR-002	5.0 U	µg/L	R
					WG-17338-111005-RR-005	5.0 U	µg/L	R
					WG-17338-111005-RR-006	170	µg/L	J
					WG-17338-111005-RR-007	5.0 U	µg/L	R
					WG-17338-111005-RR-008	25 U	µg/L	R
					WG-17338-111005-RR-009	570 J	µg/L	J
					WG-17338-111105-RR-011	25 U	µg/L	R
					WG-17338-111105-RR-012	5.0 U	µg/L	R
					WG-17338-111105-RR-013	5.0 U	µg/L	R
					WG-17338-111405-RR-015	5.0 U	µg/L	R
					WG-17338-111405-RR-016	5.0 U	µg/L	R
					WG-17338-111405-RR-017	5.0 U	µg/L	R
					WG-17338-111505-RR-023	5.0 U	µg/L	R
					WG-17338-111505-RR-024	5.0 U	µg/L	R
SVOCs	Atrazine	11/16/05	>0.05	30.2	RB-17338-110905-RR-003	11 U	µg/L	UJ
					WG-17338-110905-RR-001	200 U	µg/L	UJ
					WG-17338-110905-RR-002	210 U	µg/L	UJ
					WG-17338-111005-RR-005	11 U	µg/L	UJ
					WG-17338-111005-RR-006	100 U	µg/L	UJ
					WG-17338-111005-RR-007	10 U	µg/L	UJ
					WG-17338-111005-RR-008	11 U	µg/L	UJ
					WG-17338-111005-RR-009	110 U	µg/L	UJ
					WG-17338-111105-RR-011	21 U	µg/L	UJ
					WG-17338-111105-RR-012	11 U	µg/L	UJ
					WG-17338-111105-RR-013	11 U	µg/L	UJ
SVOCs	Benzaldehyde	11/23/05	>0.05	57	WG-17338-111405-RR-015	10 U	µg/L	UJ
					WG-17338-111405-RR-016	11 U	µg/L	UJ
					WG-17338-111405-RR-017	11 U	µg/L	UJ
					WG-17338-111505-RR-023	10 U	µg/L	UJ
					WG-17338-111505-RR-024	10 U	µg/L	UJ

Notes:
%RSD Percent Relative Standard Deviation.
J Estimated.
R Rejected.
RRF Relative Response Factor.
SVOCs Semi-Volatile Organic Compounds.
U Non-detect at associated value.
UJ The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.
VOCs Volatile Organic Compounds.

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
NOVEMBER 8-15, 2005

Parameter	*Calibration Date*	*Compound*	*%D*	*RRF*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
SVOCs	11/22/05	2,4-Dinitrophenol	25.1	>0.05	WG-17338-110905-RR-002	820 U	µg/L	UJ
VOCs	11/16/05	2-Butanone (Methyl Ethyl Ketone)	<25	0.034	WG-17338-111005-RR-005	5.0 U	µg/L	R
					WG-17338-111005-RR-006	170	µg/L	J
					WG-17338-111005-RR-007	5.0 U	µg/L	R
					WG-17338-111005-RR-008	25 U	µg/L	R
					WG-17338-111005-RR-009	570 J	µg/L	J
					WG-17338-111105-RR-011	25 U	µg/L	R
					WG-17338-111105-RR-012	5.0 U	µg/L	R
					WG-17338-111105-RR-013	5.0 U	µg/L	R
					WG-17338-111405-RR-015	5.0 U	µg/L	R
VOCs	11/18/05	2-Butanone (Methyl Ethyl Ketone)	<25	0.034	WG-17338-111405-RR-016	5.0 U	µg/L	R
					WG-17338-111405-RR-017	5.0 U	µg/L	R
					WG-17338-111505-RR-023	5.0 U	µg/L	R
					WG-17338-111505-RR-024	5.0 U	µg/L	R
SVOCs	11/23/05	Atrazine	33	>0.05	WG-17338-111405-RR-015	10 U	µg/L	UJ
					WG-17338-111405-RR-016	11 U	µg/L	UJ
					WG-17338-111405-RR-017	11 U	µg/L	UJ
					WG-17338-111505-RR-023	10 U	µg/L	UJ
					WG-17338-111505-RR-024	10 U	µg/L	UJ

Notes:
%D Percent Difference.
J Estimated.
R Rejected.
RRF Relative Response Factor.
SVOCs Semi-Volatile Organic Compounds.
U Non-detect at associated value.
UJ The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.
VOCs Volatile Organic Compounds.

TABLE 6

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
NOVEMBER 8-15, 2005

Parameter	*Associated Sample ID*	*Analyte*	*MS Recovery (percent)*	*MSD Recovery (percent)*	*RPD*	*Control Limits*		*Sample Result*	*Units*	*Qualifier*
						Recovery (percent)	*RPD (percent)*			
Metals	WG-17338-111005-RR-008	Chromium VI (Hexavalent)	0	0	NA	85-115	20	10 U	µg/L	R
	WG-17338-111005-RR-009							10 U	µg/L	R
	WG-17338-111105-RR-011							10 U	µg/L	R
	WG-17338-111105-RR-012							10 U	µg/L	R

Notes:
MS Matrix Spike.
MSD Matrix Spike Duplicate.
NA Not Applicable.
R Rejected.
RPD Relative Percent Difference.
U Non-detect at associated value.

TABLE 7

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE RINSE BLANKS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
NOVEMBER 8-15, 2005

Parameter	*Rinse Blank Date*	*Analyte*	*Blank Result*	*Sample ID*	*Sample Result*	*Qualified Sample Result*	*Units*
SVOC	11/09/05	bis(2-Ethylhexyl)phthalate	17	WG-17338-111005-RR-005	19	19 U	µg/L
				WG-17338-111005-RR-006	33 J	100 U	µg/L
				WG-17338-111005-RR-007	24	24 U	µg/L
				WG-17338-111005-RR-008	26	26 U	µg/L
				WG-17338-111005-RR-009	29 J	110 U	µg/L
				WG-17338-111105-RR-011	24	24 U	µg/L
				WG-17338-111105-RR-012	24	24 U	µg/L
				WG-17338-111105-RR-013	17	17 U	µg/L
SVOC	11/09/05	Di-n-butylphthalate	6.0	WG-17338-111005-RR-005	6.7 J	11 U	µg/L
				WG-17338-111005-RR-007	7.5 J	10 U	µg/L
				WG-17338-111005-RR-008	10 J	11 U	µg/L
				WG-17338-111105-RR-011	10 J	21 U	µg/L
				WG-17338-111105-RR-012	8.6 J	11 U	µg/L
				WG-17338-111105-RR-013	6.7 J	11 U	µg/L

Notes:
J Estimated.
SVOCs Semi-Volatile Organic Compounds.
U Non-detect at associated value.

TABLE 8

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
NOVEMBER 8-15, 2005

Sample Location	*Volatile Organics*	*Estimated Concentration (µg/L)*	*Semi-Volatile Organics*	*Estimated Concentration (µg/L)*
WG-17338-111405-RR-017	C5H12 Alkane	8.3 J	Ethlymethylbenzene isomer	25 J
	C6H12 Cycloalkane	5.6 J	Unknown	17 J
	C9H10 aromatic	7.7 J		
	Diisopropyl ether	8.3 J		
	Dimethyl Cyclohexane Isomer	9.9 J		
	n-Propylbenzene	11 J		
WG-17338-111005-RR-009	Isopropyl Alcohol	2100 J	1H-Inden-1-one,2,3-dihydro-	180 J
			2-Methylbutanoic acid	110 J
			Benzeneacetic acid	610 J
			Benzoic acid, 3-methyl-	140 J
			Butoxyethoxy-ethanol	540 J
			Octanoic acid	510 J
			p-Toluic acid	240 J
			Unknowns	13400 J
			Unknown Dimethylphenol Isomers	320 J
WG-17338-111005-RR-008	Ethlymethylbenzene isomer	31 J	2,3-Dihydro-methyl-1H-Indene Isomer	9.7 J
	Trimethylbenzene isomer	37 J	Ethlymethylbenzene isomer	15 J
			Unknowns	1600 J
WG-17338-111105-RR-012	C9H10 aromatic	8.9 J	Bisphenol A	320 J
	Diethylbenzene Isomer	30 J	Unknowns	64 J
			Chlorobenzene A	24 J
			Unknowns	53 J
WG-17338-111405-RR-015	2,3-dihydro-dimethyl-1h-Indene Isomer	7.8 J	1H-Indene,2,3-dihydro	34 J
	2,3-Dihydro-methyl-1H-Indene Isomer	10 J	1H-Indol-5-ol	8.9 J
	C10H12 aromatic	8.0 J	Trimethylbenzoic Acid	18
	C10H12/C10H14Aromatic	9.4 J	Bisphenol A	52 J
	C9H10 aromatic	60 J	Unknowns	59 J
	Diethylbenzene Isomer	11 J	Unknown MethlyEthylPhenol Isomer	9.4 J
	Tetramethylbenzene Isomer	9.8 J		
WG-17338-111105-RR-011	Diisopropyl ether	44 J	C10H12 aromatic	22 J
	n-Propylbenzene	45 J	Ethlymethylbenzene isomer	60 J
			Ethyl Dimethyl Benzene Isomer	18 J

TABLE 8

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
NOVEMBER 8-15, 2005

Sample Location	*Volatile Organics*	*Estimated Concentration (µg/L)*	*Semi-Volatile Organics*	*Estimated Concentration (µg/L)*
WG-17338-111005-RR-006	Butanal	62 J	2-Butoxy-Ethanol	11000 J
	Unknown Alcohols	590 J	2-Ethyl-ethanoic acid	620 J
	Unknown Organic Acid	71 J	N-Octanol	150 J
			Unknowns	28800 J
WG-17338-111005-RR-007	None		Unknowns	310 J
WG-17338-111005-RR-005	2,3-Dihydro-methyl-1H-Indene Isomer	14 J	C10H12 aromatic	20 J
	Benzene, 1-methyl-3-(1-methylethyl)-	27 J	Methyl benzoic acid	130 J
	C9H10 aromatic	13 J	Unknowns	1500 J
	Ethlymethylbenzene isomer	35 J	Unknown Organic Acid	27 J
	Ethyl Dimethyl Benzene Isomer	12 J		
	Trimethylbenzene isomer	70 J		
WG-17338-110905-RR-001	Unknown Aromatics	5200 J	1H-Indene,2,3-dihydro	330 J
	Methylpropylbenzene isomer	420 J	2,3-Dihydro-methyl-1H-Indene Isomer	610 J
	Unknown	470 J	C10H12 aromatic	230 J
			Ethyl Dimethyl Benzene Isomers	2400 J
			Methylpropylbenzene isomer	380 J
			Tetramethylbenzene Isomers	1000 J
			Trimethylbenzene isomer	350 J
WG-17338-110905-RR-002	Unknown Aromatics	5800 J	1H-Indene,2,3-dihydro	320 J
			2,3-Dihydro-methyl-1H-Indene Isomers	800 J
			Ethyl Dimethyl Benzene Isomers	1600 J
			Methylpropylbenzene isomer	360 J
			Tetramethylbenzene Isomers	980 J
			Trimethylbenzene isomer	350 J
			Unknown	480 J
WG-17338-111505-RR-024	None		2-Propanol, 1-butoxy-	20 J
			Unknowns	200 J

Note:
J Estimated.

TABLE 8

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
NOVEMBER 8-15, 2005

Sample Location	*Volatile Organics*	*Estimated Concentration (µg/L)*	*Semi-Volatile Organics*	*Estimated Concentration (µg/L)*

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
www.stl-inc.com

09/19/2006

Conestoga-Rovers & Associates
2371 George Urban Blvd
Depew, NY 14043

Attention: Ms. Susan Scrocchi

Laboratory Results
Job No. W081 - GM Wilmington-17338 (Revised)

Dear Ms. Scrocchi:

Enclosed are the results you requested for the following sample(s) received at our laboratory on August 21, 2006.

Lab No.	Client ID	Analysis Required
763593	W17338082106001	TCLVO+10 Special TCL BNA 4.2 List TAL Metals Chrome VI (7196A)
763594	GW17338082106002	TCLVO+10 Special TCL BNA 4.2 List TAL Metals Chrome VI (7196A)
763595	GW17338082106003	TCLVO+10 Special TCL BNA 4.2 List TAL Metals Chrome VI (7196A)
763596	GW17338082106004	TCLVO+10 Special TCL BNA 4.2 List
763597	TripBlank-082106	TCLVO+10 Special
763598	GW17338082106002-DISSOLVED	TAL Metals Chrome VI (7196A)
763599	GW17338082106003-DISSOLVED	TAL Metals Chrome VI (7196A)
763961	GW17338082206005	TCLVO+10 Special

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Laboratory Results
Job No. W081 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
		TCL BNA 4.2 List TAL Metals Chrome VI (7196A)
763962	GW17338082206006	TCLVO+10 Special TCL BNA 4.2 List TAL Metals Chrome VI (7196A)
763963	GW17338082206007	TCLVO+10 Special TCL BNA 4.2 List TAL Metals Chrome VI (7196A)
763964	GW17338082206008	TCLVO+10 Special TCL BNA 4.2 List TAL Metals Chrome VI (7196A)
763965	GW17338082206009	TCLVO+10 Special TCL BNA 4.2 List TAL Metals Chrome VI (7196A)
763966	GW17338082206010	TCLVO+10 Special TCL BNA 4.2 List

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Laboratory Results
Job No. W081 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
		TAL Metals
		Chrome VI (7196A)
763967	GW17338082206011	TCLVO+10 Special
		TCL BNA 4.2 List
		TAL Metals
		Chrome VI (7196A)
763968	GW17338082206012	TCLVO+10 Special
		TCL BNA 4.2 List
		TAL Metals
		Chrome VI (7196A)
763969	TripBlank-082206	TCLVO+10 Special
763970	GW17338082206005-DISSOLVED	TAL Metals
		Chrome VI (7196A)
763971	GW17338082206006-DISSOLVED	TAL Metals
		Chrome VI (7196A)
763972	GW17338082206007-DISSOLVED	TAL Metals
		Chrome VI (7196A)
763973	GW17338082206008-DISSOLVED	TAL Metals
		Chrome VI (7196A)

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Laboratory Results
Job No. W081 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
763974	GW17338082206009-DISSOLVED	TAL Metals Chrome VI (7196A)
763975	GW17338082206010-DISSOLVED	TAL Metals Chrome VI (7196A)
763976	GW17338082206011-DISSOLVED	TAL Metals Chrome VI (7196A)
763977	GW17338082206012-DISSOLVED	TAL Metals Chrome VI (7196A)
764262	GW17338082306013	TCLVO+10 Special TCL BNA 4.2 List TAL Metals Chrome VI (7196A)
764263	GW17338082306014	TCLVO+10 Special TCL BNA 4.2 List TAL Metals Chrome VI (7196A)
764264	GW17338082306015	TAL Metals Chrome VI (7196A)
764265	W17338082306016	TCLVO+10 Special TCL BNA 4.2 List

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Laboratory Results
Job No. W081 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
		TAL Metals Chrome VI (7196A)
764266	TripBlank-082306	TCLVO+10 Special
764267	GW17338082306013-DISSOLVED	TAL Metals Chrome VI (7196A)
764268	GW17338082306014-DISSOLVED	TAL Metals Chrome VI (7196A)
764269	GW17338082306015-DISSOLVED	TAL Metals Chrome VI (7196A)

If you have any questions please contact your Project Manager, Joy Kelly, at (732) 549-3900.

Very Truly Yours,

Michael Urban
Laboratory Manager

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Analytical Results Summary

Client ID: **W17338082106001**
Site: GM Wilmington-17338

Lab Sample No: **763593**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13133.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **W17338082106001**
Site: GM Wilmington-17338

Lab Sample No: **763593**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13133.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **W17338082106001**
Site: GM Wilmington-17338

Lab Sample No: **763593**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13133.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW17338082106002**
Site: GM Wilmington-17338

Lab Sample No: **763594**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Analyzed: 08/28/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13110.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	3.0	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	1.4J	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW17338082106002**
Site: GM Wilmington-17338

Lab Sample No: **763594**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Analyzed: 08/28/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13110.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	0.6J	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **GW17338082106002**
Site: GM Wilmington-17338

Lab Sample No: **763594**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Analyzed: 08/28/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13110.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
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26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **GW17338082106003**
Site: GM Wilmington-17338

Lab Sample No: **763595**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Analyzed: 08/28/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13111.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW17338082106003**
Site: GM Wilmington-17338

Lab Sample No: **763595**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Analyzed: 08/28/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13111.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **GW17338082106003**
Site: GM Wilmington-17338

Lab Sample No: **763595**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Analyzed: 08/28/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13111.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW17338082106004**
Site: GM Wilmington-17338

Lab Sample No: **763596**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Analyzed: 08/29/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13117.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	7.2	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	60	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW17338082106004**
Site: GM Wilmington-17338

Lab Sample No: **763596**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Analyzed: 08/29/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13117.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	16	5.0
Cyclohexane	1.1J	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	2.8J	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	0.8J	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **GW17338082106004**
Site: GM Wilmington-17338

Lab Sample No: **763596**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Analyzed: 08/29/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13117.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Unknown Aromatic	7.93	5.2	
2. Indane	8.16	180	
3. Diethylbenzene isomer	8.18	25	
4. Diethylbenzene isomer	8.25	7.8	
5. C10H14 Aromatic	8.37	8.3	
6. 2,3-dihydro-methyl-1H-Indene isomer	8.39	17	
7. Unknown Aromatic	8.42	7.6	
8. Tetramethylbenzene isomer	8.56	30	
9. 2,3-dihydro-methyl-1H-Indene isomer	8.75	23	
10. 2,3-dihydro-dimethyl-1H-Indene isomer	8.95	7.6	
11. Naphthalene	9.09	5.1	
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TOTAL ESTIMATED CONCENTRATION	317

Client ID: **TripBlank-082106**
Site: GM Wilmington-17338

Lab Sample No: **763597**
Lab Job No: W081

Date Sampled: 08/18/06
Date Received: 08/21/06
Date Analyzed: 08/28/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13112.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **TripBlank-082106**
Site: GM Wilmington-17338

Lab Sample No: **763597**
Lab Job No: W081

Date Sampled: 08/18/06
Date Received: 08/21/06
Date Analyzed: 08/28/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13112.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **TripBlank-082106**
Site: GM Wilmington-17338

Lab Sample No: **763597**
Lab Job No: W081

Date Sampled: 08/18/06
Date Received: 08/21/06
Date Analyzed: 08/28/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13112.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW17338082206005**
Site: GM Wilmington-17338

Lab Sample No: **763961**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/29/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13119.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 50.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	250
Bromomethane	ND	250
Vinyl Chloride	ND	250
Chloroethane	ND	250
Methylene Chloride	ND	150
Acetone	ND	250
Carbon Disulfide	ND	250
Trichlorofluoromethane	ND	250
1,1-Dichloroethene	ND	100
1,1-Dichloroethane	ND	250
trans-1,2-Dichloroethene	ND	250
cis-1,2-Dichloroethene	ND	250
Chloroform	ND	250
1,2-Dichloroethane	ND	100
2-Butanone	ND	250
1,1,1-Trichloroethane	ND	250
Carbon Tetrachloride	ND	100
Bromodichloromethane	ND	50
1,2-Dichloropropane	ND	50
cis-1,3-Dichloropropene	ND	250
Trichloroethene	ND	50
Dibromochloromethane	ND	250
1,1,2-Trichloroethane	ND	150
Benzene	ND	50
trans-1,3-Dichloropropene	ND	250
Bromoform	ND	200
4-Methyl-2-Pentanone	ND	250
2-Hexanone	ND	250
Tetrachloroethene	ND	50
1,1,2,2-Tetrachloroethane	ND	50
Toluene	7500	250
Chlorobenzene	ND	250
Ethylbenzene	530	200
Styrene	ND	250

Client ID: **GW17338082206005**
Site: GM Wilmington-17338

Lab Sample No: **763961**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/29/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13119.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 50.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	3000	250
Freon TF	ND	250
MTBE	46 J	250
Cyclohexane	ND	250
1,2-Dibromoethane	ND	250
1,3-Dichlorobenzene	ND	250
1,4-Dichlorobenzene	ND	250
1,2-Dichlorobenzene	ND	250
Dichlorodifluoromethane	ND	250
Isopropylbenzene	25 J	250
1,2,4-Trichlorobenzene	ND	250
Methyl Acetate	ND	250
Methyl Cyclohexane	80 J	250
1,2-Dibromo-3-chloropropane	ND	250

Client ID: **GW17338082206005**
Site: GM Wilmington-17338

Lab Sample No: **763961**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/29/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13119.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 50.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Trimethylbenzene isomer	8.09	400	
2.	Indane	8.15	780	
3.	Ethyldimethylbenzene isomer	8.19	400	
4.	C10H14 Aromatic	8.34	460	
5.	C10H14 Aromatic	8.37	460	
6.	Tetramethylbenzene isomer	8.56	360	
7.	Tetramethylbenzene isomer	8.58	510	
8.	C10H12/C10H14 Aromatics	8.76	510	
9.	Naphthalene	9.09	1700	
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TOTAL ESTIMATED CONCENTRATION 5580

Client ID: **GW17338082206006**
Site: GM Wilmington-17338

Lab Sample No: **763962**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 09/05/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46346.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	25
Bromomethane	ND	25
Vinyl Chloride	ND	25
Chloroethane	ND	25
Methylene Chloride	ND	15
Acetone	ND	25
Carbon Disulfide	ND	25
Trichlorofluoromethane	ND	25
1,1-Dichloroethene	ND	10
1,1-Dichloroethane	ND	25
trans-1,2-Dichloroethene	ND	25
cis-1,2-Dichloroethene	7.1J	25
Chloroform	ND	25
1,2-Dichloroethane	ND	10
2-Butanone	ND	25
1,1,1-Trichloroethane	ND	25
Carbon Tetrachloride	ND	10
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	25
Trichloroethene	ND	5.0
Dibromochloromethane	ND	25
1,1,2-Trichloroethane	ND	15
Benzene	350	5.0
trans-1,3-Dichloropropene	ND	25
Bromoform	ND	20
4-Methyl-2-Pentanone	ND	25
2-Hexanone	ND	25
Tetrachloroethene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Toluene	3.4J	25
Chlorobenzene	ND	25
Ethylbenzene	*	20
Styrene	ND	25

*See Dilution

Client ID: **GW17338082206006**
Site: GM Wilmington-17338

Lab Sample No: **763962**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 09/05/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46346.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	*	25
Freon TF	ND	25
MTBE	43	25
Cyclohexane	16 J	25
1,2-Dibromoethane	ND	25
1,3-Dichlorobenzene	ND	25
1,4-Dichlorobenzene	ND	25
1,2-Dichlorobenzene	ND	25
Dichlorodifluoromethane	ND	25
Isopropylbenzene	97	25
1,2,4-Trichlorobenzene	ND	25
Methyl Acetate	ND	25
Methyl Cyclohexane	22 J	25
1,2-Dibromo-3-chloropropane	ND	25

*See Dilution

Client ID: **GW17338082206006**
Site: GM Wilmington-17338

Lab Sample No: **763962**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 09/05/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46346.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Diisopropyl ether	5.81	27	
2. Benzene, propyl-	13.04	46	
3. Ethylmethylbenzene isomer	13.16	26	
4. Trimethylbenzene isomer	13.61	32	
5. Indane	14.26	41	
6. Ethyldimethylbenzene isomer	14.65	37	
7. C10H12/C10H14 Aromatics	15.56	40	
8. Naphthalene	16.24	41	
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TOTAL ESTIMATED CONCENTRATION		290	

Client ID: **GW17338082206006D1**
Site: GM Wilmington-17338

Lab Sample No: **763962D1**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13146.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 50.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Ethylbenzene	1600	200
Xylene (Total)	8800	250

Client ID: **GW17338082206007**
Site: GM Wilmington-17338

Lab Sample No: **763963**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 09/05/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46347.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 100.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	500
Bromomethane	ND	500
Vinyl Chloride	ND	500
Chloroethane	ND	500
Methylene Chloride	ND	300
Acetone	*	500
Carbon Disulfide	ND	500
Trichlorofluoromethane	ND	500
1,1-Dichloroethene	ND	200
1,1-Dichloroethane	ND	500
trans-1,2-Dichloroethene	ND	500
cis-1,2-Dichloroethene	ND	500
Chloroform	ND	500
1,2-Dichloroethane	ND	200
2-Butanone	ND	500
1,1,1-Trichloroethane	ND	500
Carbon Tetrachloride	ND	200
Bromodichloromethane	ND	100
1,2-Dichloropropane	ND	100
cis-1,3-Dichloropropene	ND	500
Trichloroethene	ND	100
Dibromochloromethane	ND	500
1,1,2-Trichloroethane	ND	300
Benzene	870	100
trans-1,3-Dichloropropene	ND	500
Bromoform	ND	400
4-Methyl-2-Pentanone	ND	500
2-Hexanone	ND	500
Tetrachloroethene	ND	100
1,1,2,2-Tetrachloroethane	ND	100
Toluene	*	500
Chlorobenzene	ND	500
Ethylbenzene	10000	400
Styrene	ND	500

*See Dilution

Client ID: **GW17338082206007**
Site: GM Wilmington-17338

Lab Sample No: **763963**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 09/05/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46347.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 100.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	18000	500
Freon TF	ND	500
MTBE	800	500
Cyclohexane	ND	500
1,2-Dibromoethane	ND	500
1,3-Dichlorobenzene	ND	500
1,4-Dichlorobenzene	ND	500
1,2-Dichlorobenzene	ND	500
Dichlorodifluoromethane	ND	500
Isopropylbenzene	ND	500
1,2,4-Trichlorobenzene	ND	500
Methyl Acetate	ND	500
Methyl Cyclohexane	ND	500
1,2-Dibromo-3-chloropropane	ND	500

Client ID: **GW17338082206007**
Site: GM Wilmington-17338

Lab Sample No: **763963**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 09/05/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46347.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 100.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Isopropyl Alcohol	4.54	1400	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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21.				
22.				
23.				
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26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 1400

Client ID: **GW17338082206007D1**
Site: GM Wilmington-17338

Lab Sample No: **763963D1**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13145.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 2500.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Acetone	370000	12000
Toluene	140000	12000

Client ID: **GW17338082206008**
Site: GM Wilmington-17338

Lab Sample No: **763964**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13134.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	3.4	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	1.1J	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	5.2	4.0
Styrene	ND	5.0

Client ID: **GW17338082206008**
Site: GM Wilmington-17338

Lab Sample No: **763964**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13134.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	7.9	5.0
Freon TF	ND	5.0
MTBE	2.0J	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	1.7J	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **GW17338082206008**
Site: GM Wilmington-17338

Lab Sample No: **763964**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13134.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Indane	8.15	7.2	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
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24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	7.2

Client ID: **GW17338082206009**
Site: GM Wilmington-17338

Lab Sample No: **763965**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/28/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13113.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	0.6J	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	0.7J	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	38	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW17338082206009**
Site: GM Wilmington-17338

Lab Sample No: **763965**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/28/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13113.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	62	5.0
Freon TF	ND	5.0
MTBE	14	5.0
Cyclohexane	47	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	19	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	9.4	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **GW17338082206009**
Site: GM Wilmington-17338

Lab Sample No: **763965**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/28/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13113.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	C5H10 Cycloalkane	1.83	8.2	
2.	Diisopropyl ether	2.49	11	
3.	C6H12 Cycloalkane	2.61	9.4	
4.	C8H16 Cycloalkane	5.27	8.2	
5.	Benzene, propyl-	7.57	6.2	
6.	Indane	8.16	5.5	
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 48

Client ID: **GW17338082206010**
Site: GM Wilmington-17338

Lab Sample No: **763966**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 09/05/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46348.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 10.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	50
Bromomethane	ND	50
Vinyl Chloride	ND	50
Chloroethane	ND	50
Methylene Chloride	ND	30
Acetone	530	50
Carbon Disulfide	ND	50
Trichlorofluoromethane	ND	50
1,1-Dichloroethene	ND	20
1,1-Dichloroethane	ND	50
trans-1,2-Dichloroethene	ND	50
cis-1,2-Dichloroethene	ND	50
Chloroform	ND	50
1,2-Dichloroethane	ND	20
2-Butanone	180	50
1,1,1-Trichloroethane	ND	50
Carbon Tetrachloride	ND	20
Bromodichloromethane	ND	10
1,2-Dichloropropane	ND	10
cis-1,3-Dichloropropene	ND	50
Trichloroethene	ND	10
Dibromochloromethane	ND	50
1,1,2-Trichloroethane	ND	30
Benzene	480	10
trans-1,3-Dichloropropene	ND	50
Bromoform	ND	40
4-Methyl-2-Pentanone	ND	50
2-Hexanone	ND	50
Tetrachloroethene	ND	10
1,1,2,2-Tetrachloroethane	ND	10
Toluene	*	50
Chlorobenzene	ND	50
Ethylbenzene	*	40
Styrene	ND	50

*See Dilution

Client ID: **GW17338082206010**
Site: GM Wilmington-17338

Lab Sample No: **763966**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 09/05/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46348.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 10.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	*	50
Freon TF	ND	50
MTBE	650	50
Cyclohexane	ND	50
1,2-Dibromoethane	ND	50
1,3-Dichlorobenzene	ND	50
1,4-Dichlorobenzene	ND	50
1,2-Dichlorobenzene	ND	50
Dichlorodifluoromethane	ND	50
Isopropylbenzene	ND	50
1,2,4-Trichlorobenzene	ND	50
Methyl Acetate	ND	50
Methyl Cyclohexane	ND	50
1,2-Dibromo-3-chloropropane	ND	50

Client ID: **GW17338082206010**
Site: GM Wilmington-17338

Lab Sample No: **763966**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 09/05/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46348.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 10.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW17338082206010D1**
Site: GM Wilmington-17338

Lab Sample No: **763966D1**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13143.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 100.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Toluene	6500	500
Ethylbenzene	9700	400
Xylene (Total)	10000	500

Client ID: **GW17338082206011**
Site: GM Wilmington-17338

Lab Sample No: **763967**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/29/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13121.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	25
Bromomethane	ND	25
Vinyl Chloride	ND	25
Chloroethane	ND	25
Methylene Chloride	ND	15
Acetone	74	25
Carbon Disulfide	ND	25
Trichlorofluoromethane	ND	25
1,1-Dichloroethene	ND	10
1,1-Dichloroethane	ND	25
trans-1,2-Dichloroethene	ND	25
cis-1,2-Dichloroethene	ND	25
Chloroform	ND	25
1,2-Dichloroethane	ND	10
2-Butanone	ND	25
1,1,1-Trichloroethane	ND	25
Carbon Tetrachloride	ND	10
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	25
Trichloroethene	ND	5.0
Dibromochloromethane	ND	25
1,1,2-Trichloroethane	ND	15
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	25
Bromoform	ND	20
4-Methyl-2-Pentanone	ND	25
2-Hexanone	ND	25
Tetrachloroethene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Toluene	730	25
Chlorobenzene	ND	25
Ethylbenzene	170	20
Styrene	ND	25

Client ID: **GW17338082206011**
Site: GM Wilmington-17338

Lab Sample No: **763967**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/29/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13121.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	340	25
Freon TF	ND	25
MTBE	ND	25
Cyclohexane	ND	25
1,2-Dibromoethane	ND	25
1,3-Dichlorobenzene	ND	25
1,4-Dichlorobenzene	ND	25
1,2-Dichlorobenzene	ND	25
Dichlorodifluoromethane	ND	25
Isopropylbenzene	6.4J	25
1,2,4-Trichlorobenzene	ND	25
Methyl Acetate	ND	25
Methyl Cyclohexane	ND	25
1,2-Dibromo-3-chloropropane	ND	25

Client ID: **GW17338082206011**
Site: GM Wilmington-17338

Lab Sample No: **763967**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/29/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13121.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Indane	8.15	120	
2.	Diethylbenzene isomer	8.18	28	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				
	TOTAL ESTIMATED CONCENTRATION		148	

Client ID: **GW17338082206012**
Site: GM Wilmington-17338

Lab Sample No: **763968**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13135.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	1.4	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	23	5.0
Chlorobenzene	110	5.0
Ethylbenzene	48	4.0
Styrene	ND	5.0

Client ID: **GW17338082206012**
Site: GM Wilmington-17338

Lab Sample No: **763968**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13135.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	56	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	0.4J	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **GW17338082206012**
Site: GM Wilmington-17338

Lab Sample No: **763968**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13135.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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14.				
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16.				
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26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **TripBlank-082206**
Site: GM Wilmington-17338

Lab Sample No: **763969**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/28/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13114.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **TripBlank-082206**
Site: GM Wilmington-17338

Lab Sample No: **763969**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/28/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13114.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **TripBlank-082206**
Site: GM Wilmington-17338

Lab Sample No: **763969**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Analyzed: 08/28/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13114.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW17338082306013**
Site: GM Wilmington-17338

Lab Sample No: **764262**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13144.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	25
Bromomethane	ND	25
Vinyl Chloride	ND	25
Chloroethane	ND	25
Methylene Chloride	ND	15
Acetone	ND	25
Carbon Disulfide	ND	25
Trichlorofluoromethane	ND	25
1,1-Dichloroethene	ND	10
1,1-Dichloroethane	ND	25
trans-1,2-Dichloroethene	ND	25
cis-1,2-Dichloroethene	ND	25
Chloroform	ND	25
1,2-Dichloroethane	ND	10
2-Butanone	ND	25
1,1,1-Trichloroethane	ND	25
Carbon Tetrachloride	ND	10
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	25
Trichloroethene	ND	5.0
Dibromochloromethane	ND	25
1,1,2-Trichloroethane	ND	15
Benzene	27	5.0
trans-1,3-Dichloropropene	ND	25
Bromoform	ND	20
4-Methyl-2-Pentanone	ND	25
2-Hexanone	ND	25
Tetrachloroethene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Toluene	440	25
Chlorobenzene	ND	25
Ethylbenzene	340	20
Styrene	ND	25

Client ID: **GW17338082306013**
Site: GM Wilmington-17338

Lab Sample No: **764262**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13144.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	1400	25
Freon TF	ND	25
MTBE	ND	25
Cyclohexane	16 J	25
1,2-Dibromoethane	ND	25
1,3-Dichlorobenzene	ND	25
1,4-Dichlorobenzene	ND	25
1,2-Dichlorobenzene	ND	25
Dichlorodifluoromethane	ND	25
Isopropylbenzene	87	25
1,2,4-Trichlorobenzene	ND	25
Methyl Acetate	ND	25
Methyl Cyclohexane	20 J	25
1,2-Dibromo-3-chloropropane	ND	25

Client ID: **GW17338082306013**
Site: GM Wilmington-17338

Lab Sample No: **764262**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13144.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Diisopropyl ether	2.49	78	
2.	Benzene, propyl-	7.57	44	
3.				
4.				
5.				
6.				
7.				
8.				
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27.				
28.				
29.				
30.				
	TOTAL ESTIMATED CONCENTRATION		122	

Client ID: **GW17338082306014**
Site: GM Wilmington-17338

Lab Sample No: **764263**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Analyzed: 08/29/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13115.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	1.5	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	59	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	12	4.0
Styrene	ND	5.0

Client ID: **GW17338082306014**
Site: GM Wilmington-17338

Lab Sample No: **764263**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Analyzed: 08/29/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13115.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	21	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **GW17338082306014**
Site: GM Wilmington-17338

Lab Sample No: **764263**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Analyzed: 08/29/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13115.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
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26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **W17338082306016**
Site: GM Wilmington-17338

Lab Sample No: **764265**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13136.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **W17338082306016**
Site: GM Wilmington-17338

Lab Sample No: **764265**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13136.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **W17338082306016**
Site: GM Wilmington-17338

Lab Sample No: **764265**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Analyzed: 08/31/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13136.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **TripBlank-082306**
Site: GM Wilmington-17338

Lab Sample No: **764266**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Analyzed: 08/29/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13116.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **TripBlank-082306**
Site: GM Wilmington-17338

Lab Sample No: **764266**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Analyzed: 08/29/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13116.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **TripBlank-082306**
Site: GM Wilmington-17338

Lab Sample No: **764266**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Analyzed: 08/29/06
GC Column: RTX-VMS
Instrument ID: VOAMS3.i
Lab File ID: ca13116.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
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27.				
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29.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **W17338082106001**
Site: GM Wilmington-17338

Lab Sample No: **763593**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23964.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **W17338082106001**
Site: GM Wilmington-17338

Lab Sample No: **763593**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23964.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **W17338082106001**
Site: GM Wilmington-17338

Lab Sample No: **763593**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23964.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
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29.				
30.				

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **GW17338082106002**
Site: GM Wilmington-17338

Lab Sample No: **763594**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23965.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	ND	11
4-Methylphenol	ND	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	ND	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.1
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
Naphthalene	ND	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11

Client ID: **GW17338082106002**
Site: GM Wilmington-17338

Lab Sample No: **763594**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23965.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Diphenyl	ND	11
Acetophenone	ND	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Atrazine	ND	11

Client ID: **GW17338082106002**
Site: GM Wilmington-17338

Lab Sample No: **763594**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23965.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
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21.				
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23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **GW17338082106003**
Site: GM Wilmington-17338

Lab Sample No: **763595**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23966.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW17338082106003**
Site: GM Wilmington-17338

Lab Sample No: **763595**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23966.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW17338082106003**
Site: GM Wilmington-17338

Lab Sample No: **763595**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23966.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
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16.				
17.				
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21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **GW17338082106004**
Site: GM Wilmington-17338

Lab Sample No: **763596**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23967.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	ND	11
4-Methylphenol	ND	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	ND	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	33
4-Nitrophenol	ND	33
4,6-Dinitro-2-methylphenol	ND	33
Pentachlorophenol	ND	33
bis(2-Chloroethyl)ether	ND	1.1
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
Naphthalene	0.5J	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11

Client ID: **GW17338082106004**
Site: GM Wilmington-17338

Lab Sample No: **763596**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23967.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Diphenyl	ND	11
Acetophenone	ND	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Atrazine	ND	11

Client ID: **GW17338082106004**
Site: GM Wilmington-17338

Lab Sample No: **763596**
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23967.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	3.67	12	
2.	2(3H)-Benzothiazolone	12.46	10	
3.	Unknown	13.89	9.5	
4.	Phenol, 4,4'-(1-methylethylidene)bis-	15.48	34	
5.	Unknown	20.17	19	
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
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21.				
22.				
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25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 84

Client ID: **GW17338082206005**
Site: GM Wilmington-17338

Lab Sample No: **763961**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23986.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	200
2-Chlorophenol	ND	200
2-Methylphenol	200 J	200
4-Methylphenol	25 J	200
2-Nitrophenol	ND	200
2,4-Dimethylphenol	ND	200
2,4-Dichlorophenol	ND	200
4-Chloro-3-methylphenol	ND	200
2,4,6-Trichlorophenol	ND	200
2,4,5-Trichlorophenol	ND	200
2,4-Dinitrophenol	ND	610
4-Nitrophenol	ND	610
4,6-Dinitro-2-methylphenol	ND	610
Pentachlorophenol	ND	610
bis(2-Chloroethyl)ether	ND	20
bis(2-chloroisopropyl)ether	ND	200
N-Nitroso-di-n-propylamine	ND	20
Hexachloroethane	ND	20
Nitrobenzene	ND	20
Isophorone	ND	200
bis(2-Chloroethoxy)methane	ND	200
Naphthalene	2400	200
4-Chloroaniline	ND	200
Hexachlorobutadiene	ND	41
2-Methylnaphthalene	58 J	200
Hexachlorocyclopentadiene	ND	200
2-Chloronaphthalene	ND	200
2-Nitroaniline	ND	410
Dimethylphthalate	ND	200
Acenaphthylene	ND	200
2,6-Dinitrotoluene	ND	41
3-Nitroaniline	ND	410
Acenaphthene	ND	200
Dibenzofuran	ND	200

Client ID: **GW17338082206005**
Site: GM Wilmington-17338

Lab Sample No: **763961**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23986.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	41
Diethylphthalate	ND	200
4-Chlorophenyl-phenylether	ND	200
Fluorene	ND	200
4-Nitroaniline	ND	410
N-Nitrosodiphenylamine	ND	200
4-Bromophenyl-phenylether	ND	200
Hexachlorobenzene	ND	20
Phenanthrene	ND	200
Anthracene	ND	200
Carbazole	ND	200
Di-n-butylphthalate	ND	200
Fluoranthene	ND	200
Pyrene	ND	200
Butylbenzylphthalate	ND	200
3,3'-Dichlorobenzidine	ND	410
Benzo(a)anthracene	ND	20
Chrysene	ND	200
bis(2-Ethylhexyl)phthalate	ND	200
Di-n-octylphthalate	ND	200
Benzo(b)fluoranthene	ND	20
Benzo(k)fluoranthene	ND	20
Benzo(a)pyrene	ND	20
Indeno(1,2,3-cd)pyrene	ND	20
Dibenz(a,h)anthracene	ND	20
Benzo(g,h,i)perylene	ND	200
Diphenyl	ND	200
Acetophenone	170 J	200
Benzaldehyde	ND	200
Caprolactam	ND	200
Atrazine	ND	200

Client ID: **GW17338082206005**
Site: GM Wilmington-17338

Lab Sample No: **763961**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23986.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	3.81	3200	
2.	Xylene isomer	5.17	1800	
3.	Xylene isomer	5.47	730	
4.	Trimethylbenzene isomer	6.97	390	
5.	Indane	7.13	400	
6.	Ethyldimethylbenzene isomer	7.30	390	
7.	Ethyldimethylbenzene isomer	7.50	380	
8.	Ethyldimethylbenzene isomer	7.53	310	
9.	Ethyldimethylbenzene isomer	7.59	720	
10.	Tetramethylbenzene isomer	7.91	370	
11.	Tetramethylbenzene isomer	7.95	530	
12.	Indan, 1-methyl-	8.16	240	
13.	Methylpropylbenzene isomer	8.28	560	
14.	Unknown	10.08	220	
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 10240

Client ID: **GW17338082206006**
Site: GM Wilmington-17338

Lab Sample No: **763962**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23969.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	9.9J	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	82	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	37	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	1.0J	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW17338082206006**
Site: GM Wilmington-17338

Lab Sample No: **763962**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23969.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	5.2J	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW17338082206006**
Site: GM Wilmington-17338

Lab Sample No: **763962**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23969.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Unknown	4.16	99	
2. Ethylbenzene	5.08	77	
3. p-Xylene	5.23	2600	
4. Unknown	7.02	220	
5. Ethyldimethylbenzene isomer	7.61	32	
6. Unknown	7.92	940	
7. Ethyldimethylbenzene isomer	7.97	34	
8. Benzenemethanol, 4-methyl-	8.11	160	
9. Ethyldimethylbenzene isomer	8.30	29	
10. Unknown	8.33	58	
11. Unknown	8.99	61	
12. Benzoic acid, 3-methyl-	9.36	98	
13. Unknown Organic Acid	9.46	77	
14. Unknown	9.88	54	
15. Unknown	10.25	340	
16. Unknown	10.60	64	
17. Unknown	10.79	68	
18. Unknown	10.93	18	
19. Unknown	10.99	33	
20. Unknown Organic Acid	11.11	110	
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION	5172

Client ID: **GW17338082206007**
Site: GM Wilmington-17338

Lab Sample No: **763963**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23985.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	220
2-Chlorophenol	ND	220
2-Methylphenol	230	220
4-Methylphenol	770	220
2-Nitrophenol	ND	220
2,4-Dimethylphenol	600	220
2,4-Dichlorophenol	ND	220
4-Chloro-3-methylphenol	ND	220
2,4,6-Trichlorophenol	ND	220
2,4,5-Trichlorophenol	ND	220
2,4-Dinitrophenol	ND	670
4-Nitrophenol	ND	670
4,6-Dinitro-2-methylphenol	ND	670
Pentachlorophenol	ND	670
bis(2-Chloroethyl)ether	ND	22
bis(2-chloroisopropyl)ether	ND	220
N-Nitroso-di-n-propylamine	ND	22
Hexachloroethane	ND	22
Nitrobenzene	ND	22
Isophorone	ND	220
bis(2-Chloroethoxy)methane	ND	220
Naphthalene	ND	220
4-Chloroaniline	ND	220
Hexachlorobutadiene	ND	44
2-Methylnaphthalene	ND	220
Hexachlorocyclopentadiene	ND	220
2-Chloronaphthalene	ND	220
2-Nitroaniline	ND	440
Dimethylphthalate	ND	220
Acenaphthylene	ND	220
2,6-Dinitrotoluene	ND	44
3-Nitroaniline	ND	440
Acenaphthene	ND	220
Dibenzofuran	ND	220

Client ID: **GW17338082206007**
Site: GM Wilmington-17338

Lab Sample No: **763963**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23985.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	44
Diethylphthalate	ND	220
4-Chlorophenyl-phenylether	ND	220
Fluorene	ND	220
4-Nitroaniline	ND	440
N-Nitrosodiphenylamine	ND	220
4-Bromophenyl-phenylether	ND	220
Hexachlorobenzene	ND	22
Phenanthrene	ND	220
Anthracene	ND	220
Carbazole	ND	220
Di-n-butylphthalate	ND	220
Fluoranthene	ND	220
Pyrene	ND	220
Butylbenzylphthalate	ND	220
3,3'-Dichlorobenzidine	ND	440
Benzo(a)anthracene	ND	22
Chrysene	ND	220
bis(2-Ethylhexyl)phthalate	ND	220
Di-n-octylphthalate	ND	220
Benzo(b)fluoranthene	ND	22
Benzo(k)fluoranthene	ND	22
Benzo(a)pyrene	ND	22
Indeno(1,2,3-cd)pyrene	ND	22
Dibenz(a,h)anthracene	ND	22
Benzo(g,h,i)perylene	ND	220
Diphenyl	ND	220
Acetophenone	ND	220
Benzaldehyde	ND	220
Caprolactam	ND	220
Atrazine	ND	220

Client ID: **GW17338082206007**
Site: GM Wilmington-17338

Lab Sample No: **763963**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23985.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Unknown	3.44	460	
2. Toluene	3.86	58000	
3. Unknown	4.12	260	
4. Unknown	4.79	400	
5. Ethylbenzene	5.08	12000	
6. Xylene isomer	5.17	13000	
7. Xylene isomer	5.48	7000	
8. Unknown	5.68	250	
9. Unknown	6.07	230	
10. Unknown	7.45	890	
11. Unknown	7.70	4300	
12. Dimethylphenol Isomer	7.80	240	
13. Unknown	8.32	360	
14. Unknown	9.07	340	
15. 1H-Inden-1-one, 2,3-dihydro-	9.49	360	
16. Unknown	10.21	16000	
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION 114090

Client ID: **GW17338082206008**
Site: GM Wilmington-17338

Lab Sample No: **763964**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23971.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	ND	11
4-Methylphenol	ND	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	ND	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.1
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
Naphthalene	0.2J	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11

Client ID: **GW17338082206008**
Site: GM Wilmington-17338

Lab Sample No: **763964**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23971.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Diphenyl	ND	11
Acetophenone	ND	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Atrazine	ND	11

Client ID: **GW17338082206008**
Site: GM Wilmington-17338

Lab Sample No: **763964**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23971.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	7.45	12	
2.	Unknown	7.63	24	
3.	Unknown	10.13	100	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 136

Client ID: **GW17338082206009**
Site: GM Wilmington-17338

Lab Sample No: **763965**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23972.d

Matrix: WATER
Level: LOW
Sample Volume: 910 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	ND	11
4-Methylphenol	ND	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	0.6J	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	33
4-Nitrophenol	ND	33
4,6-Dinitro-2-methylphenol	ND	33
Pentachlorophenol	ND	33
bis(2-Chloroethyl)ether	ND	1.1
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
Naphthalene	0.4J	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11

Client ID: **GW17338082206009**
Site: GM Wilmington-17338

Lab Sample No: **763965**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23972.d

Matrix: WATER
Level: LOW
Sample Volume: 910 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Diphenyl	ND	11
Acetophenone	ND	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Atrazine	ND	11

Client ID: **GW17338082206009**
Site: GM Wilmington-17338

Lab Sample No: **763965**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23972.d

Matrix: WATER
Level: LOW
Sample Volume: 910 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Xylene isomer	5.17	37	
2.	Ethylmethylbenzene isomer	5.85	11	
3.	Unknown	10.09	11	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
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26.				
27.				
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29.				
30.				

TOTAL ESTIMATED CONCENTRATION 59

Client ID: **GW17338082206010**
Site: GM Wilmington-17338

Lab Sample No: **763966**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23984.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	210
2-Chlorophenol	ND	210
2-Methylphenol	ND	210
4-Methylphenol	62 J	210
2-Nitrophenol	ND	210
2,4-Dimethylphenol	61 J	210
2,4-Dichlorophenol	ND	210
4-Chloro-3-methylphenol	ND	210
2,4,6-Trichlorophenol	ND	210
2,4,5-Trichlorophenol	ND	210
2,4-Dinitrophenol	ND	620
4-Nitrophenol	ND	620
4,6-Dinitro-2-methylphenol	ND	620
Pentachlorophenol	ND	620
bis(2-Chloroethyl)ether	ND	21
bis(2-chloroisopropyl)ether	ND	210
N-Nitroso-di-n-propylamine	ND	21
Hexachloroethane	ND	21
Nitrobenzene	ND	21
Isophorone	ND	210
bis(2-Chloroethoxy)methane	ND	210
Naphthalene	ND	210
4-Chloroaniline	ND	210
Hexachlorobutadiene	ND	41
2-Methylnaphthalene	ND	210
Hexachlorocyclopentadiene	ND	210
2-Chloronaphthalene	ND	210
2-Nitroaniline	ND	410
Dimethylphthalate	ND	210
Acenaphthylene	ND	210
2,6-Dinitrotoluene	ND	41
3-Nitroaniline	ND	410
Acenaphthene	ND	210
Dibenzofuran	ND	210

Client ID: **GW17338082206010**
Site: GM Wilmington-17338

Lab Sample No: **763966**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23984.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	41
Diethylphthalate	ND	210
4-Chlorophenyl-phenylether	ND	210
Fluorene	ND	210
4-Nitroaniline	ND	410
N-Nitrosodiphenylamine	ND	210
4-Bromophenyl-phenylether	ND	210
Hexachlorobenzene	ND	21
Phenanthrene	ND	210
Anthracene	ND	210
Carbazole	ND	210
Di-n-butylphthalate	ND	210
Fluoranthene	ND	210
Pyrene	ND	210
Butylbenzylphthalate	ND	210
3,3'-Dichlorobenzidine	ND	410
Benzo(a)anthracene	ND	21
Chrysene	ND	210
bis(2-Ethylhexyl)phthalate	ND	210
Di-n-octylphthalate	ND	210
Benzo(b)fluoranthene	ND	21
Benzo(k)fluoranthene	ND	21
Benzo(a)pyrene	ND	21
Indeno(1,2,3-cd)pyrene	ND	21
Dibenz(a,h)anthracene	ND	21
Benzo(g,h,i)perylene	ND	210
Diphenyl	ND	210
Acetophenone	ND	210
Benzaldehyde	ND	210
Caprolactam	ND	210
Atrazine	ND	210

Client ID: **GW17338082206010**
Site: GM Wilmington-17338

Lab Sample No: **763966**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23984.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 20.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Toluene	3.82	4000	
2. Unknown	4.48	6400	
3. Ethylbenzene	5.07	7000	
4. Xylene isomer	5.17	6600	
5. Xylene isomer	5.47	720	
6. Ethanol, 2-butoxy-	5.61	12000	
7. Unknown	6.79	20000	
8. Unknown	7.93	22000	
9. Unknown	7.99	180	
10. Octanoic Acid	8.48	6000	
11. Unknown	8.59	12000	
12. Unknown	8.97	810	
13. Unknown	9.49	260	
14. Unknown	10.28	33000	
15. Unknown	11.39	250	
16. Unknown	13.20	610	
17. Ethanol, 2-(2-butoxyethoxy)-	14.76	350	
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION	132180

Client ID: **GW17338082206011**
Site: GM Wilmington-17338

Lab Sample No: **763967**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23980.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	36	10
4-Methylphenol	5.6J	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	7.3J	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	31
4-Nitrophenol	ND	31
4,6-Dinitro-2-methylphenol	ND	31
Pentachlorophenol	ND	31
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	2.4J	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	0.6J	10
Dibenzofuran	ND	10

Client ID: **GW17338082206011**
Site: GM Wilmington-17338

Lab Sample No: **763967**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23980.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	1.1J	10
Pyrene	0.5J	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	1.4J	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW17338082206011**
Site: GM Wilmington-17338

Lab Sample No: **763967**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23980.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	3.82	58	
2.	Xylene isomer	5.17	100	
3.	Xylene isomer	5.47	59	
4.	Indane	7.13	53	
5.	Diethylbenzene isomer	7.28	26	
6.	Ethyldimethylbenzene isomer	7.59	10	
7.	Benzenemethanol, 4-methyl-	8.06	21	
8.	Indan, 1-methyl-	8.28	9.3	
9.	1H-Inden-1-ol, 2,3-dihydro-	9.02	17	
10.	1,3,5-Triazine-2,4-diamine, 6-phenyl-	14.70	17	
11.	Phenol, 4,4'-(1-methylethylidene)bis-	15.51	440	
12.	Unknown	20.17	58	
13.				
14.				
15.				
16.				
17.				
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TOTAL ESTIMATED CONCENTRATION 868

Client ID: **GW17338082206012**
Site: GM Wilmington-17338

Lab Sample No: **763968**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23981.d

Matrix: WATER
Level: LOW
Sample Volume: 960 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	31
4-Nitrophenol	ND	31
4,6-Dinitro-2-methylphenol	ND	31
Pentachlorophenol	ND	31
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW17338082206012**
Site: GM Wilmington-17338

Lab Sample No: **763968**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23981.d

Matrix: WATER
Level: LOW
Sample Volume: 960 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW17338082206012**
Site: GM Wilmington-17338

Lab Sample No: **763968**
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/22/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23981.d

Matrix: WATER
Level: LOW
Sample Volume: 960 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	3.66	24	
2.	Toluene	3.82	11	
3.	Benzene, chloro-	4.89	39	
4.	Ethylbenzene	5.07	25	
5.	Xylene isomer	5.16	26	
6.	1H-Benzotriazole, 5-methyl-	11.43	55	
7.	Unknown	11.73	37	
8.	Unknown	12.63	8.9	
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TOTAL ESTIMATED CONCENTRATION 226

Client ID: **GW17338082306013**
Site: GM Wilmington-17338

Lab Sample No: **764262**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23977.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	0.6J	11
4-Methylphenol	ND	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	2.1J	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	33
4-Nitrophenol	ND	33
4,6-Dinitro-2-methylphenol	ND	33
Pentachlorophenol	ND	33
bis(2-Chloroethyl)ether	ND	1.1
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
Naphthalene	6.2J	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	2.6J	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11

Client ID: **GW17338082306013**
Site: GM Wilmington-17338

Lab Sample No: **764262**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23977.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Diphenyl	ND	11
Acetophenone	ND	11
Benzaldehyde	ND	11
Caprolactam	5.1J	11
Atrazine	ND	11

Client ID: **GW17338082306013**
Site: GM Wilmington-17338

Lab Sample No: **764262**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Extracted: 08/25/06
Date Analyzed: 09/11/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23977.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Toluene	3.82	190	
2. Ethylbenzene	5.07	240	
3. Xylene isomer	5.17	530	
4. Xylene isomer	5.47	150	
5. Ethylmethylbenzene isomer	5.84	84	
6. Benzene, propyl-	6.18	40	
7. Ethyldimethylbenzene isomer	7.59	29	
8. Methylpropylbenzene isomer	8.28	13	
9. Unknown	10.09	15	
10.			
11.			
12.			
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16.			
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TOTAL ESTIMATED CONCENTRATION	1291

Client ID: **GW17338082306014**
Site: GM Wilmington-17338

Lab Sample No: **764263**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23960.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	ND	11
4-Methylphenol	ND	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	ND	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	33
4-Nitrophenol	ND	33
4,6-Dinitro-2-methylphenol	ND	33
Pentachlorophenol	ND	33
bis(2-Chloroethyl)ether	ND	1.1
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
Naphthalene	ND	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11

Client ID: **GW17338082306014**
Site: GM Wilmington-17338

Lab Sample No: **764263**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23960.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Diphenyl	ND	11
Acetophenone	ND	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Atrazine	ND	11

Client ID: **GW17338082306014**
Site: GM Wilmington-17338

Lab Sample No: **764263**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23960.d

Matrix: WATER
Level: LOW
Sample Volume: 900 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	3.83	20	
2.	Xylene isomer	5.18	9.3	
3.	Unknown	18.05	50	
4.	Unknown	20.92	14	
5.	Unknown	26.46	11	
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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TOTAL ESTIMATED CONCENTRATION: 104

Client ID: **W17338082306016**
Site: GM Wilmington-17338

Lab Sample No: **764265**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23963.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **W17338082306016**
Site: GM Wilmington-17338

Lab Sample No: **764265**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23963.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **W17338082306016**
Site: GM Wilmington-17338

Lab Sample No: **764265**
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/23/06
Date Extracted: 08/25/06
Date Analyzed: 09/10/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s23963.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **W17338082106001**
Site: **GM Wilmington-17338**

Lab Sample No: 763593
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	ND	1.3		P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	ND	74.5		P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	ND	3.1		P
Iron	ND	39.7		P
Lead	ND	2.2		P
Magnesium	ND	70.0		P
Manganese	ND	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	ND	130		P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	ND	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	24.4	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW17338082106002**
Site: **GM Wilmington-17338**

Lab Sample No: 763594
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	1000	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	292	1.3		P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	25900	74.5		P
Chromium	7.1	2.8	B	P
Cobalt	86.2	3.5		P
Copper	ND	3.1		P
Iron	13100	39.7		P
Lead	ND	2.2		P
Magnesium	17600	70.0		P
Manganese	970	2.9		P
Mercury	ND	0.10		CV
Nickel	5.3	3.9	B	P
Potassium	4470	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	79600	361		P
Thallium	ND	4.8		P
Vanadium	1.8	1.5	B	P
Zinc	67.0	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW17338082106003**
Site: **GM Wilmington-17338**

Lab Sample No: 763595
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	395	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	172	1.3	B	P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	30400	74.5		P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	ND	3.1		P
Iron	1450	39.7		P
Lead	3.2	2.2		P
Magnesium	13100	70.0		P
Manganese	222	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	4450	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	52100	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	12.1	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **6002-DISSOLVED**
Site: **GM Wilmington-17338**

Lab Sample No: 763598
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	294	1.3		P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	27600	74.5		P
Chromium	7.6	2.8	B	P
Cobalt	86.7	3.5		P
Copper	ND	3.1		P
Iron	6890	39.7		P
Lead	ND	2.2		P
Magnesium	18500	70.0		P
Manganese	993	2.9		P
Mercury	ND	0.10		CV
Nickel	4.0	3.9	B	P
Potassium	4720	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	83800	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	100	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **6003-DISSOLVED**
Site: **GM Wilmington-17338**

Lab Sample No: 763599
Lab Job No: W081

Date Sampled: 08/21/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	170	1.3	B	P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	30200	74.5		P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	ND	3.1		P
Iron	ND	39.7		P
Lead	ND	2.2		P
Magnesium	13100	70.0		P
Manganese	211	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	4510	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	52500	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	7.7	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW17338082206005**
Site: **GM Wilmington-17338**

Lab Sample No: 763961
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	4470	77.4		P
Antimony	ND	4.9		P
Arsenic	25.5	4.5		P
Barium	374	1.3		P
Beryllium	0.26	0.10	B	P
Cadmium	ND	0.50		P
Calcium	55600	74.5		P
Chromium	8.6	2.8	B	P
Cobalt	4.7	3.5	B	P
Copper	4.6	3.1	B	P
Iron	70200	39.7		P
Lead	2.5	2.2	B	P
Magnesium	26600	70.0		P
Manganese	694	2.9		P
Mercury	ND	0.10		CV
Nickel	4.5	3.9	B	P
Potassium	5790	130		P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	98200	361		P
Thallium	ND	4.8		P
Vanadium	10.5	1.5	B	P
Zinc	19.9	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW17338082206006**
Site: **GM Wilmington-17338**

Lab Sample No: 763962
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	8570	77.4		P
Antimony	ND	4.9		P
Arsenic	9.4	4.5		P
Barium	169	1.3	B	P
Beryllium	0.26	0.10	B	P
Cadmium	ND	0.50		P
Calcium	32100	74.5		P
Chromium	26.2	2.8		P
Cobalt	ND	3.5		P
Copper	10.8	3.1	B	P
Iron	60900	39.7		P
Lead	15.6	2.2		P
Magnesium	35400	70.0		P
Manganese	330	2.9		P
Mercury	ND	0.10		CV
Nickel	10.0	3.9	B	P
Potassium	2340	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	33500	361		P
Thallium	ND	4.8		P
Vanadium	26.6	1.5	B	P
Zinc	79.2	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW17338082206007**
Site: **GM Wilmington-17338**

Lab Sample No: 763963
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	439	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	460	1.3		P
Beryllium	0.23	0.10	B	P
Cadmium	ND	0.50		P
Calcium	70900	74.5		P
Chromium	5.3	2.8	B	P
Cobalt	ND	3.5		P
Copper	3.9	3.1	B	P
Iron	217000	39.7		P
Lead	7.2	2.2		P
Magnesium	70800	70.0		P
Manganese	17800	2.9		P
Mercury	0.15	0.10	B	CV
Nickel	ND	3.9		P
Potassium	2860	130	B	P
Selenium	ND	9.6		P
Silver	ND	1.2		P
Sodium	57000	361		P
Thallium	ND	4.8		P
Vanadium	2.7	1.5	B	P
Zinc	37.6	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW17338082206008**
Site: **GM Wilmington-17338**

Lab Sample No: 763964
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	602	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	286	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	40200	42.5		P
Chromium	ND	1.6		P
Cobalt	4.0	1.7	B	P
Copper	4.3	3.7	B	P
Iron	31800	39.2		P
Lead	ND	2.7		P
Magnesium	22300	41.6		P
Manganese	824	1.2		P
Mercury	ND	0.10		CV
Nickel	3.1	2.4	B	P
Potassium	5560	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	61000	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	11.8	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW17338082206009**
Site: **GM Wilmington-17338**

Lab Sample No: 763965
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	650	62.6		P
Antimony	ND	5.8		P
Arsenic	13.9	3.2		P
Barium	499	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	43700	42.5		P
Chromium	ND	1.6		P
Cobalt	2.7	1.7	B	P
Copper	6.0	3.7	B	P
Iron	72100	39.2		P
Lead	ND	2.7		P
Magnesium	33200	41.6		P
Manganese	1220	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	5920	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	151000	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	42.2	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW17338082206010**
Site: **GM Wilmington-17338**

Lab Sample No: 763966
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	2350	62.6		P
Antimony	ND	5.8		P
Arsenic	42.1	3.2		P
Barium	401	1.7		P
Beryllium	0.31	0.30	B	P
Cadmium	ND	0.40		P
Calcium	91500	42.5		P
Chromium	3.6	1.6	B	P
Cobalt	234	1.7		P
Copper	ND	3.7		P
Iron	167000	39.2		P
Lead	ND	2.7		P
Magnesium	71200	41.6		P
Manganese	1930	1.2		P
Mercury	ND	0.10		CV
Nickel	8.1	2.4	B	P
Potassium	4580	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	85800	396		P
Thallium	ND	4.7		P
Vanadium	6.3	4.7	B	P
Zinc	15.9	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW17338082206011**
Site: **GM Wilmington-17338**

Lab Sample No: 763967
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	811	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	442	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	73000	42.5		P
Chromium	2.6	1.6	B	P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	25300	39.2		P
Lead	ND	2.7		P
Magnesium	26700	41.6		P
Manganese	1050	1.2		P
Mercury	ND	0.10		CV
Nickel	3.5	2.4	B	P
Potassium	14100	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	98800	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	16.6	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW17338082206012**
Site: **GM Wilmington-17338**

Lab Sample No: 763968
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	626	62.6		P
Antimony	ND	5.8		P
Arsenic	8.3	3.2		P
Barium	269	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	29000	42.5		P
Chromium	ND	1.6		P
Cobalt	20.8	1.7	B	P
Copper	ND	3.7		P
Iron	57100	39.2		P
Lead	ND	2.7		P
Magnesium	25200	41.6		P
Manganese	2250	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	2730	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	52300	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	8.3	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **06005-DISSOLVED**
Site: **GM Wilmington-17338**

Lab Sample No: 763970
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	211	62.6		P
Antimony	ND	5.8		P
Arsenic	23.6	3.2		P
Barium	432	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	65400	42.5		P
Chromium	ND	1.6		P
Cobalt	2.2	1.7	B	P
Copper	ND	3.7		P
Iron	65700	39.2		P
Lead	ND	2.7		P
Magnesium	31600	41.6		P
Manganese	724	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	7750	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	117000	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	8.5	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **06006-DISSOLVED**
Site: **GM Wilmington-17338**

Lab Sample No: 763971
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	6.9	3.2		P
Barium	155	1.7	B	P
Beryllium	0.31	0.30	B	P
Cadmium	ND	0.40		P
Calcium	34900	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	59900	39.2		P
Lead	ND	2.7		P
Magnesium	38300	41.6		P
Manganese	367	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	2600	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	36900	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **06007-DISSOLVED**
Site: **GM Wilmington-17338**

Lab Sample No: 763972
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	259	125	B	P
Antimony	ND	11.6		P
Arsenic	ND	6.4		P
Barium	533	3.4		P
Beryllium	ND	0.60		P
Cadmium	ND	0.80		P
Calcium	80900	85.0		P
Chromium	4.7	3.2	B	P
Cobalt	ND	3.4		P
Copper	ND	7.4		P
Iron	245000	78.4		P
Lead	ND	5.4		P
Magnesium	81900	83.2		P
Manganese	21000	6.0		P
Mercury	0.14	0.10	B	CV
Nickel	ND	4.8		P
Potassium	4000	631	B	P
Selenium	ND	8.4		P
Silver	ND	2.8		P
Sodium	64500	791		P
Thallium	ND	9.4		P
Vanadium	ND	9.4		P
Zinc	ND	11.6		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **06008-DISSOLVED**
Site: **GM Wilmington-17338**

Lab Sample No: 763973
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	296	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	42200	42.5		P
Chromium	ND	1.6		P
Cobalt	3.0	1.7	B	P
Copper	ND	3.7		P
Iron	32200	39.2		P
Lead	ND	2.7		P
Magnesium	23200	41.6		P
Manganese	888	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	5780	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	63900	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	9.4	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **06009-DISSOLVED**
Site: **GM Wilmington-17338**

Lab Sample No: 763974
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	14.9	3.2		P
Barium	506	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	44200	42.5		P
Chromium	ND	1.6		P
Cobalt	2.8	1.7	B	P
Copper	ND	3.7		P
Iron	73400	39.2		P
Lead	ND	2.7		P
Magnesium	33800	41.6		P
Manganese	1280	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	5920	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	155000	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	13.0	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **06010-DISSOLVED**
Site: **GM Wilmington-17338**

Lab Sample No: 763975
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	43.7	3.2		P
Barium	397	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	92100	42.5		P
Chromium	ND	1.6		P
Cobalt	216	1.7		P
Copper	ND	3.7		P
Iron	159000	39.2		P
Lead	ND	2.7		P
Magnesium	71900	41.6		P
Manganese	1800	1.2		P
Mercury	ND	0.10		CV
Nickel	5.3	2.4	B	P
Potassium	4580	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	92100	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	7.7	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **06011-DISSOLVED**
Site: **GM Wilmington-17338**

Lab Sample No: 763976
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	485	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	81100	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	26300	39.2		P
Lead	ND	2.7		P
Magnesium	29900	41.6		P
Manganese	1140	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	15700	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	110000	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	19.7	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **06012-DISSOLVED**
Site: **GM Wilmington-17338**

Lab Sample No: 763977
Lab Job No: W081

Date Sampled: 08/22/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	7.3	3.2		P
Barium	264	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	29000	42.5		P
Chromium	ND	1.6		P
Cobalt	20.2	1.7	B	P
Copper	ND	3.7		P
Iron	56200	39.2		P
Lead	ND	2.7		P
Magnesium	24200	41.6		P
Manganese	2130	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	2750	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	53200	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	7.3	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW17338082306013**
Site: **GM Wilmington-17338**

Lab Sample No: 764262
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	5500	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	449	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	40000	42.5		P
Chromium	9.0	1.6	B	P
Cobalt	7.9	1.7	B	P
Copper	7.1	3.7	B	P
Iron	31900	39.2		P
Lead	3.8	2.7	B	P
Magnesium	33400	41.6		P
Manganese	1200	1.2		P
Mercury	ND	0.10		CV
Nickel	6.5	2.4	B	P
Potassium	5170	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	70600	396		P
Thallium	ND	4.7		P
Vanadium	13.2	4.7	B	P
Zinc	20.3	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW17338082306014**
Site: **GM Wilmington-17338**

Lab Sample No: 764263
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	125		P
Antimony	ND	11.6		P
Arsenic	ND	6.4		P
Barium	280	3.4	B	P
Beryllium	ND	0.60		P
Cadmium	ND	0.80		P
Calcium	52600	85.0		P
Chromium	ND	3.2		P
Cobalt	ND	3.4		P
Copper	ND	7.4		P
Iron	ND	78.4		P
Lead	ND	5.4		P
Magnesium	31000	83.2		P
Manganese	50.9	2.4		P
Mercury	ND	0.10		CV
Nickel	ND	4.8		P
Potassium	6830	631	B	P
Selenium	ND	8.4		P
Silver	ND	2.8		P
Sodium	273000	791		P
Thallium	ND	9.4		P
Vanadium	ND	9.4		P
Zinc	20.0	11.6	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW17338082306015**
Site: **GM Wilmington-17338**

Lab Sample No: 764264
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	257	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	296	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	47300	42.5		P
Chromium	ND	1.6		P
Cobalt	22.2	1.7	B	P
Copper	ND	3.7		P
Iron	54600	39.2		P
Lead	ND	2.7		P
Magnesium	31800	41.6		P
Manganese	1980	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	2790	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	60000	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **W17338082306016**
Site: **GM Wilmington-17338**

Lab Sample No: 764265
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	ND	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	ND	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	ND	39.2		P
Lead	ND	2.7		P
Magnesium	ND	41.6		P
Manganese	ND	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	318	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	ND	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	8.4	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **06013-DISSOLVED**
Site: **GM Wilmington-17338**

Lab Sample No: 764267
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	431	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	42000	42.5		P
Chromium	ND	1.6		P
Cobalt	4.2	1.7	B	P
Copper	ND	3.7		P
Iron	31200	39.2		P
Lead	ND	2.7		P
Magnesium	34400	41.6		P
Manganese	1260	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	5080	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	72100	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	6.7	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **06014-DISSOLVED**
Site: **GM Wilmington-17338**

Lab Sample No: 764268
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	125		P
Antimony	ND	11.6		P
Arsenic	ND	6.4		P
Barium	293	3.4	B	P
Beryllium	ND	0.60		P
Cadmium	ND	0.80		P
Calcium	53800	85.0		P
Chromium	ND	3.2		P
Cobalt	ND	3.4		P
Copper	ND	7.4		P
Iron	ND	78.4		P
Lead	ND	5.4		P
Magnesium	32200	83.2		P
Manganese	51.9	2.4		P
Mercury	ND	0.10		CV
Nickel	ND	4.8		P
Potassium	6940	631	B	P
Selenium	ND	8.4		P
Silver	ND	2.8		P
Sodium	274000	791		P
Thallium	ND	9.4		P
Vanadium	ND	9.4		P
Zinc	14.5	11.6	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **06015-DISSOLVED**
Site: **GM Wilmington-17338**

Lab Sample No: 764269
Lab Job No: W081

Date Sampled: 08/23/06
Date Received: 08/21/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	305	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	48700	42.5		P
Chromium	ND	1.6		P
Cobalt	22.4	1.7	B	P
Copper	ND	3.7		P
Iron	56600	39.2		P
Lead	ND	2.7		P
Magnesium	33100	41.6		P
Manganese	2050	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	2850	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	61700	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	8.6	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Site: GM Wilmington-17338 Lab Job No: W081
Matrix: WATER QA Batch: 4038

Chromium VI (7196A)

STL Edison Sample #	Client ID	Date Sampled	Date Extracted	Date Analyzed	DF	Analytical Result Units:ug/l	Reporting Limit Units:ug/l
763593	W17338082106001	08/21/06	08/22/06	08/22/06	1.0	ND	10.0
763594	GW17338082106002	08/21/06	08/22/06	08/22/06	1.0	ND	10.0
763595	GW17338082106003	08/21/06	08/22/06	08/22/06	1.0	ND	10.0
763598	6002-DISSOLVED	08/21/06	08/22/06	08/22/06	1.0	ND	10.0
763599	6003-DISSOLVED	08/21/06	08/22/06	08/22/06	1.0	ND	10.0

Site: GM Wilmington-17338 Lab Job No: W081
Matrix: WATER QA Batch: 4041

Chromium VI (7196A)

STL Edison Sample #	Client ID	Date Sampled	Date Extracted	Date Analyzed	DF	Analytical Result Units:ug/l	Reporting Limit Units:ug/l
763961	GW173380822060005	08/22/06	08/23/06	08/23/06	2.0	ND	20.0
763962	GW173380822060006	08/22/06	08/23/06	08/23/06	4.0	ND	40.0
763963	GW173380822060007	08/22/06	08/23/06	08/23/06	2.0	ND	20.0
763964	GW173380822060008	08/22/06	08/23/06	08/23/06	1.0	ND	10.0
763965	GW173380822060009	08/22/06	08/23/06	08/23/06	2.0	ND	20.0
763966	GW173380822060010	08/22/06	08/23/06	08/23/06	5.0	ND	50.0
763967	GW173380822060011	08/22/06	08/23/06	08/23/06	1.0	ND	10.0
763968	GW173380822060012	08/22/06	08/23/06	08/23/06	2.0	ND	20.0
763970	06005-DISSOLVED	08/22/06	08/23/06	08/23/06	2.0	ND	20.0
763971	06006-DISSOLVED	08/22/06	08/23/06	08/23/06	2.0	ND	20.0
763972	06007-DISSOLVED	08/22/06	08/23/06	08/23/06	1.0	ND	10.0
763973	06008-DISSOLVED	08/22/06	08/23/06	08/23/06	1.0	ND	10.0
763974	06009-DISSOLVED	08/22/06	08/23/06	08/23/06	2.0	ND	20.0
763975	06010-DISSOLVED	08/22/06	08/23/06	08/23/06	2.0	ND	20.0
763976	06011-DISSOLVED	08/22/06	08/23/06	08/23/06	1.0	ND	10.0
763977	06012-DISSOLVED	08/22/06	08/23/06	08/23/06	5.0	ND	50.0
764262	GW173380823060013	08/23/06	08/23/06	08/23/06	1.0	ND	10.0
764263	GW173380823060014	08/23/06	08/23/06	08/23/06	1.0	ND	10.0
764264	GW173380823060015	08/23/06	08/23/06	08/23/06	4.0	ND	40.0
764265	W17338082306016	08/23/06	08/23/06	08/23/06	1.0	ND	10.0
764267	06013-DISSOLVED	08/23/06	08/23/06	08/23/06	1.0	ND	10.0
764268	06014-DISSOLVED	08/23/06	08/23/06	08/23/06	1.0	ND	10.0
764269	06015-DISSOLVED	08/23/06	08/23/06	08/23/06	5.0	ND	50.0

STL Edison
777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
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09/28/2006

Conestoga-Rovers & Associates
2371 George Urban Blvd
Depew, NY 14043

Attention: Ms. Susan Scrocchi

Laboratory Results
Job No. W673 - GM Wilmington-17338 (Revised)

Dear Ms. Scrocchi:

Enclosed are the results you requested for the following sample(s) received at our laboratory on September 6, 2006.

Lab No.	Client ID	Analysis Required
767333	GW1733809060601	TCL VOA+10 Special TCL BNA+20 Special TAL Metals Chrome VI (7196A)
767334	GW1733809060602	TCL VOA+10 Special TCL BNA+20 Special TAL Metals Chrome VI (7196A)
767335	GW1733809060603	TCL VOA+10 Special TCL BNA+20 Special TAL Metals Chrome VI (7196A)
767336	GW1733809060604	TCL VOA+10 Special TCL BNA+20 Special TAL Metals Chrome VI (7196A)
767337	GW1733809060605	TCL VOA+10 Special TCL BNA+20 Special TAL Metals Chrome VI (7196A)
767338	GW1733809060606	TCL VOA+10 Special

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Laboratory Results
Job No. W673 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
		TCL BNA+20 Special TAL Metals Chrome VI (7196A)
767339	GW1733809060607	TCL VOA+10 Special TCL BNA+20 Special TAL Metals Chrome VI (7196A)
767340	TB09060601	TCL VOA+10 Special
767341	GW1733809060601d	TAL Metals Chrome VI (7196A)
767342	GW1733809060602d	TAL Metals Chrome VI (7196A)
767343	GW1733809060603d	TAL Metals Chrome VI (7196A)
767344	GW1733809060604d	TAL Metals Chrome VI (7196A)
767345	GW1733809060605d	TAL Metals Chrome VI (7196A)
767346	GW1733809060606d	TAL Metals

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Laboratory Results
Job No. W673 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
		Chrome VI (7196A)
767347	GW1733809060607d	TAL Metals
		Chrome VI (7196A)
767637	GW1733809070608	TCL VOA+10 Special
		TCL BNA+20 Special
		TAL Metals
		Chrome VI (7196A)
767638	GW1733809070609	TCL VOA+10 Special
		TCL BNA+20 Special
		TAL Metals
		Chrome VI (7196A)
767639	W1733809070610	TCL VOA+10 Special
		TCL BNA+20 Special
		TAL Metals
		Chrome VI (7196A)
767640	TB09070602	TCL VOA+10 Special
767641	GW1733809070608d	TAL Metals
		Chrome VI (7196A)
767642	GW1733809070609d	TAL Metals

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Laboratory Results
Job No. W673 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
		Chrome VI (7196A)
767643	W1733809070610d	TAL Metals
		Chrome VI (7196A)

If you have any questions please contact your Project Manager, Joy Kelly, at (732) 549-3900.

Very Truly Yours,

Michael Urban
Laboratory Manager

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Analytical Results Summary

Client ID: **GW1733809060601**
Site: GM Wilmington-17338

Lab Sample No: **767333**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46499.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	36	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	0.4J	5.0
Chlorobenzene	8.5	5.0
Ethylbenzene	0.9J	4.0
Styrene	ND	5.0

Client ID: **GW1733809060601**
Site: GM Wilmington-17338

Lab Sample No: **767333**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46499.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	72	5.0
Freon TF	ND	5.0
MTBE	10	5.0
Cyclohexane	32	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	0.4J	5.0
1,4-Dichlorobenzene	6.7	5.0
1,2-Dichlorobenzene	3.5J	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	14	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	7.0	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **GW1733809060601**
Site: GM Wilmington-17338

Lab Sample No: **767333**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46499.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Diisopropyl ether	5.76	5.2	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 5.2

Client ID: **GW1733809060602**
Site: GM Wilmington-17338

Lab Sample No: **767334**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46486.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 20.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	100
Bromomethane	ND	100
Vinyl Chloride	ND	100
Chloroethane	ND	100
Methylene Chloride	ND	60
Acetone	ND	100
Carbon Disulfide	ND	100
Trichlorofluoromethane	ND	100
1,1-Dichloroethene	ND	40
1,1-Dichloroethane	ND	100
trans-1,2-Dichloroethene	ND	100
cis-1,2-Dichloroethene	ND	100
Chloroform	ND	100
1,2-Dichloroethane	ND	40
2-Butanone	ND	100
1,1,1-Trichloroethane	ND	100
Carbon Tetrachloride	ND	40
Bromodichloromethane	ND	20
1,2-Dichloropropane	ND	20
cis-1,3-Dichloropropene	ND	100
Trichloroethene	ND	20
Dibromochloromethane	ND	100
1,1,2-Trichloroethane	ND	60
Benzene	24	20
trans-1,3-Dichloropropene	ND	100
Bromoform	ND	80
4-Methyl-2-Pentanone	ND	100
2-Hexanone	ND	100
Tetrachloroethene	ND	20
1,1,2,2-Tetrachloroethane	ND	20
Toluene	*	100
Chlorobenzene	ND	100
Ethylbenzene	*	80
Styrene	ND	100

*See Dilution

Client ID: **GW1733809060602**
Site: GM Wilmington-17338

Lab Sample No: **767334**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46486.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 20.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	8000	100
Freon TF	ND	100
MTBE	ND	100
Cyclohexane	79 J	100
1,2-Dibromoethane	ND	100
1,3-Dichlorobenzene	ND	100
1,4-Dichlorobenzene	ND	100
1,2-Dichlorobenzene	ND	100
Dichlorodifluoromethane	ND	100
Isopropylbenzene	28 J	100
1,2,4-Trichlorobenzene	ND	100
Methyl Acetate	ND	100
Methyl Cyclohexane	200	100
1,2-Dibromo-3-chloropropane	ND	100

Client ID: **GW1733809060602**
Site: GM Wilmington-17338

Lab Sample No: **767334**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46486.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 20.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown Alcohol	8.17	110	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	110

Client ID: **GW1733809060602D1**
Site: GM Wilmington-17338

Lab Sample No: **767334D1**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46512.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 100.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Toluene	17000	500
Ethylbenzene	4100	400

Client ID: **GW1733809060603**
Site: GM Wilmington-17338

Lab Sample No: **767335**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46480.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	0.7J	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	25	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	9.8	4.0
Styrene	ND	5.0

Client ID: **GW1733809060603**
Site: GM Wilmington-17338

Lab Sample No: **767335**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46480.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	19	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	36	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **GW1733809060603**
Site: GM Wilmington-17338

Lab Sample No: **767335**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46480.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733809060604**
Site: GM Wilmington-17338

Lab Sample No: **767336**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46481.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	0.7J	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	29	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	10	4.0
Styrene	ND	5.0

Client ID: **GW1733809060604**
Site: GM Wilmington-17338

Lab Sample No: **767336**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46481.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	16	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **GW1733809060604**
Site: GM Wilmington-17338

Lab Sample No: **767336**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46481.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	5.00	8.3	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	8.3

Client ID: **GW1733809060605**
Site: GM Wilmington-17338

Lab Sample No: **767337**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46483.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	6.6	5.0
Ethylbenzene	9.4	4.0
Styrene	ND	5.0

Client ID: **GW1733809060605**
Site: GM Wilmington-17338

Lab Sample No: **767337**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46483.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	4.8J	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	0.6J	5.0
1,4-Dichlorobenzene	9.6	5.0
1,2-Dichlorobenzene	4.9J	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	32	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	20	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **GW1733809060605**
Site: GM Wilmington-17338

Lab Sample No: **767337**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46483.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Benzene, propyl-	12.99	20	
2.	Trimethylbenzene isomer	13.56	7.7	
3.	C9H10 Aromatic	14.21	140	
4.	Methyl-methylethylbenzene isomer	14.61	13	
5.	C10H12 Aromatic	14.76	23	
6.	Ethyldimethylbenzene isomer	15.00	18	
7.	C10H12 Aromatic	15.51	36	
8.	Methyl-1H-Indene isomer	15.69	7.5	
9.	Coeluting Aromatics	15.81	6.1	
10.	Naphthalene	16.19	8.7	
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 280

Client ID: **GW1733809060606**
Site: GM Wilmington-17338

Lab Sample No: **767338**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46484.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	3.1J	5.0
Ethylbenzene	9.8	4.0
Styrene	ND	5.0

Client ID: **GW1733809060606**
Site: GM Wilmington-17338

Lab Sample No: **767338**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46484.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	3.2J	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	4.4J	5.0
1,2-Dichlorobenzene	2.3J	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	32	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	3.4J	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **GW1733809060606**
Site: GM Wilmington-17338

Lab Sample No: **767338**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46484.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Benzene, propyl-	13.00	24	
2.	Ethylmethylbenzene isomer	13.10	6.0	
3.	Trimethylbenzene isomer	13.56	8.6	
4.	C9H10 Aromatic	14.22	150	
5.	Ethyldimethylbenzene isomer	14.61	14	
6.	C10H12 Aromatic	14.77	20	
7.	2,3-dihydro-methyl-1H-Indene isomer	15.35	17	
8.	C10H12 Aromatic	15.50	37	
9.	Methyl-1H-Indene isomer	15.69	6.0	
10.	Naphthalene	16.18	7.6	
11.				
12.				
13.				
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TOTAL ESTIMATED CONCENTRATION	290

Client ID: **GW1733809060607**
Site: GM Wilmington-17338

Lab Sample No: **767339**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46479.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	12	5.0
Ethylbenzene	1.2J	4.0
Styrene	ND	5.0

Client ID: **GW1733809060607**
Site: GM Wilmington-17338

Lab Sample No: **767339**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46479.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	4.5J	5.0
Freon TF	ND	5.0
MTBE	0.6J	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	14	5.0
1,2-Dichlorobenzene	6.8	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **GW1733809060607**
Site: GM Wilmington-17338

Lab Sample No: **767339**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46479.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
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11.				
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30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **TB09060601**
Site: GM Wilmington-17338

Lab Sample No: **767340**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46496.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	1.7J	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **TB09060601**
Site: GM Wilmington-17338

Lab Sample No: **767340**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46496.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **TB09060601**
Site: GM Wilmington-17338

Lab Sample No: **767340**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46496.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
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11.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733809070608**
Site: GM Wilmington-17338

Lab Sample No: **767637**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46482.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	8.9	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	4.4	4.0
Styrene	ND	5.0

Client ID: **GW1733809070608**
Site: GM Wilmington-17338

Lab Sample No: **767637**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46482.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	9.8	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	45	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **GW1733809070608**
Site: GM Wilmington-17338

Lab Sample No: **767637**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46482.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
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10.			
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733809070609**
Site: GM Wilmington-17338

Lab Sample No: **767638**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46478.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	1.2J	5.0
Chlorobenzene	9.1	5.0
Ethylbenzene	1.4J	4.0
Styrene	ND	5.0

Client ID: **GW1733809070609**
Site: GM Wilmington-17338

Lab Sample No: **767638**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46478.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	4.5J	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	0.6J	5.0
1,4-Dichlorobenzene	9.3	5.0
1,2-Dichlorobenzene	5.1	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	1.0J	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **GW1733809070609**
Site: GM Wilmington-17338

Lab Sample No: **767638**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46478.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **W1733809070610**
Site: GM Wilmington-17338

Lab Sample No: **767639**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46497.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **W1733809070610**
Site: GM Wilmington-17338

Lab Sample No: **767639**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46497.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **W1733809070610**
Site: GM Wilmington-17338

Lab Sample No: **767639**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Analyzed: 09/12/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46497.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.			
3.			
4.			
5.			
6.			
7.			
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27.			
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **TB09070602**
Site: GM Wilmington-17338

Lab Sample No: **767640**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Analyzed: 09/11/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46476.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **TB09070602**
Site: GM Wilmington-17338

Lab Sample No: **767640**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Analyzed: 09/11/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46476.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
Isopropylbenzene	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0

Client ID: **TB09070602**
Site: GM Wilmington-17338

Lab Sample No: **767640**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Analyzed: 09/11/06
GC Column: DB624
Instrument ID: VOAMS2.i
Lab File ID: b46476.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
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21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733809060601**
Site: GM Wilmington-17338

Lab Sample No: **767333**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24056.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	0.3J	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	31
4-Nitrophenol	ND	31
4,6-Dinitro-2-methylphenol	ND	31
Pentachlorophenol	ND	31
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	0.9J	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733809060601**
Site: GM Wilmington-17338

Lab Sample No: **767333**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24056.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733809060601**
Site: GM Wilmington-17338

Lab Sample No: **767333**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24056.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Xylene isomer	5.08	58	
2.	Ethylmethylbenzene isomer	5.75	11	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 69

Client ID: **GW1733809060602**
Site: GM Wilmington-17338

Lab Sample No: **767334**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24057.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	110	10
4-Methylphenol	21	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	12	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	0.9J	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733809060602**
Site: GM Wilmington-17338

Lab Sample No: **767334**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24057.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	0.3J	10
Di-n-butylphthalate	ND	10
Fluoranthene	0.6J	10
Pyrene	0.3J	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	9.8J	10
Benzaldehyde	ND	10
Caprolactam	0.8J	10
Atrazine	ND	10

Client ID: **GW1733809060602**
Site: GM Wilmington-17338

Lab Sample No: **767334**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24057.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Cyclohexane, methyl-	3.12	10	
2. Toluene	3.82	4200	
3. Ethylbenzene	5.04	2200	
4. Xylene isomer	5.44	1500	
5. Ethylmethylbenzene isomer	5.76	20	
6. Benzene, propyl-	6.10	9.9	
7. Ethylmethylbenzene isomer	6.19	25	
8. Indane	7.04	13	
9. Phenol, 2-ethyl-	7.97	98	
10. Phenol, 3-ethyl-	8.25	12	
11. Phenol, 4,4'-(1-methylethylidene)bis-	15.38	66	
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION	8154

Client ID: **GW1733809060603**
Site: GM Wilmington-17338

Lab Sample No: **767335**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24058.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	31
4-Nitrophenol	ND	31
4,6-Dinitro-2-methylphenol	ND	31
Pentachlorophenol	ND	31
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733809060603**
Site: GM Wilmington-17338

Lab Sample No: **767335**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24058.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733809060603**
Site: GM Wilmington-17338

Lab Sample No: **767335**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24058.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	3.73	21	
2.	Ethylbenzene	4.99	10	
3.	Xylene isomer	5.08	16	
4.	Unknown	17.90	43	
5.	Unknown	20.68	11	
6.	Unknown	26.10	9.5	
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 110

Client ID: **GW1733809060604**
Site: GM Wilmington-17338

Lab Sample No: **767336**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24059.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	10
4-Nitrophenol	ND	30
4,6-Dinitro-2-methylphenol	ND	30
Pentachlorophenol	ND	30
bis(2-Chloroethyl)ether	ND	30
bis(2-chloroisopropyl)ether	ND	1.0
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	1.0
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
2-Methylnaphthalene	ND	2.0
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	10
Dimethylphthalate	ND	20
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	10
3-Nitroaniline	ND	2.0
Acenaphthene	ND	20
Dibenzofuran	ND	10
	ND	10

Client ID: **GW1733809060604**
Site: GM Wilmington-17338

Lab Sample No: **767336**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24059.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733809060604**
Site: GM Wilmington-17338

Lab Sample No: **767336**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24059.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	3.73	26	
2.	Ethylbenzene	4.98	15	
3.	Xylene isomer	5.08	23	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION: 64

Client ID: **GW1733809060605**
Site: GM Wilmington-17338

Lab Sample No: **767337**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24060.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	31
4-Nitrophenol	ND	31
4,6-Dinitro-2-methylphenol	ND	31
Pentachlorophenol	ND	31
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	16	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	2.1J	10
Dibenzofuran	0.5J	10

Client ID: **GW1733809060605**
Site: GM Wilmington-17338

Lab Sample No: **767337**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24060.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	0.3J	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	5.1J	10
Pyrene	2.8J	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733809060605**
Site: GM Wilmington-17338

Lab Sample No: **767337**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24060.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Ethylbenzene	4.98	8.5	
2.	Ethylmethylbenzene isomer	5.75	26	
3.	Benzene, propyl-	6.10	23	
4.	Trimethylbenzene isomer	6.55	11	
5.	Indane	7.04	110	
6.	Diethylbenzene isomer	7.13	17	
7.	Diethylbenzene isomer	7.20	32	
8.	Ethyldimethylbenzene isomer	7.51	23	
9.	Ethyldimethylbenzene isomer	7.82	12	
10.	1-Phenyl-1-butene	8.08	21	
11.	3-Phenylbut-1-ene	8.20	32	
12.	Ethylmethylbenzene isomer	10.32	19	
13.	1,3,5-Triazine-2,4-diamine, 6-phenyl-	14.63	61	
14.	Phenol, 4,4'-(1-methylethylidene)bis-	15.43	970	
15.	Unknown	16.69	43	
16.	Unknown	16.87	58	
17.	Unknown	20.00	150	
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 1616

Client ID: **GW1733809060606**
Site: GM Wilmington-17338

Lab Sample No: **767338**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24061.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	30
4-Nitrophenol	ND	30
4,6-Dinitro-2-methylphenol	ND	30
Pentachlorophenol	ND	30
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	15	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	2.3J	10
Dibenzofuran	0.6J	10

Client ID: **GW1733809060606**
Site: GM Wilmington-17338

Lab Sample No: **767338**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24061.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	0.4J	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	5.3J	10
Pyrene	2.8J	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733809060606**
Site: GM Wilmington-17338

Lab Sample No: **767338**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24061.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Ethylmethylbenzene isomer	5.75	26	
2.	Benzene, propyl-	6.10	21	
3.	Trimethylbenzene isomer	6.55	9.2	
4.	Indane	7.04	110	
5.	Diethylbenzene isomer	7.13	16	
6.	Diethylbenzene isomer	7.20	34	
7.	Ethyldimethylbenzene isomer	7.51	22	
8.	Ethyldimethylbenzene isomer	7.82	11	
9.	Benzene, 1-ethenyl-4-ethyl-	8.08	20	
10.	Methylpropylbenzene isomer	8.19	30	
11.	Ethylmethylbenzene isomer	10.32	19	
12.	1,3,5-Triazine-2,4-diamine, 6-phenyl-	14.64	65	
13.	Phenol, 4,4'-(1-methylethylidene)bis-	15.43	950	
14.	Unknown	16.70	42	
15.	Unknown	16.87	53	
16.	Unknown	20.01	150	
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION: 1578

Client ID: **GW1733809060607**
Site: GM Wilmington-17338

Lab Sample No: **767339**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24062.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	0.7J	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733809060607**
Site: GM Wilmington-17338

Lab Sample No: **767339**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24062.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733809060607**
Site: GM Wilmington-17338

Lab Sample No: **767339**
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06
Date Extracted: 09/07/06
Date Analyzed: 09/15/06
GC Column: DB-5
Instrument ID: BNAMS2.i
Lab File ID: s24062.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	17.89	9.4	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	9.4

Client ID: **GW1733809070608**
Site: GM Wilmington-17338

Lab Sample No: **767637**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Extracted: 09/08/06
Date Analyzed: 09/23/06
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa4607.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	30
4-Nitrophenol	ND	30
4,6-Dinitro-2-methylphenol	ND	30
Pentachlorophenol	ND	30
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733809070608**
Site: GM Wilmington-17338

Lab Sample No: **767637**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Extracted: 09/08/06
Date Analyzed: 09/23/06
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa4607.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733809070608**
Site: GM Wilmington-17338

Lab Sample No: **767637**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Extracted: 09/08/06
Date Analyzed: 09/23/06
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa4607.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	4.12	8.7	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 8.7

Client ID: **GW1733809070609**
Site: GM Wilmington-17338

Lab Sample No: **767638**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Extracted: 09/08/06
Date Analyzed: 09/23/06
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa4608.d

Matrix: WATER
Level: LOW
Sample Volume: 960 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	31
4-Nitrophenol	ND	31
4,6-Dinitro-2-methylphenol	ND	31
Pentachlorophenol	ND	31
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733809070609**
Site: GM Wilmington-17338

Lab Sample No: **767638**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Extracted: 09/08/06
Date Analyzed: 09/23/06
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa4608.d

Matrix: WATER
Level: LOW
Sample Volume: 960 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733809070609**
Site: GM Wilmington-17338

Lab Sample No: **767638**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Extracted: 09/08/06
Date Analyzed: 09/23/06
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa4608.d

Matrix: WATER
Level: LOW
Sample Volume: 960 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
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29.				
30.				

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **W1733809070610**
Site: GM Wilmington-17338

Lab Sample No: **767639**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Extracted: 09/08/06
Date Analyzed: 09/23/06
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa4609.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	30
4-Nitrophenol	ND	30
4,6-Dinitro-2-methylphenol	ND	30
Pentachlorophenol	ND	30
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **W1733809070610**
Site: GM Wilmington-17338

Lab Sample No: **767639**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Extracted: 09/08/06
Date Analyzed: 09/23/06
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa4609.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **W1733809070610**
Site: GM Wilmington-17338

Lab Sample No: **767639**
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/07/06
Date Extracted: 09/08/06
Date Analyzed: 09/23/06
GC Column: DB-5
Instrument ID: BNAMS8.i
Lab File ID: aa4609.d

Matrix: WATER
Level: LOW
Sample Volume: 1000 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO SEMI-VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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30.				

TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **GW1733809060601**
Site: **GM Wilmington-17338**

Lab Sample No: 767333
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	116	77.4	B	P
Antimony	ND	4.9		P
Arsenic	13.1	4.5		P
Barium	445	1.3		P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	38300	74.5		P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	4.0	3.1	B	P
Iron	63700	39.7		P
Lead	ND	2.2		P
Magnesium	28600	70.0		P
Manganese	982	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	4960	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	129000	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	27.0	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809060602**
Site: **GM Wilmington-17338**

Lab Sample No: 767334
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	12400	77.4		P
Antimony	ND	4.9		P
Arsenic	9.0	4.5		P
Barium	110	1.3	B	P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	10000	74.5		P
Chromium	14.8	2.8		P
Cobalt	7.5	3.5	B	P
Copper	14.2	3.1	B	P
Iron	23100	39.7		P
Lead	6.9	2.2		P
Magnesium	3530	70.0	B	P
Manganese	307	2.9		P
Mercury	0.12	0.10	B	CV
Nickel	8.9	3.9	B	P
Potassium	2850	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	11600	361		P
Thallium	ND	4.8		P
Vanadium	18.7	1.5	B	P
Zinc	78.7	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809060603**
Site: **GM Wilmington-17338**

Lab Sample No: 767335
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	2150	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	136	1.3	B	P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	26800	74.5		P
Chromium	3.5	2.8	B	P
Cobalt	7.9	3.5	B	P
Copper	5.7	3.1	B	P
Iron	3130	39.7		P
Lead	ND	2.2		P
Magnesium	13300	70.0		P
Manganese	192	2.9		P
Mercury	ND	0.10		CV
Nickel	4.2	3.9	B	P
Potassium	4970	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	65300	361		P
Thallium	ND	4.8		P
Vanadium	5.2	1.5	B	P
Zinc	31.1	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809060604**
Site: **GM Wilmington-17338**

Lab Sample No: 767336
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	2330	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	134	1.3	B	P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	25800	74.5		P
Chromium	ND	2.8		P
Cobalt	7.3	3.5	B	P
Copper	ND	3.1		P
Iron	3000	39.7		P
Lead	ND	2.2		P
Magnesium	13000	70.0		P
Manganese	191	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	4760	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	63600	361		P
Thallium	ND	4.8		P
Vanadium	4.7	1.5	B	P
Zinc	18.2	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809060605**
Site: **GM Wilmington-17338**

Lab Sample No: 767337
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	837	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	471	1.3		P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	84700	74.5		P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	ND	3.1		P
Iron	7590	39.7		P
Lead	ND	2.2		P
Magnesium	18500	70.0		P
Manganese	483	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	23100	130		P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	117000	361		P
Thallium	ND	4.8		P
Vanadium	1.6	1.5	B	P
Zinc	15.6	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809060606**
Site: **GM Wilmington-17338**

Lab Sample No: 767338
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	856	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	469	1.3		P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	85900	74.5		P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	3.2	3.1	B	P
Iron	7670	39.7		P
Lead	ND	2.2		P
Magnesium	18500	70.0		P
Manganese	490	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	23100	130		P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	117000	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	12.9	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809060607**
Site: **GM Wilmington-17338**

Lab Sample No: 767339
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	4800	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	137	1.3	B	P
Beryllium	0.91	0.10	B	P
Cadmium	ND	0.50		P
Calcium	30600	74.5		P
Chromium	9.4	2.8	B	P
Cobalt	4.8	3.5	B	P
Copper	5.1	3.1	B	P
Iron	16800	39.7		P
Lead	ND	2.2		P
Magnesium	13600	70.0		P
Manganese	189	2.9		P
Mercury	ND	0.10		CV
Nickel	10.4	3.9	B	P
Potassium	4470	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	28800	361		P
Thallium	ND	4.8		P
Vanadium	13.3	1.5	B	P
Zinc	31.5	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809060601d**
Site: **GM Wilmington-17338**

Lab Sample No: 767341
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	12.8	4.5		P
Barium	459	1.3		P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	39600	74.5		P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	ND	3.1		P
Iron	65600	39.7		P
Lead	ND	2.2		P
Magnesium	29600	70.0		P
Manganese	1040	2.9		P
Mercury	0.11	0.10	B	CV
Nickel	ND	3.9		P
Potassium	5110	130		P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	135000	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	8.3	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809060602d**
Site: **GM Wilmington-17338**

Lab Sample No: 767342
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	70.0	1.3	B	P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	11100	74.5		P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	ND	3.1		P
Iron	13400	39.7		P
Lead	ND	2.2		P
Magnesium	3480	70.0	B	P
Manganese	291	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	2580	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	13600	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	9.2	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809060603d**
Site: **GM Wilmington-17338**

Lab Sample No: 767343
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	131	1.3	B	P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	27800	74.5		P
Chromium	ND	2.8		P
Cobalt	6.2	3.5	B	P
Copper	ND	3.1		P
Iron	ND	39.7		P
Lead	ND	2.2		P
Magnesium	13900	70.0		P
Manganese	174	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	5060	130		P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	69100	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	12.2	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809060604d**
Site: **GM Wilmington-17338**

Lab Sample No: 767344
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	133	1.3	B	P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	28400	74.5		P
Chromium	ND	2.8		P
Cobalt	6.5	3.5	B	P
Copper	ND	3.1		P
Iron	ND	39.7		P
Lead	ND	2.2		P
Magnesium	14100	70.0		P
Manganese	167	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	5210	130		P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	70900	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	12.7	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809060605d**
Site: **GM Wilmington-17338**

Lab Sample No: 767345
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	491	1.3		P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	89200	74.5		P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	ND	3.1		P
Iron	7550	39.7		P
Lead	ND	2.2		P
Magnesium	19600	70.0		P
Manganese	496	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	23900	130		P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	122000	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	9.1	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809060606d**
Site: **GM Wilmington-17338**

Lab Sample No: 767346
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	503	1.3		P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	92800	74.5		P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	ND	3.1		P
Iron	7630	39.7		P
Lead	ND	2.2		P
Magnesium	20000	70.0		P
Manganese	512	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	24700	130		P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	126000	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	15.4	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809060607d**
Site: **GM Wilmington-17338**

Lab Sample No: 767347
Lab Job No: W673

Date Sampled: 09/06/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	121	1.3	B	P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	33800	74.5		P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	ND	3.1		P
Iron	ND	39.7		P
Lead	ND	2.2		P
Magnesium	14500	70.0		P
Manganese	123	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	4550	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	30700	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	14.3	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809070608**
Site: **GM Wilmington-17338**

Lab Sample No: 767637
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	898	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	60.4	1.3	B	P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	11700	74.5		P
Chromium	ND	2.8		P
Cobalt	3.6	3.5	B	P
Copper	ND	3.1		P
Iron	574	39.7		P
Lead	ND	2.2		P
Magnesium	10500	70.0		P
Manganese	667	2.9		P
Mercury	0.11	0.10	B	CV
Nickel	ND	3.9		P
Potassium	1800	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	76800	361		P
Thallium	ND	4.8		P
Vanadium	4.0	1.5	B	P
Zinc	15.5	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809070609**
Site: **GM Wilmington-17338**

Lab Sample No: 767638
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	13500	77.4		P
Antimony	ND	4.9		P
Arsenic	4.6	4.5	B	P
Barium	166	1.3	B	P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	28200	74.5		P
Chromium	16.4	2.8		P
Cobalt	ND	3.5		P
Copper	9.8	3.1	B	P
Iron	8570	39.7		P
Lead	8.6	2.2		P
Magnesium	7620	70.0		P
Manganese	260	2.9		P
Mercury	ND	0.10		CV
Nickel	9.4	3.9	B	P
Potassium	4530	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	47100	361		P
Thallium	ND	4.8		P
Vanadium	29.8	1.5	B	P
Zinc	27.0	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **W1733809070610**
Site: **GM Wilmington-17338**

Lab Sample No: 767639
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	ND	1.3		P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	ND	74.5		P
Chromium	3.1	2.8	B	P
Cobalt	ND	3.5		P
Copper	ND	3.1		P
Iron	ND	39.7		P
Lead	ND	2.2		P
Magnesium	ND	70.0		P
Manganese	ND	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	ND	130		P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	ND	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	15.6	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809070608d**
Site: **GM Wilmington-17338**

Lab Sample No: 767641
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	60.2	1.3	B	P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	12300	74.5		P
Chromium	ND	2.8		P
Cobalt	3.6	3.5	B	P
Copper	ND	3.1		P
Iron	134	39.7	B	P
Lead	ND	2.2		P
Magnesium	11200	70.0		P
Manganese	711	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	1860	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	81800	361		P
Thallium	ND	4.8		P
Vanadium	1.9	1.5	B	P
Zinc	26.5	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733809070609d**
Site: **GM Wilmington-17338**

Lab Sample No: 767642
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	118	1.3	B	P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	30200	74.5		P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	ND	3.1		P
Iron	864	39.7		P
Lead	ND	2.2		P
Magnesium	7780	70.0		P
Manganese	250	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	4400	130	B	P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	51200	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	20.3	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **W1733809070610d**
Site: **GM Wilmington-17338**

Lab Sample No: 767643
Lab Job No: W673

Date Sampled: 09/07/06
Date Received: 09/06/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	77.4		P
Antimony	ND	4.9		P
Arsenic	ND	4.5		P
Barium	ND	1.3		P
Beryllium	ND	0.10		P
Cadmium	ND	0.50		P
Calcium	148	74.5	B	P
Chromium	ND	2.8		P
Cobalt	ND	3.5		P
Copper	ND	3.1		P
Iron	ND	39.7		P
Lead	ND	2.2		P
Magnesium	ND	70.0		P
Manganese	ND	2.9		P
Mercury	ND	0.10		CV
Nickel	ND	3.9		P
Potassium	ND	130		P
Selenium	ND	4.8		P
Silver	ND	1.2		P
Sodium	ND	361		P
Thallium	ND	4.8		P
Vanadium	ND	1.5		P
Zinc	16.7	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Site: GM Wilmington-17338 Lab Job No: W673
Matrix: WATER QA Batch: 4057

Chromium VI (7196A)

STL Edison Sample #	Client ID	Date Sampled	Date Extracted	Date Analyzed	DF	Analytical Result Units:ug/l	Reporting Limit Units:ug/l
767333	GW1733809060601	09/06/06	09/06/06	09/06/06	1.0	ND	10.0
767334	GW1733809060602	09/06/06	09/06/06	09/06/06	5.0	ND	50.0
767341	GW1733809060601d	09/06/06	09/06/06	09/06/06	1.0	ND	10.0
767342	GW1733809060602d	09/06/06	09/06/06	09/06/06	1.0	ND	10.0

Site: GM Wilmington-17338 Lab Job No: W673
Matrix: WATER QA Batch: 4060

Chromium VI (7196A)

STL Edison Sample #	Client ID	Date Sampled	Date Extracted	Date Analyzed	DF	Analytical Result Units:ug/l	Reporting Limit Units:ug/l
767335	GW1733809060603	09/06/06	09/07/06	09/07/06	1.0	ND	10.0
767336	GW1733809060604	09/06/06	09/07/06	09/07/06	1.0	ND	10.0
767337	GW1733809060605	09/06/06	09/07/06	09/07/06	1.0	ND	10.0
767338	GW1733809060606	09/06/06	09/07/06	09/07/06	1.0	ND	10.0
767339	GW1733809060607	09/06/06	09/07/06	09/07/06	2.0	ND	20.0
767343	GW1733809060603d	09/06/06	09/07/06	09/07/06	1.0	ND	10.0
767344	GW1733809060604d	09/06/06	09/07/06	09/07/06	1.0	ND	10.0
767345	GW1733809060605d	09/06/06	09/07/06	09/07/06	1.0	ND	10.0
767346	GW1733809060606d	09/06/06	09/07/06	09/07/06	1.0	ND	10.0
767347	GW1733809060607d	09/06/06	09/07/06	09/07/06	1.0	ND	10.0

Site: GM Wilmington-17338 Lab Job No: W673
Matrix: WATER QA Batch: 4066

Chromium VI (7196A)

STL Edison Sample #	Client ID	Date Sampled	Date Extracted	Date Analyzed	DF	Analytical Result Units:ug/l	Reporting Limit Units:ug/l
767637	GW1733809070608	09/07/06	09/08/06	09/08/06	1.0	ND	10.0
767638	GW1733809070609	09/07/06	09/08/06	09/08/06	2.0	ND	20.0
767639	W1733809070610	09/07/06	09/08/06	09/08/06	1.0	ND	10.0
767641	GW1733809070608d	09/07/06	09/08/06	09/08/06	1.0	ND	10.0
767642	GW1733809070609d	09/07/06	09/08/06	09/08/06	1.0	ND	10.0
767643	W1733809070610d	09/07/06	09/08/06	09/08/06	1.0	ND	10.0

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MEMORANDUM

TO: Greg Carli

REF. NO.: 017307-091007-0001

FROM: Karen Bevilacqua/jbh/5-NF

DATE: October 27, 2006

E-Mail and Regular Mail

RE: Data Quality Assessment and Validation
OU-2 Area Investigation – Groundwater Sampling
Wilmington, Delaware
August - September 2006

The following details a quality assessment and validation of the analytical data resulting from the collection of 21 water and 10 quality control (QC) samples from the General Motors Assembly Plant Site in Wilmington, Delaware, during August through September 2006. The sample summary detailing sample identification, sample location, QC samples, and analytical parameters is presented in Table 1. Sample analysis was completed by Severn Trent Laboratories (STL) in Edison, New Jersey, in accordance with the methodologies presented in Table 2.

The QC criteria used to assess the data were established by the methods and the Quality Assurance Project Plan (QAPP). Application of quality assurance criteria was consistent with the following guidance documents:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99/008, October 1999; and

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Review", USEPA 540/R-94/013, February 1994.

Sample Quantitation

The laboratory reported detected concentrations of volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), and inorganics below the laboratory's practical quantitation limit (PQL)/report limit (RL) but above the laboratory's method detection limit (MDL). The laboratory flagged these sample concentrations with a "J" or a "B" for organics and inorganics respectively. These concentrations should be qualified as estimated (J) values unless qualified otherwise in this memorandum. The laboratory "B" flags may be disregarded.

Sample Preservation and Holding Times

Sample holding time periods and preservation requirements are presented in the analytical methods. All samples were prepared and analyzed within the method-required holding times.

All samples were properly preserved and cooled to 4°C (±2°C) after collection.

Gas Chromatography/Mass Spectrometer (GC/MS) – Tuning and Mass Calibration (Instrument Performance Check) – Organic Analyses

Prior to analysis, GC/MS instrumentation is tuned to ensure optimization over the mass range of interest. To evaluate instrument tuning, the VOC and SVOC methods require the analysis of the specific tuning compounds bromofluorobenzene (BFB) and decafluorotriphenylphosphine (DFTPP), respectively. The resulting spectra must meet the criteria cited in the method before analysis is initiated. Analysis of the tuning compound must then be repeated every 12 hours throughout sample analysis to ensure the continued optimization of the instrument.

Instrument tuning data were reviewed. Tuning compounds were analyzed at the required frequency throughout the VOC and SVOC analysis periods. All tuning criteria were met for the analyses, indicating proper optimization of the instrument.

Initial Calibration – Organic Analyses

To quantify compounds of interest in samples, calibration of the GC/MS over a specific concentration range must be performed. Initially, a five-point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific concentration range.

Calibration data were reviewed for all samples. Linearity of the calibration curve and instrument sensitivity were evaluated against the following criteria:

i) GC/MS (all compounds) – must meet a minimum mean relative response factor (RRF) of 0.05; and

ii) GC/MS (all compounds) – the percent relative standard deviation (%RSD) values must not exceed 30.0 percent or a minimum coefficient of determination of 0.99 if quadratic equation calibration curves is used.

Initial calibration standards were analyzed as required and the data showed acceptable sensitivity and linearity with the exception of benzaldehyde for linearity and acetone and 2-butanone, which did not exhibit an adequate instrument response.

All associated sample data for benzaldehyde were qualified as estimated (see Table 3).

All associated positive sample data for acetone and 2-butanone were qualified as estimated and all non-detect results were rejected (see Table 3).

Continuing Calibration – Organic Analyses

To ensure that instrument calibration is acceptable throughout the sample analysis period, continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours. The following criteria were employed to evaluate the continuing calibration data:

i) GC/MS (all compounds) – must meet a minimum mean RRF of 0.05; and

ii) GC/MS (all compounds) - the percent difference (%D) between the mean initial calibration RRF and the continuing calibration RRF must not exceed 25 percent; and

iii) GC/MS (compounds determined by quadratic curve) – the percent drift between the true value and the continuing value must not exceed 25 percent.

Calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity and linearity of response with the exception of bromomethane, trifluorotrichloroethane, methyl tert butyl ether, methyl acetate, trichlorofluoromethane, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, pentachlorophenol, hexachlorocyclopentadiene, di-n-octyl phthalate, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene for linearity and acetone, 2-butanone, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, and hexachlorocyclopentadiene, which did not exhibit an adequate instrument response.

All associated sample data that did not meet the linearity criteria were qualified as estimated (see Table 4).

All associated positive sample data for acetone, 2-butanone, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, and hexachlorocyclopentadiene were qualified as estimated and all non-detect results were rejected (see Table 4).

Initial Calibration – Inorganic Analyses

The initial calibration includes a blank and at least one standard for inductively coupled plasma/mass spectrometer (ICP/MS) to establish the analytical curve. Mercury and hexavalent chromium analyses requires the analysis of a calibration blank and a minimum of five standards to establish the analytical curve. The coefficient of variation for calibration curves must be at least 0.995.

Initial calibration is verified with an initial calibration verification (ICV) standard which must recover within 90 to 110 percent.

A review of the laboratory data showed that the inorganic initial calibration curves and ICVs were analyzed at the appropriate frequency and were within the acceptance criteria.

Continuing Calibration – Inorganic Analyses

To ensure the instrument calibration is acceptable throughout the sample analysis period, continuing calibration verification (CCV) standards are analyzed on a regular basis. The CCVs must meet the percent recovery control limits specified above for the ICVs. Criteria for inorganic analyses are the same criteria as used for assessing the initial calibration data.

A review of the laboratory data showed that CCVs were analyzed at the appropriate frequency and the data were within the acceptance criteria.

Method Blank Samples

Method blank samples are prepared and analyzed with the investigative samples to assess the presence and the magnitude of sample contamination introduced during sample analysis. Additionally, continuing calibration blanks (CCBs) are routinely analyzed after each CCV for metals.

For this study, method blanks were analyzed at a minimum frequency of one per analytical batch and CCBs were analyzed for metals after each CCV. The blank results were non-detect for the analytes of interest.

Surrogate Compounds – Organic Analyses

In accordance with the methods employed, all samples, blanks, and standards analyzed for VOCs and SVOCs are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of individual sample matrices on analytical efficiency and are assessed against method control limits. For the SVOC methods, it is acceptable for one surrogate recovery per fraction (base neutral or acid phenolic) to fall outside of these limits, provided it is greater than 10 percent.

All surrogate recoveries were within the laboratory control limits demonstrating acceptable analytical accuracy with the exception of some low semi-volatile recoveries. All associated sample results were qualified as estimated based on the potential low bias (see Table 5).

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

MS/MSD samples are prepared using a representative subset of analytes for each parameter and analyzed with each sample batch for the organic parameters. Matrix spike/duplicate (MS/Dup) samples are prepared and analyzed with the samples for inorganics. The recoveries of spike analyses are used to assess the analytical accuracy achieved on individual sample matrices. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed. The RPD between the MS and MSD or the original sample and the Dup are used to assess analytical precision.

MS/MSD analyses were performed as shown in Table 1. The MS/MSD recoveries were within laboratory control limits for all analytes of interest, demonstrating acceptable overall analytical accuracy and precision.

MS/Dup analyses were performed as shown in Table 1. The MS/Dup recoveries were within laboratory control limits for all analytes of interest demonstrating acceptable overall analytical accuracy and precision.

Laboratory Control Sample (LCS) Analysis

The LCS serves as a measure of the overall analytical performance. LCSs are prepared with all analytes of interest and analyzed with each sample batch.

LCSs were prepared and analyzed for all parameters. The LCS recoveries were within the laboratory control limits for all analytes of interest demonstrating acceptable overall analytical accuracy, with the exception of high recoveries for pentachlorophenol, 2,4-dinitrotoluene, and 4-chloro-3-methylphenol. All associated sample results were non-detect and would not have been impacted by the implied high bias.

Internal Standard (IS) Summaries

To correct for changes in GC/MS response and sensitivity, IS compounds are added to all investigative samples and QC samples prior to VOC and SVOC analyses. All results are calculated as a ratio of the IS response. The criteria by which the IS results are assessed is as follows:

i) IS standard area counts must not vary by more than a factor of two (-50 percent to +100 percent) from the associated continuing calibration standard IS area counts; and

ii) the retention time (RT) of the IS must not vary by more than ±30 seconds from the associated calibration standard.

All sample IS results met the above criteria.

Inductively Coupled Plasma (ICP) Interference Check Sample (ICS) Analysis – Inorganic Analyses

To verify that proper inter-element and background correction factors had been established by the laboratory ICSs are analyzed. These samples contain high concentrations of aluminum, calcium, magnesium, and iron and are analyzed at the beginning and end of each sample analysis period. The ICSs are evaluated against recovery control limits of 80 to 120 percent.

The ICS analysis results were evaluated for all samples and were within the control limits.

Serial Dilution – Inorganic Analyses

The serial dilution determines whether significant physical or chemical interferences exist due to sample matrix. A minimum of one sample per 20 investigative samples is analyzed at a five-fold dilution. The serial dilution results must agree within 10 %D of the original results for samples with detected concentrations greater than 50 times the instrument detection limit.

Serial dilutions were performed at the proper frequency. All results met the specified criteria.

Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and mass spectra (if applicable) were evaluated according to identification criteria established by the methods. The samples identified in Table 1 were reviewed. The organic compounds reported adhered to the specified identification criteria.

Target Compound Quantitation

The reported quantitation results and detection limits were checked to ensure results reported were accurate. The samples identified in Table 1 were reviewed. No discrepancies were found between the raw data and the sample results reported by the laboratory.

Field QA/QC

The field QA/QC consisted of five trip blank samples, three field blank samples, and two field duplicate samples.

Trip Blanks – VOCs

Trip blanks are transported, stored, and analyzed with the investigative samples to identify potential cross-contamination of VOCs. Trip blanks were collected at the proper frequency, and all results were

non-detect for the analytes of interest, with the exception of carbon tetrachloride. All associated sample results were non-detect and no qualification of data was necessary.

Field Blanks
Field blanks are collected and submitted for analysis to identify possible contamination introduced during sample collection and/or analysis. Three field blanks were collected and analyzed as summarized in Table 1. All results were non-detect for the analytes of interest.

Field Duplicates
To assess overall analytical and sampling precision, field duplicates were collected and submitted "blind" to the laboratory for analysis as shown in Table 1.

A comparison of the results showed good analytical and sampling precision, with the exception of methyl acetate, chlorobenzene, and 1,4-dichlorobenzene. All associated sample results were qualified as estimated based on the implied variability (see Table 6).

System Performance

System performance between various quality control checks was evaluated to monitor for changes that may have caused the degradation of data quality. No technical problems or chromatographic anomalies were observed which would require qualification of the data.

Tentatively Identified Compounds (TICs)

TICs were evaluated for all samples submitted for volatile and semi-volatile analyses. A summary of the TICs reported and the estimated concentrations is presented in Table 7. TICs which were present in the blanks or which were identified as aldol condensation products and/or siloxanes have been eliminated.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the exceptions and qualifications noted.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST-SEPTEMBER 2006

				Analysis/Parameters						
Sample ID	*Location ID*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*TCL VOCs + TICs*	*TCL SVOCs + TICs*	*TAL Metals*	*TAL Metals Filtered*	*Hexavalent Chromium*	*Filtered Hexavalent Chromium*	*Comments*
GW17338082106002	MW-11R	08/21/06	11:55	X	X	X	X	X	X	
GW17338082106003	MW-9	08/21/06	13:00	X	X	X	X	X	X	
GW17338082106004	MW-8	08/21/06	14:15	X	X					
W17338082106001	Field Blank	08/21/06	11:30	X	X	X		X		Field Blank
TripBlank-082106	Trip Blank	08/21/06	-	X						Trip Blank
GW17338082206005	MW-13	08/22/06	9:15	X	X	X	X	X	X	
GW17338082206006	MW-12	08/22/06	9:10	X	X	X	X	X	X	
GW17338082206007	MW-3	08/22/06	10:25	X	X	X	X	X	X	
GW17338082206008	MW-3D	08/22/06	10:35	X	X	X	X	X	X	
GW17338082206009	MW-2	08/22/06	12:50	X	X	X	X	X	X	
GW17338082206010	MW-11	08/22/06	13:00	X	X	X	X	X	X	
GW17338082206011	MW-6	08/22/06	14:30	X	X	X	X	X	X	
GW17338082206012	MW-7	08/22/06	14:25	X	X	X	X	X	X	
GW17338082306013	MW-10	08/23/06	09:15	X	X	X	X	X	X	
GW17338082306014	MW-14	08/23/06	09:05	X	X	X	X	X	X	MS/MSD
GW17338082306015	MW-8	08/23/06	11:00			X	X	X	X	
W17338082306016	Field Blank	08/23/06	10:45	X	X	X		X		Field Blank
TripBank-082306	Trip Blank	08/23/06	-	X						Trip Blank
TripBank-082206	Trip Blank	08/22/06	-	X						Trip Blank
GW1733809060601	MW-2	09/06/06	8:40	X	X	X	X	X	X	MS/MSD/Dup.
GW1733809060602	MW-6	09/06/06	10:00	X	X	X	X	X	X	
GW1733809060603	MW-15	09/06/06	11:30	X	X	X	X	X	X	
GW1733809060604	MW-15	09/06/06	11:40	X	X	X	X	X	X	Field duplicate of GW1733809060603
GW1733809060605	MW-16	09/06/06	13:00	X	X	X	X	X	X	
GW1733809060606	MW-16	09/06/06	13:10	X	X	X	X	X	X	Field duplicate of GW1733809060605
GW1733809060607	MW-17	09/06/06	14:30	X	X	X	X	X	X	
TB09060601	Trip Blank	09/06/06	-	X						Trip Blank
GW1733809070608	MW-18	09/07/06	9:10	X	X	X	X	X	X	
GW1733809070609	MW-19	09/07/06	10:30	X	X	X	X	X	X	
W1733809070610	Field Blank	09/07/06	10:40	X	X	X	X	X	X	Field Blank
TB09070602	Trip Blank	09/07/06	-	X						Trip Blank

Notes:

-	Not applicable.
Dup.	Duplicate.
MS	Matrix Spike.
MSD	Matrix Spike Duplicate.
SVOCs	Semi-Volatile Organic Compounds.
TAL	Target Analyte List.
TCL	Target Compound List.
TICs	Tentatively Identified Compounds.
VOCs	Volatile Organic Compounds.

TABLE 2

SUMMARY OF ANALYTICAL METHODS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST-SEPTEMBER 2006

Parameter	*Method* [1]
TCL VOCs plus TICs	SW-846 8260B
Select SVOCs plus TICs	SW-846 8270C
Metals	SW-846 6010/7470
Hexavalent Chromium	SW-846 7196

Notes:

[1] "Test Methods for Solid Waste/Physical Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

SVOCs Semi-Volatile Organic Compounds.
TCL Target Compound List.
TICs Tentatively Identified Compounds.
VOCs Volatile Organic Compounds.

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INITIAL CALIBRATION RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Parameter	*Compound*	*Calibration Date*	*RRF*	*%RSD*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
Volatiles	2-Butanone (Methyl Ethyl Ketone)	08/08/06	0.027	10.5	GW17338082206006	25 U	µg/L	R
					GW17338082206007	500 U	µg/L	R
					GW17338082206010	180	µg/L	J
Volatiles	Acetone	08/24/06	0.040	13.3	GW17338082106002	5.0 U	µg/L	R
					GW17338082106003	5.0 U	µg/L	R
					GW17338082206007	370000	µg/L	J
					GW17338082206008	5.0 U	µg/L	R
					GW17338082206009	5.0 U	µg/L	R
					GW17338082206011	74	µg/L	J
					GW17338082206012	5.0 U	µg/L	R
					GW17338082306013	25 U	µg/L	R
					GW17338082306014	5.0 U	µg/L	R
					GW17338082106004	5.0 U	µg/L	R
					GW17338082206005	250 U	µg/L	R
Volatiles	2-Butanone (Methyl Ethyl Ketone)	09/08/06	0.025	10.1	GW1733809060601	5.0 U	µg/L	R
					GW1733809060602	100 U	µg/L	R
					GW1733809060603	5.0 U	µg/L	R
					GW1733809060604	5.0 U	µg/L	R
					GW1733809060605	5.0 U	µg/L	R
					GW1733809060606	5.0 U	µg/L	R
					GW1733809060607	5.0 U	µg/L	R
					GW1733809070608	5.0 U	µg/L	R
					GW1733809070609	5.0 U	µg/L	R
Semi-Volatiles	Benzaldehyde	09/05/06	0.980	38.4	GW17338082106002	11 U	µg/L	UJ
					GW17338082106003	10 U	µg/L	UJ
					GW17338082206006	10 U	µg/L	UJ
					GW17338082206007	220 U	µg/L	UJ
					GW17338082206008	11 U	µg/L	UJ
					GW17338082206009	11 U	µg/L	UJ
					GW17338082206010	210 U	µg/L	UJ
					GW17338082206011	10 U	µg/L	UJ
					GW17338082206012	10 U	µg/L	UJ
					GW17338082306013	11 U	µg/L	UJ

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INITIAL CALIBRATION RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Parameter	*Compound*	*Calibration Date*	*RRF*	*%RSD*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
Semi-Volatiles	Benzaldehyde	09/05/06	0.980	38.4	GW17338082306014	11 U	µg/L	UJ
					GW17338082106004	11 U	µg/L	UJ
					GW17338082206005	200 U	µg/L	UJ
					GW1733809060601	10 U	µg/L	UJ
					GW1733809060602	10 U	µg/L	UJ
					GW1733809060603	10 U	µg/L	UJ
					GW1733809060604	10 U	µg/L	UJ
					GW1733809060605	10 U	µg/L	UJ
					GW1733809060606	10 U	µg/L	UJ
					GW1733809060607	10 U	µg/L	UJ
Semi-Volatiles	Benzaldehyde	09/20/06	1.40	38.4	GW1733809070608	10 U	µg/L	UJ
					GW1733809070609	10 U	µg/L	UJ

Notes:
%RSD Percent Relative Standard Deviation.
J Estimated.
R Rejected.
RRF Relative Response Factor.
U Non-detect at associated value.
UJ The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Parameter	*Calibration Date*	*Compound*	*RRF*	*%D*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
Volatiles	09/01/06	Bromomethane (Methyl Bromide)	0.174	-29.8	GW17338082206008	5.0 U	µg/L	UJ
					GW17338082206012	5.0 U	µg/L	UJ
					GW17338082306013	25 U	µg/L	UJ
Volatiles	09/01/06	Trifluorotrichloroethane (Freon 113)	0.546	-26.4	GW17338082206008	5.0 U	µg/L	UJ
					GW17338082206012	5.0 U	µg/L	UJ
					GW17338082306013	25 U	µg/L	UJ
Volatiles	09/01/06	Methyl Tert Butyl Ether	1.37	-28.7	GW17338082206008	2.0 J	µg/L	J
					GW17338082206012	5.0 U	µg/L	UJ
					GW17338082306013	25 U	µg/L	UJ
Volatiles	09/01/06	Methyl acetate	0.463	-36.6	GW17338082206008	5.0 U	µg/L	UJ
					GW17338082206012	5.0 U	µg/L	UJ
					GW17338082306013	25 U	µg/L	UJ
Volatiles	09/06/06	Acetone	0.042	20.8	GW17338082206006	25 U	µg/L	R
					GW17338082206010	530	µg/L	J
Volatiles	09/06/06	2-Butanone (Methyl Ethyl Ketone)	0.026	3.7	GW17338082206006	25 U	µg/L	R
					GW17338082206007	500 U	µg/L	R
					GW17338082206010	180	µg/L	J
Volatiles	09/12/06	Acetone	0.040	29.8	GW1733809060602	100 U	µg/L	R
					GW1733809060603	5.0 U	µg/L	R
					GW1733809060604	5.0 U	µg/L	R
					GW1733809060605	5.0 U	µg/L	R
					GW1733809060606	5.0 U	µg/L	R
					GW1733809060607	5.0 U	µg/L	R
					GW1733809070608	5.0 U	µg/L	R
					GW1733809070609	5.0 U	µg/L	R

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Parameter	*Calibration Date*	*Compound*	*RRF*	*%D*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
Volatiles	09/12/06	Trichlorofluoromethane (CFC-11)	0.767	25.5	GW1733809060602	100 U	µg/L	UJ
					GW1733809060603	5.0 U	µg/L	UJ
					GW1733809060604	5.0 U	µg/L	UJ
					GW1733809060605	5.0 U	µg/L	UJ
					GW1733809060606	5.0 U	µg/L	UJ
					GW1733809060607	5.0 U	µg/L	UJ
					GW1733809070608	5.0 U	µg/L	UJ
					GW1733809070609	5.0 U	µg/L	UJ
Volatiles	09/12/06	2-Butanone (Methyl Ethyl Ketone)	0.024	7.7	GW1733809060602	100 U	µg/L	R
					GW1733809060603	5.0 U	µg/L	R
					GW1733809060604	5.0 U	µg/L	R
					GW1733809060605	5.0 U	µg/L	R
					GW1733809060606	5.0 U	µg/L	R
					GW1733809060607	5.0 U	µg/L	R
					GW1733809070608	5.0 U	µg/L	R
					GW1733809070609	5.0 U	µg/L	R
Volatiles	09/12/06	2-Butanone (Methyl Ethyl Ketone)	0.021	19.2	GW1733809060601	5.0 U	µg/L	R
Semi-Volatiles	09/10/06	2,4-Dinitrophenol	0.113	35.2	GW17338082106002	32 U	µg/L	UJ
					GW17338082106003	32 U	µg/L	UJ
					GW17338082206006	32 U	µg/L	UJ
					GW17338082206008	32 U	µg/L	UJ
					GW17338082206009	33 U	µg/L	UJ
					GW17338082306014	33 U	µg/L	UJ
					GW17338082106004	33 U	µg/L	UJ
Semi-Volatiles	09/10/06	4,6-Dinitro-2-methylphenol	0.125	26.8	GW17338082106002	32 U	µg/L	UJ
					GW17338082106003	32 U	µg/L	UJ
					GW17338082206006	32 U	µg/L	UJ
					GW17338082206008	32 U	µg/L	UJ
					GW17338082206009	33 U	µg/L	UJ
					GW17338082306014	33 U	µg/L	UJ
					GW17338082106004	33 U	µg/L	UJ

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Parameter	*Calibration Date*	*Compound*	*RRF*	*%D*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Parameter	*Calibration Date*	*Compound*	*RRF*	*%D*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
Semi-Volatiles	09/10/06	Pentachlorophenol	0.086	43.6	GW17338082106002	32 U	µg/L	UJ
					GW17338082106003	32 U	µg/L	UJ
					GW17338082206006	32 U	µg/L	UJ
					GW17338082206008	32 U	µg/L	UJ
					GW17338082206009	33 U	µg/L	UJ
					GW17338082306014	33 U	µg/L	UJ
					GW17338082106004	33 U	µg/L	UJ
Semi-Volatiles	09/10/06	Hexachlorocyclopentadiene	0.124	29.2	GW17338082106002	11 U	µg/L	UJ
					GW17338082106003	10 U	µg/L	UJ
					GW17338082206006	10 U	µg/L	UJ
					GW17338082206008	11 U	µg/L	UJ
					GW17338082206009	11 U	µg/L	UJ
					GW17338082306014	11 U	µg/L	UJ
					GW17338082106004	11 U	µg/L	UJ
Semi-Volatiles	09/11/06	2,4-Dinitrophenol	0.038	78.1	GW17338082206007	220 U	µg/L	R
					GW17338082206010	210 U	µg/L	R
					GW17338082206011	10 U	µg/L	R
					GW17338082206012	10 U	µg/L	R
					GW17338082306013	11 U	µg/L	R
					GW17338082206005	200 U	µg/L	R
Semi-Volatiles	09/11/06	4,6-Dinitro-2-methylphenol	0.047	72.3	GW17338082206007	670 U	µg/L	UJ
					GW17338082206010	620 U	µg/L	UJ
					GW17338082206011	31 U	µg/L	UJ
					GW17338082206012	31 U	µg/L	UJ
					GW17338082306013	33 U	µg/L	UJ
					GW17338082206005	610 U	µg/L	UJ
Semi-Volatiles	09/11/06	Hexachlorocyclopentadiene	0.025	85.7	GW17338082206007	220 U	µg/L	R
					GW17338082206010	210 U	µg/L	R
					GW17338082206011	10 U	µg/L	R
					GW17338082206012	10 U	µg/L	R
					GW17338082306013	11 U	µg/L	R
					GW17338082206005	200 U	µg/L	R

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Parameter	*Calibration Date*	*Compound*	*RRF*	*%D*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
Semi-Volatiles	09/11/06	Di-n-octyl phthalate	4.09	-92.3	GW17338082206007	220 U	µg/L	UJ
					GW17338082206010	210 U	µg/L	UJ
					GW17338082206011	10 U	µg/L	UJ
					GW17338082206012	10 U	µg/L	UJ
					GW17338082306013	11 U	µg/L	UJ
					GW17338082206005	200 U	µg/L	UJ
Semi-Volatiles	09/11/06	Benzo(k)fluoranthene	1.75	-27.2	GW17338082206007	22 U	µg/L	UJ
					GW17338082206010	21 U	µg/L	UJ
					GW17338082206011	1.0 U	µg/L	UJ
					GW17338082206012	1.0 U	µg/L	UJ
					GW17338082306013	1.1 U	µg/L	UJ
					GW17338082206005	20 U	µg/L	UJ
Semi-Volatiles	09/11/06	Indeno(1,2,3-cd)pyrene	0.763	52.3	GW17338082206007	22 U	µg/L	UJ
					GW17338082206010	21 U	µg/L	UJ
					GW17338082206011	1.0 U	µg/L	UJ
					GW17338082206012	1.0 U	µg/L	UJ
					GW17338082306013	1.1 U	µg/L	UJ
					GW17338082206005	20 U	µg/L	UJ
Semi-Volatiles	09/11/06	Dibenz(a,h)anthracene	0.672	49.7	GW17338082206007	22 U	µg/L	UJ
					GW17338082206010	21 U	µg/L	UJ
					GW17338082206011	1.0 U	µg/L	UJ
					GW17338082206012	1.0 U	µg/L	UJ
					GW17338082306013	1.1 U	µg/L	UJ
					GW17338082206005	20 U	µg/L	UJ
Semi-Volatiles	09/11/06	Benzo(g,h,i)perylene	0.531	61.5	GW17338082206007	220 U	µg/L	UJ
					GW17338082206010	210 U	µg/L	UJ
					GW17338082206011	10 U	µg/L	UJ
					GW17338082206012	10 U	µg/L	UJ
					GW17338082306013	11 U	µg/L	UJ
					GW17338082206005	200 U	µg/L	UJ

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Parameter	*Calibration Date*	*Compound*	*RRF*	*%D*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
Semi-Volatiles	09/23/06	Hexachlorocyclopentadiene	0.275	28.7	GW1733809070608	10 U	µg/L	UJ
					GW1733809070609	10 U	µg/L	UJ

Notes:
%D Percent Difference.
J Estimated.
R Rejected.
RRF Relative Response Factor.
U Non-detect at associated value.
UJ The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING SURROGATE RECOVERIES
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Parameter	*Surrogate*	*Surrogate Recovery (percent)*	*Control Limits (percent)*	*Sample ID*	*Analytes*	*Sample Results*	*Units*	*Qualifier*
Semi-Volatiles	Nitrobenzene-d5	64-122	18	GW17338082106004	4-Nitroaniline	22 U	µg/L	UJ
	2-Fluorobiphenyl	60-106	35		Benzaldehyde	11 U	µg/L	UJ
					4-Bromophenyl phenyl ether	11 U	µg/L	UJ
					Caprolactam	11 U	µg/L	UJ
					4-Chloroaniline	11 U	µg/L	UJ
					2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	11 U	µg/L	UJ
					bis(2-Chloroethyl)ether	1.1 U	µg/L	UJ
					bis(2-Chloroethoxy)methane	11 U	µg/L	UJ
					bis(2-Ethylhexyl)phthalate	11 U	µg/L	UJ
					Di-n-octyl phthalate	11 U	µg/L	UJ
					Hexachlorobenzene	1.1 U	µg/L	UJ
					Anthracene	11 U	µg/L	UJ
					2,4-Dinitrotoluene	2.2 U	µg/L	UJ
					Pyrene	11 U	µg/L	UJ
					Dimethyl phthalate	11 U	µg/L	UJ
					Dibenzofuran	11 U	µg/L	UJ
					Atrazine	11 U	µg/L	UJ
					Benzo(g,h,i)perylene	11 U	µg/L	UJ
					Indeno(1,2,3-cd)pyrene	1.1 U	µg/L	UJ
					Benzo(b)fluoranthene	1.1 U	µg/L	UJ
					Fluoranthene	11 U	µg/L	UJ
					Benzo(k)fluoranthene	1.1 U	µg/L	UJ
					Acenaphthylene	11 U	µg/L	UJ
					Chrysene	11 U	µg/L	UJ
					Benzo(a)pyrene	1.1 U	µg/L	UJ
					Dibenz(a,h)anthracene	1.1 U	µg/L	UJ
					Benzo(a)anthracene	1.1 U	µg/L	UJ
					2,6-Dinitrotoluene	2.2 U	µg/L	UJ
					N-Nitrosodi-n-propylamine	1.1 U	µg/L	UJ
					Hexachloroethane	1.1 U	µg/L	UJ
					4-Chlorophenyl phenyl ether	11 U	µg/L	UJ
					Hexachlorocyclopentadiene	11 U	µg/L	UJ
					Isophorone	11 U	µg/L	UJ
					Acenaphthene	11 U	µg/L	UJ
					Diethyl phthalate	11 U	µg/L	UJ

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING SURROGATE RECOVERIES
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Parameter	*Surrogate*	*Surrogate Recovery (percent)*	*Control Limits (percent)*	*Sample ID*	*Analytes*	*Sample Results*	*Units*	*Qualifier*
Semi-Volatiles	Nitrobenzene-d5	64-122	18	GW17338082106004	Di-n-butylphthalate	11 U	µg/L	UJ
	2-Fluorobiphenyl	60-106	35		Phenanthrene	11 U	µg/L	UJ
					Butyl benzylphthalate	11 U	µg/L	UJ
					N-Nitrosodiphenylamine	11 U	µg/L	UJ
					Fluorene	11 U	µg/L	UJ
					Carbazole	11 U	µg/L	UJ
					Hexachlorobutadiene	2.2 U	µg/L	UJ
					2-Nitroaniline	22 U	µg/L	UJ
					Naphthalene	0.5 J	µg/L	J
					2-Methylnaphthalene	11 U	µg/L	UJ
					2-Chloronaphthalene	11 U	µg/L	UJ
					3,3'-Dichlorobenzidine	22 U	µg/L	UJ
					Biphenyl	11 U	µg/L	UJ
					Acetophenone	11 U	µg/L	UJ
					Nitrobenzene	1.1 U	µg/L	UJ
					3-Nitroaniline	22 U	µg/L	UJ

Notes:
J Estimated.
U Non-detect at associated value.
UJ The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.

TABLE 6

QUALIFIED SAMPLE RESULTS DUE TO VARIABILITY IN FIELD DUPLICATE RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Parameter	*Analyte*	*Original Sample ID*	*Original Result*	*Duplicate Sample ID*	*Duplicate Result*	*RPD*	*Units*	*Qualified*
Volatiles	Methyl acetate	GW1733809060603	36	GW1733809060604	5.0 U	*	µg/L	J
Volatiles	Methyl acetate	GW1733809060605	20	GW1733809060606	3.4 J	142	µg/L	J
	Chlorobenzene		6.6		3.1 J	72	µg/L	J
	1,4-Dichlorobenzene		9.6		4.4 J	74	µg/L	J

Notes:

*	RPD could not be calculated due to one or more non-detects.
J	Estimated.
RPD	Relative Percent Difference.
U	Non-detect at associated value.

TABLE 7
TENTATIVELY IDENTIFIED COMPOUNDS (TICs)
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Sample Location	*Volatile Organics*	*Estimated Concentration µg/L*	*Semi-Volatile Organics*	*Estimated Concentration µg/L*
GW17338082206009	C5H10 Cycloalkane A	8.2J	Ethlymethylbenzene isomer A	11J
	C6H12 Cycloalkane A	9.4J	Unknown A	11J
	C8H16 Cycloalkane A	8.2J	Unknown isomer of xylene A	37J
	Diisopropyl ether A	11J		
	Indane A	5.5J		
	n-Propylbenzene A	6.2J		
GW1733809060601	Diisopropyl ether A	5.2J	Ethlymethylbenzene isomer A	11J
			Unknown isomer of xylene A	58J
GW17338082206007	Isopropyl alcohol A	1400J	1H-Inden-1-one,2,3-dihydro- A	360J
			Ethylbenzene A	12000J
			Toluene A	58000J
			Unknowns	24000J
			Unknown dimethylphenol isomer A	240J
			Unknown isomer of xylenes	20000J
GW17338082206008	Indane A	7.2J	Unknowns	140J
GW17338082206011	Diethylbenzene isomer B	28J	1H-Inden-1-one, 2,3-dihydro- A	17J
	Indane B	120J	6-Phenyl-1,3,5-triazine-2,4-diamine A	17J
			Benzenemethanol, 4-methyl- A	21J
			Bisphenol A A	440J
			Diethylbenzene isomer A	26J
			Ethyl dimethyl benzene isomer A	10J
			Indan, 1-methyl- A	9.3J
			Indane A	53J
			Toluene A	58J
			Unknown A	58J
			Unknown isomer of xylenes	160J

TABLE 7
TENTATIVELY IDENTIFIED COMPOUNDS (TICs)
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Sample Location	*Volatile Organics*	*Estimated Concentration µg/L*	*Semi-Volatile Organics*	*Estimated Concentration µg/L*
GW1733809060602	Unknown alcohol A	110J	Bisphenol A A	66J
			Cyclohexane, methyl A	10J
			Ethlymethylbenzene isomers	45J
			Ethylbenzene A	2200J
			Indane A	13J
			m-Ethylphenol A	12J
			n-Propylbenzene A	9.9J
			Phenol, 2-ethyl- A	98J
			Toluene A	4200J
			Unknown isomer of xylene A	1500J
GW17338082206012	None	-	1H-benzotriazole,5-methyl A	55J
			Chlorobenzene A	39J
			Ethylbenzene A	25J
			Toluene A	11J
			Unknowns	70J
			Unknown isomer of xylene A	26J
GW17338082106004	2,3-Dihydro-dimethyl-1h-indene isomer A	7.6J	2(3H)-Benzothiazolone A	10J
	2,3-Dihydro-methyl-1h-indene isomers	40J	Bisphenol A A	34J
	C10H14 aromatic A	8.3J	Unknowns	41J
	Diethylbenzene isomers	33J		
	Indane A	180J		
	Naphthalene A	5.1J		
	Tetramethylbenzene isomer A	30J		
	Unknown aromatics	13J		
GW17338082306013	Diisopropyl ether A	78J	Ethlymethylbenzene isomer A	85J
	n-Propylbenzene B	44J	Ethyl dimethyl benzene isomer A	29J
			Ethylbenzene A	240J
			Methylpropylbenzene isomer A	13J
			n-Propylbenzene A	40J
			Toluene A	190J
			Unknown A	15J
			Unknown isomer of xylenes	680J

TABLE 7
TENTATIVELY IDENTIFIED COMPOUNDS (TICs)
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Sample Location	*Volatile Organics*	*Estimated Concentration µg/L*	*Semi-Volatile Organics*	*Estimated Concentration µg/L*
GW17338082206010	None	-	2-Butoxy-ethanol A	12000J
			Butoxyethoxy-ethanol A	350J
			Ethylbenzene A	7000J
			Octanoic acid A	6000J
			Toluene A	4000J
			Unknowns	96000J
			Unknown isomer of xylenes	7300J
GW17338082206006	C10H12/C10H14 aromatic	40J	Benzenemethanol, 4-methyl- A	160J
	Diisopropyl ether A	27J	Benzoic acid, 3-methyl- A	98J
	Ethlymethylbenzene isomer A	26J	Ethyl dimethyl benzene isomers	95J
	Ethyl dimethyl benzene isomer A	37J	Ethylbenzene A	77J
	Indane A	41J	p-Xylene A	2600J
	Naphthalene A	41J	Unknowns	2000J
	n-Propylbenzene A	46J	Unknown organic acids	190J
	Trimethylbenzene isomer A	32J		
GW17338082206005	C10H12/C10H14 aromatic	510J	Ethyl dimethyl benzene isomers	1800J
	C10H14 aromatics	920J	Indan, 1-methyl- A	240J
	Ethyl dimethyl benzene isomer E	400J	Indane A	400J
	Indane B	780J	Methylpropylbenzene isomer A	560J
	Naphthalene A	1700J	Tetramethylbenzene isomers	900J
	Tetramethylbenzene isomers	870J	Toluene A	3200J
	Trimethylbenzene isomer B	400J	Trimethylbenzene isomer A	390J
			Unknown A	220J
			Unknown isomer of xylenes	2500J
GW17338082306014	None	-	Toluene A	20J
			Unknowns	75J
			Unknown isomer of xylene A	9.3J

TABLE 7
TENTATIVELY IDENTIFIED COMPOUNDS (TICs)
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Sample Location	*Volatile Organics*	*Estimated Concentration µg/L*	*Semi-Volatile Organics*	*Estimated Concentration µg/L*
GW1733809060603	None	-	Ethylbenzene A	10J
			Toluene A	21J
			Unknowns	64J
			Unknown isomer of xylene A	16J
GW1733809060604	Unknown A	8.3J	Ethylbenzene A	15J
			Toluene A	26J
			Unknown isomer of xylene A	23J
GW1733809060605	Benzene, 1-methyl-3-(1-methylethyl)- A	13J	1-Phenyl-1-butene A	21J
	C10H12 aromatics	59J	3-Phenylbut-1-ene A	32J
	C9H10 aromatic A	140J	6-Phenyl-1,3,5-triazine-2,4-diamine A	61J
	Coeluting Aromatics A	6.1J	Bisphenol A A	970J
	Ethyl dimethyl benzene isomer A	18J	Diethylbenzene Isomers	50J
	Methyl-1H-indene isomer A	7.5J	Ethlymethylbenzene isomers	45J
	Naphthalene A	8.7J	Ethyl dimethyl benzene isomers	35J
	n-Propylbenzene A	20J	Ethylbenzene A	8.5J
	Trimethylbenzene isomer A	7.7J	Indane A	110J
			n-Propylbenzene B	23J
			Trimethylbenzene isomer B	11J
			Unknowns	250J
GW1733809060606	2,3-Dihydro-methyl-1h-indene isomer A	17J	6-Phenyl-1,3,5-triazine-2,4-diamine A	65J
	C10H12 aromatics	57J	Benzene,1-ethenyl-4-ethyl A	21J
	C9H10 aromatic A	150J	Bisphenol A A	950J
	Ethlymethylbenzene isomer B	6.0J	Diethylbenzene isomers	50J
	Ethyl dimethyl benzene isomer A	14J	Ethlymethylbenzene isomers	45J
	Methyl-1h-indene isomer A	6.0J	Ethyl dimethyl benzene isomers	33J
	Naphthalene A	7.6J	Indane A	110J
	n-Propylbenzene A	24J	Methylpropylbenzene isomer A	30J
	Trimethylbenzene isomer A	8.6J	n-Propylbenzene B	21J
			Trimethylbenzene isomer B	9.2J
			Unknowns	250J

TABLE 7
TENTATIVELY IDENTIFIED COMPOUNDS (TICs)
OU-2 AREA INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
AUGUST - SEPTEMBER 2006

Sample Location	*Volatile Organics*	*Estimated Concentration µg/L*	*Semi-Volatile Organics*	*Estimated Concentration µg/L*
GW1733809060607	None	-	Unknown A	9.4J
GW1733809070608	None	-	Toluene A	8.7J

Notes:
- Not applicable.
J Estimated.

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01/11/2007

Conestoga-Rovers & Associates
2371 George Urban Blvd
Depew, NY 14043

Attention: Ms. Susan Scrocchi

Laboratory Results
Job No. A753 - GM Wilmington-17338

Dear Ms. Scrocchi:

Enclosed are the results you requested for the following sample(s) received at our laboratory on December 12, 2006.

Lab No.	Client ID	Analysis Required
792580	GW1733812120601	TCL VOA+10
		TCL BNA+20
		TAL Metals
792581	GW1733812120601D	TAL Metals
792582	GW1733812120602	TCL VOA+10
		TCL BNA+20
		TAL Metals
792583	GW1733812120602D	TAL Metals
792584	GW1733812120603	TCL VOA+10
		TCL BNA+20
		TAL Metals
792585	GW1733812120603D	TAL Metals
792586	RB1733812120604	TCL VOA+10
		TCL BNA+20
		TAL Metals
792587	RB1733812120604D	TAL Metals
792588	GW1733812120605	TCL VOA+10
		TCL BNA+20
		TAL Metals
792589	GW1733812120605D	TAL Metals
792590	GW1733812120606	TCL VOA+10

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Laboratory Results
Job No. A753 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
		TCL BNA+20
		TAL Metals
792591	GW1733812120606D	TAL Metals
792592	TB17338121206	TCL VOA+10
793901	GW1733812140607	TCL VOA+10
		TCL BNA+20
		TAL Metals
793902	GW1733812140607D	TAL Metals
793903	GW1733812140608	TCL VOA+10
		TCL BNA+20
		TAL Metals
793904	GW1733812140608D	TAL Metals
793905	GW1733812140609	TCL VOA+10
		TCL BNA+20
		TAL Metals
793906	GW1733812140609D	TAL Metals
793907	GW1733812140610	TCL VOA+10
		TCL BNA+20
		TAL Metals
793908	GW1733812140610D	TAL Metals
793909	GW1733812140611	TCL VOA+10

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Laboratory Results
Job No. A753 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
		TCL BNA+20
		TAL Metals
793910	GW1733812140611D	TAL Metals
793911	GW1733812140612	TCL VOA+10
		TCL BNA+20
		TAL Metals
793912	GW1733812140612D	TAL Metals
793913	GW1733812140613	TCL VOA+10
		TCL BNA+20
		TAL Metals
793914	GW1733812140613D	TAL Metals
793915	GW1733812140614	TCL VOA+10
		TCL BNA+20
		TAL Metals
793916	GW1733812140614D	TAL Metals
793917	GW1733812140615	TCL VOA+10
		TCL BNA+20
		TAL Metals
793918	GW1733812140615D	TAL Metals
793919	GW1733812140616	TCL VOA+10
		TCL BNA+20

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Laboratory Results
Job No. A753 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
		TAL Metals
793920	GW1733812140616D	TAL Metals
793921	GW1733812140617	TCL VOA+10
		TCL BNA+20
		TAL Metals
793922	GW1733812140617D	TAL Metals
793923	GW1733812140618	TCL VOA+10
		TCL BNA+20
		TAL Metals
793924	GW1733812140618D	TAL Metals
793925	TB17338121406	TCL VOA+10
794265	GW1733812150619	TCL VOA+10
		TCL BNA+20
		TAL Metals
794266	GW1733812150619D	TAL Metals
794267	GW1733812150620	TCL VOA+10
		TCL BNA+20
		TAL Metals
794268	GW1733812150620D	TAL Metals
794269	GW1733812150621	TCL VOA+10
		TCL BNA+20

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Laboratory Results
Job No. A753 - GM Wilmington-17338 (cont'd)

Lab No.	Client ID	Analysis Required
		TAL Metals
794270	GW1733812150621D	TAL Metals
794271	RB1733812150622	TCL VOA+10
		TCL BNA+20
		TAL Metals
794272	RB1733812150622D	TAL Metals

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If you have any questions, please contact me at (732) 549-3900.

Very Truly Yours,

Joy Kelly
Project Manager

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Analytical Results Summary

Client ID: **GW1733812120601**
Site: GM Wilmington-17338

Lab Sample No: **792580**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10424.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	0.4J	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW1733812120601**
Site: GM Wilmington-17338

Lab Sample No: **792580**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10424.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	0.4J	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	0.3J	5.0
1,4-Dichlorobenzene	1.3J	5.0
1,2-Dichlorobenzene	1.2J	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **GW1733812120601**
Site: GM Wilmington-17338

Lab Sample No: **792580**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10424.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733812120602**
Site: GM Wilmington-17338

Lab Sample No: **792582**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10425.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW1733812120602**
Site: GM Wilmington-17338

Lab Sample No: **792582**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10425.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	0.5J	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **GW1733812120602**
Site: GM Wilmington-17338

Lab Sample No: **792582**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10425.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
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26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION: 0.0

Client ID: **GW1733812120603**
Site: GM Wilmington-17338

Lab Sample No: **792584**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10426.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	1.8	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	1.0J	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW1733812120603**
Site: GM Wilmington-17338

Lab Sample No: **792584**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10426.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	0.5J	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	1.0J	5.0
1,4-Dichlorobenzene	4.1J	5.0
1,2-Dichlorobenzene	4.8J	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	0.7J	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **GW1733812120603**
Site: GM Wilmington-17338

Lab Sample No: **792584**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10426.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **RB1733812120604**
Site: GM Wilmington-17338

Lab Sample No: **792586**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10427.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **RB1733812120604**
Site: GM Wilmington-17338

Lab Sample No: **792586**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10427.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **RB1733812120604**
Site: GM Wilmington-17338

Lab Sample No: **792586**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10427.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733812120605**
Site: GM Wilmington-17338

Lab Sample No: **792588**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10429.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW1733812120605**
Site: GM Wilmington-17338

Lab Sample No: **792588**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10429.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	0.4J	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **GW1733812120605**
Site: GM Wilmington-17338

Lab Sample No: **792588**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10429.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.			
3.			
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733812120606**
Site: GM Wilmington-17338

Lab Sample No: **792590**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10428.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW1733812120606**
Site: GM Wilmington-17338

Lab Sample No: **792590**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10428.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	0.4J	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **GW1733812120606**
Site: GM Wilmington-17338

Lab Sample No: **792590**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10428.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
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TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **TB17338121206**
Site: GM Wilmington-17338

Lab Sample No: **792592**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10423.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **TB17338121206**
Site: GM Wilmington-17338

Lab Sample No: **792592**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10423.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **TB17338121206**
Site: GM Wilmington-17338

Lab Sample No: **792592**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Analyzed: 12/14/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10423.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733812140607**
Site: GM Wilmington-17338

Lab Sample No: **793901**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10466.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW1733812140607**
Site: GM Wilmington-17338

Lab Sample No: **793901**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10466.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **GW1733812140607**
Site: GM Wilmington-17338

Lab Sample No: **793901**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10466.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733812140608**
Site: GM Wilmington-17338

Lab Sample No: **793903**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10467.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	0.6J	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW1733812140608**
Site: GM Wilmington-17338

Lab Sample No: **793903**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10467.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **GW1733812140608**
Site: GM Wilmington-17338

Lab Sample No: **793903**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10467.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733812140609**
Site: GM Wilmington-17338

Lab Sample No: **793905**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10468.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	1.1	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW1733812140609**
Site: GM Wilmington-17338

Lab Sample No: **793905**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10468.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **GW1733812140609**
Site: GM Wilmington-17338

Lab Sample No: **793905**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10468.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
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TOTAL ESTIMATED CONCENTRATION 0.0

Client ID: **GW1733812140610**
Site: GM Wilmington-17338

Lab Sample No: **793907**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10474.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	6.6	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	49	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW1733812140610**
Site: GM Wilmington-17338

Lab Sample No: **793907**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10474.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	17	5.0
Cyclohexane	1.6J	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	0.9J	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	1.8J	5.0

Client ID: **GW1733812140610**
Site: GM Wilmington-17338

Lab Sample No: **793907**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10474.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	C9H10 Aromatic	9.48	120	
2.	Diethylbenzene isomer	9.63	16	
3.	Diethylbenzene isomer	9.77	5.3	
4.	C10H12 Aromatic	10.03	23	
5.	C10H12 Aromatic	10.08	8.6	
6.	Tetramethylbenzene isomer	10.41	17	
7.	2,3-dihydro-methyl-1H-Indene isomer	10.76	31	
8.	Ethyldimethylbenzene isomer	10.80	5.4	
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10.				
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TOTAL ESTIMATED CONCENTRATION	226

Client ID: **GW1733812140611**
Site: GM Wilmington-17338

Lab Sample No: **793909**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10469.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	0.5J	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	76	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW1733812140611**
Site: GM Wilmington-17338

Lab Sample No: **793909**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10469.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	0.8J	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **GW1733812140611**
Site: GM Wilmington-17338

Lab Sample No: **793909**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10469.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733812140612**
Site: GM Wilmington-17338

Lab Sample No: **793911**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10470.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW1733812140612**
Site: GM Wilmington-17338

Lab Sample No: **793911**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10470.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	4.9J	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **GW1733812140612**
Site: GM Wilmington-17338

Lab Sample No: **793911**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10470.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	C9H10 Aromatic	9.47	98	
2.	Diethylbenzene isomer	9.63	16	
3.	C10H12 Aromatic	10.08	6.1	
4.	2,3-dihydro-methyl-1H-Indene isomer	10.61	6.0	
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TOTAL ESTIMATED CONCENTRATION 126

Client ID: **GW1733812140613**
Site: GM Wilmington-17338

Lab Sample No: **793913**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10471.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **GW1733812140613**
Site: GM Wilmington-17338

Lab Sample No: **793913**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10471.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	6.0	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **GW1733812140613**
Site: GM Wilmington-17338

Lab Sample No: **793913**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10471.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	C9H10 Aromatic	9.47	100	
2.	Benzene, 1,4-diethyl-	9.63	18	
3.	C10H12 Aromatic	10.08	6.8	
4.	2,3-dihydro-methyl-1H-Indene isomer	10.61	6.8	
5.	2,3-dihydro-methyl-1H-Indene isomer	10.76	5.2	
6.				
7.				
8.				
9.				
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12.				
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TOTAL ESTIMATED CONCENTRATION 137

Client ID: **GW1733812140614**
Site: GM Wilmington-17338

Lab Sample No: **793915**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10478.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 10.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	50
Bromomethane	ND	50
Vinyl Chloride	ND	50
Chloroethane	ND	50
Methylene Chloride	ND	30
Acetone	ND	50
Carbon Disulfide	ND	50
Trichlorofluoromethane	ND	50
1,1-Dichloroethene	ND	20
1,1-Dichloroethane	ND	50
trans-1,2-Dichloroethene	ND	50
cis-1,2-Dichloroethene	ND	50
Chloroform	ND	50
1,2-Dichloroethane	ND	20
2-Butanone	ND	50
1,1,1-Trichloroethane	ND	50
Carbon Tetrachloride	ND	20
Bromodichloromethane	ND	10
1,2-Dichloropropane	ND	10
cis-1,3-Dichloropropene	ND	50
Trichloroethene	ND	10
Dibromochloromethane	ND	50
1,1,2-Trichloroethane	ND	30
Benzene	ND	10
trans-1,3-Dichloropropene	ND	50
Bromoform	ND	40
4-Methyl-2-Pentanone	ND	50
2-Hexanone	ND	50
Tetrachloroethene	ND	10
1,1,2,2-Tetrachloroethane	ND	10
Toluene	990	50
Chlorobenzene	ND	50
Ethylbenzene	220	40
Styrene	ND	50

Client ID: **GW1733812140614**
Site: GM Wilmington-17338

Lab Sample No: **793915**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10478.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 10.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	450	50
Freon TF	ND	50
MTBE	ND	50
Cyclohexane	ND	50
1,2-Dibromoethane	ND	50
1,3-Dichlorobenzene	ND	50
1,4-Dichlorobenzene	ND	50
1,2-Dichlorobenzene	ND	50
Dichlorodifluoromethane	ND	50
1,2,4-Trichlorobenzene	ND	50
1,2-Dibromo-3-chloropropane	ND	50
Isopropylbenzene	ND	50
Methyl Acetate	ND	50
Methyl Cyclohexane	ND	50

Client ID: **GW1733812140614**
Site: GM Wilmington-17338

Lab Sample No: **793915**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10478.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 10.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
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22.				
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24.				
25.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733812140615**
Site: GM Wilmington-17338

Lab Sample No: **793917**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10472.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	4.0	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	7.4	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	6.7	4.0
Styrene	ND	5.0

Client ID: **GW1733812140615**
Site: GM Wilmington-17338

Lab Sample No: **793917**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10472.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	10	5.0
Freon TF	ND	5.0
MTBE	2.2J	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	1.3J	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	0.6J	5.0

Client ID: **GW1733812140615**
Site: GM Wilmington-17338

Lab Sample No: **793917**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10472.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Diisopropyl ether	1.68	7.8	
2.	C9H10 Aromatic	9.47	6.5	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
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21.				
22.				
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24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	14

Client ID: **GW1733812140616**
Site: GM Wilmington-17338

Lab Sample No: **793919**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10475.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 50.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	250
Bromomethane	ND	250
Vinyl Chloride	ND	250
Chloroethane	ND	250
Methylene Chloride	ND	150
Acetone	ND	250
Carbon Disulfide	ND	250
Trichlorofluoromethane	ND	250
1,1-Dichloroethene	ND	100
1,1-Dichloroethane	ND	250
trans-1,2-Dichloroethene	ND	250
cis-1,2-Dichloroethene	ND	250
Chloroform	ND	250
1,2-Dichloroethane	ND	100
2-Butanone	ND	250
1,1,1-Trichloroethane	ND	250
Carbon Tetrachloride	ND	100
Bromodichloromethane	ND	50
1,2-Dichloropropane	ND	50
cis-1,3-Dichloropropene	ND	250
Trichloroethene	ND	50
Dibromochloromethane	ND	250
1,1,2-Trichloroethane	ND	150
Benzene	23 J	50
trans-1,3-Dichloropropene	ND	250
Bromoform	ND	200
4-Methyl-2-Pentanone	ND	250
2-Hexanone	ND	250
Tetrachloroethene	ND	50
1,1,2,2-Tetrachloroethane	ND	50
Toluene	6200	250
Chlorobenzene	ND	250
Ethylbenzene	490	200
Styrene	ND	250

Client ID: **GW1733812140616**
Site: GM Wilmington-17338

Lab Sample No: **793919**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10475.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 50.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	2800	250
Freon TF	ND	250
MTBE	37 J	250
Cyclohexane	ND	250
1,2-Dibromoethane	ND	250
1,3-Dichlorobenzene	ND	250
1,4-Dichlorobenzene	ND	250
1,2-Dichlorobenzene	ND	250
Dichlorodifluoromethane	ND	250
1,2,4-Trichlorobenzene	ND	250
1,2-Dibromo-3-chloropropane	ND	250
Isopropylbenzene	ND	250
Methyl Acetate	ND	250
Methyl Cyclohexane	70 J	250

Client ID: **GW1733812140616**
Site: GM Wilmington-17338

Lab Sample No: **793919**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10475.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 50.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Trimethylbenzene isomer	9.36	370	
2.	C9H10 Aromatic	9.47	520	
3.	Ethyldimethylbenzene isomer	9.68	310	
4.	Ethyldimethylbenzene isomer	9.97	560	
5.	Ethyldimethylbenzene isomer	10.04	630	
6.	Tetramethylbenzene isomer	10.41	440	
7.	Tetramethylbenzene isomer	10.46	700	
8.	C10H12 Aromatic	10.76	510	
9.	Tetramethylbenzene isomer	10.80	290	
10.	Naphthalene	11.34	2100	
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 6430

Client ID: **GW1733812140617**
Site: GM Wilmington-17338

Lab Sample No: **793921**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10473.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	0.7J	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	22	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	12	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	2.5J	4.0
Styrene	ND	5.0

Client ID: **GW1733812140617**
Site: GM Wilmington-17338

Lab Sample No: **793921**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10473.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	4.2J	5.0
Freon TF	ND	5.0
MTBE	13	5.0
Cyclohexane	26	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	0.6J	5.0
1,2-Dichlorobenzene	1.3J	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	8.8	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	5.0	5.0

Client ID: **GW1733812140617**
Site: GM Wilmington-17338

Lab Sample No: **793921**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10473.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	C5H12 Alkane	0.85	5.2	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
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22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 5.2

Client ID: **GW1733812140618**
Site: GM Wilmington-17338

Lab Sample No: **793923**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10476.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	25
Bromomethane	ND	25
Vinyl Chloride	ND	25
Chloroethane	ND	25
Methylene Chloride	ND	15
Acetone	ND	25
Carbon Disulfide	ND	25
Trichlorofluoromethane	ND	25
1,1-Dichloroethene	ND	10
1,1-Dichloroethane	ND	25
trans-1,2-Dichloroethene	ND	25
cis-1,2-Dichloroethene	ND	25
Chloroform	ND	25
1,2-Dichloroethane	ND	10
2-Butanone	ND	25
1,1,1-Trichloroethane	ND	25
Carbon Tetrachloride	ND	10
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	25
Trichloroethene	ND	5.0
Dibromochloromethane	ND	25
1,1,2-Trichloroethane	ND	15
Benzene	20	5.0
trans-1,3-Dichloropropene	ND	25
Bromoform	ND	20
4-Methyl-2-Pentanone	ND	25
2-Hexanone	ND	25
Tetrachloroethene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Toluene	170	25
Chlorobenzene	ND	25
Ethylbenzene	170	20
Styrene	ND	25

Client ID: **GW1733812140618**
Site: GM Wilmington-17338

Lab Sample No: **793923**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10476.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	860	25
Freon TF	ND	25
MTBE	ND	25
Cyclohexane	11 J	25
1,2-Dibromoethane	ND	25
1,3-Dichlorobenzene	ND	25
1,4-Dichlorobenzene	ND	25
1,2-Dichlorobenzene	ND	25
Dichlorodifluoromethane	ND	25
1,2,4-Trichlorobenzene	ND	25
1,2-Dibromo-3-chloropropane	ND	25
Isopropylbenzene	75	25
Methyl Acetate	ND	25
Methyl Cyclohexane	15 J	25

Client ID: **GW1733812140618**
Site: GM Wilmington-17338

Lab Sample No: **793923**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10476.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Diisopropyl ether	1.68	27	
2.	Benzene, propyl-	7.94	35	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
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27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 62

Client ID: **TB17338121406**
Site: GM Wilmington-17338

Lab Sample No: **793925**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10465.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **TB17338121406**
Site: GM Wilmington-17338

Lab Sample No: **793925**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10465.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **TB17338121406**
Site: GM Wilmington-17338

Lab Sample No: **793925**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Analyzed: 12/18/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10465.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.			
3.			
4.			
5.			
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733812150619**
Site: GM Wilmington-17338

Lab Sample No: **794265**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10481.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 100.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	500
Bromomethane	ND	500
Vinyl Chloride	ND	500
Chloroethane	ND	500
Methylene Chloride	ND	300
Acetone	ND	500
Carbon Disulfide	ND	500
Trichlorofluoromethane	ND	500
1,1-Dichloroethene	ND	200
1,1-Dichloroethane	ND	500
trans-1,2-Dichloroethene	ND	500
cis-1,2-Dichloroethene	ND	500
Chloroform	ND	500
1,2-Dichloroethane	ND	200
2-Butanone	ND	500
1,1,1-Trichloroethane	ND	500
Carbon Tetrachloride	ND	200
Bromodichloromethane	ND	100
1,2-Dichloropropane	ND	100
cis-1,3-Dichloropropene	ND	500
Trichloroethene	ND	100
Dibromochloromethane	ND	500
1,1,2-Trichloroethane	ND	300
Benzene	480	100
trans-1,3-Dichloropropene	ND	500
Bromoform	ND	400
4-Methyl-2-Pentanone	ND	500
2-Hexanone	ND	500
Tetrachloroethene	ND	100
1,1,2,2-Tetrachloroethane	ND	100
Toluene	3600	500
Chlorobenzene	ND	500
Ethylbenzene	8100	400
Styrene	ND	500

Client ID: **GW1733812150619**
Site: GM Wilmington-17338

Lab Sample No: **794265**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10481.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 100.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	9100	500
Freon TF	ND	500
MTBE	640	500
Cyclohexane	ND	500
1,2-Dibromoethane	ND	500
1,3-Dichlorobenzene	ND	500
1,4-Dichlorobenzene	ND	500
1,2-Dichlorobenzene	ND	500
Dichlorodifluoromethane	ND	500
1,2,4-Trichlorobenzene	ND	500
1,2-Dibromo-3-chloropropane	ND	500
Isopropylbenzene	ND	500
Methyl Acetate	ND	500
Methyl Cyclohexane	ND	500

Client ID: **GW1733812150619**
Site: GM Wilmington-17338

Lab Sample No: **794265**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10481.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 100.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733812150620**
Site: GM Wilmington-17338

Lab Sample No: **794267**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10482.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 20.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	100
Bromomethane	ND	100
Vinyl Chloride	ND	100
Chloroethane	ND	100
Methylene Chloride	ND	60
Acetone	ND	100
Carbon Disulfide	ND	100
Trichlorofluoromethane	ND	100
1,1-Dichloroethene	ND	40
1,1-Dichloroethane	ND	100
trans-1,2-Dichloroethene	ND	100
cis-1,2-Dichloroethene	ND	100
Chloroform	ND	100
1,2-Dichloroethane	ND	40
2-Butanone	ND	100
1,1,1-Trichloroethane	ND	100
Carbon Tetrachloride	ND	40
Bromodichloromethane	ND	20
1,2-Dichloropropane	ND	20
cis-1,3-Dichloropropene	ND	100
Trichloroethene	ND	20
Dibromochloromethane	ND	100
1,1,2-Trichloroethane	ND	60
Benzene	370	20
trans-1,3-Dichloropropene	ND	100
Bromoform	ND	80
4-Methyl-2-Pentanone	ND	100
2-Hexanone	ND	100
Tetrachloroethene	ND	20
1,1,2,2-Tetrachloroethane	ND	20
Toluene	14 J	100
Chlorobenzene	ND	100
Ethylbenzene	1200	80
Styrene	ND	100

Client ID: **GW1733812150620**
Site: GM Wilmington-17338

Lab Sample No: **794267**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10482.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 20.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	4600	100
Freon TF	ND	100
MTBE	39 J	100
Cyclohexane	12 J	100
1,2-Dibromoethane	ND	100
1,3-Dichlorobenzene	ND	100
1,4-Dichlorobenzene	ND	100
1,2-Dichlorobenzene	ND	100
Dichlorodifluoromethane	ND	100
1,2,4-Trichlorobenzene	ND	100
1,2-Dibromo-3-chloropropane	ND	100
Isopropylbenzene	51 J	100
Methyl Acetate	ND	100
Methyl Cyclohexane	15 J	100

Client ID: **GW1733812150620**
Site: GM Wilmington-17338

Lab Sample No: **794267**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10482.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 20.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733812150621**
Site: GM Wilmington-17338

Lab Sample No: **794269**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10483.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5000.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	25000
Bromomethane	ND	25000
Vinyl Chloride	ND	25000
Chloroethane	ND	25000
Methylene Chloride	ND	15000
Acetone	370000	25000
Carbon Disulfide	ND	25000
Trichlorofluoromethane	ND	25000
1,1-Dichloroethene	ND	10000
1,1-Dichloroethane	ND	25000
trans-1,2-Dichloroethene	ND	25000
cis-1,2-Dichloroethene	ND	25000
Chloroform	ND	25000
1,2-Dichloroethane	ND	10000
2-Butanone	ND	25000
1,1,1-Trichloroethane	ND	25000
Carbon Tetrachloride	ND	10000
Bromodichloromethane	ND	5000
1,2-Dichloropropane	ND	5000
cis-1,3-Dichloropropene	ND	25000
Trichloroethene	ND	5000
Dibromochloromethane	ND	25000
1,1,2-Trichloroethane	ND	15000
Benzene	ND	5000
trans-1,3-Dichloropropene	ND	25000
Bromoform	ND	20000
4-Methyl-2-Pentanone	ND	25000
2-Hexanone	ND	25000
Tetrachloroethene	ND	5000
1,1,2,2-Tetrachloroethane	ND	5000
Toluene	160000	25000
Chlorobenzene	ND	25000
Ethylbenzene	11000 J	20000
Styrene	ND	25000

Client ID: **GW1733812150621**
Site: GM Wilmington-17338

Lab Sample No: **794269**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10483.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5000.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	16000 J	25000
Freon TF	ND	25000
MTBE	ND	25000
Cyclohexane	ND	25000
1,2-Dibromoethane	ND	25000
1,3-Dichlorobenzene	ND	25000
1,4-Dichlorobenzene	ND	25000
1,2-Dichlorobenzene	ND	25000
Dichlorodifluoromethane	ND	25000
1,2,4-Trichlorobenzene	ND	25000
1,2-Dibromo-3-chloropropane	ND	25000
Isopropylbenzene	ND	25000
Methyl Acetate	ND	25000
Methyl Cyclohexane	ND	25000

Client ID: **GW1733812150621**
Site: GM Wilmington-17338

Lab Sample No: **794269**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10483.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 5000.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.				
3.				
4.				
5.				
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29.				
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **RB1733812150622**
Site: GM Wilmington-17338

Lab Sample No: **794271**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10480.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Chloromethane	ND	5.0
Bromomethane	ND	5.0
Vinyl Chloride	ND	5.0
Chloroethane	ND	5.0
Methylene Chloride	ND	3.0
Acetone	ND	5.0
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	2.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,2-Dichloroethane	ND	2.0
2-Butanone	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	2.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	1.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	3.0
Benzene	ND	1.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	4.0
4-Methyl-2-Pentanone	ND	5.0
2-Hexanone	ND	5.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	4.0
Styrene	ND	5.0

Client ID: **RB1733812150622**
Site: GM Wilmington-17338

Lab Sample No: **794271**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10480.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS (cont'd)
METHOD 8260B

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Xylene (Total)	ND	5.0
Freon TF	ND	5.0
MTBE	ND	5.0
Cyclohexane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
Dichlorodifluoromethane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
Isopropylbenzene	ND	5.0
Methyl Acetate	ND	5.0
Methyl Cyclohexane	ND	5.0

Client ID: **RB1733812150622**
Site: GM Wilmington-17338

Lab Sample No: **794271**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Analyzed: 12/19/06
GC Column: Rtx-VMS
Instrument ID: VOAMS12.i
Lab File ID: o10480.d

Matrix: WATER
Level: LOW
Purge Volume: 5.0 ml
Dilution Factor: 1.0

VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8260B

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. NO VOLATILE ORGANIC COMPOUNDS FOUND			
2.			
3.			
4.			
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TOTAL ESTIMATED CONCENTRATION	0.0

Client ID: **GW1733812120601**
Site: GM Wilmington-17338

Lab Sample No: **792580**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31834.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733812120601**
Site: GM Wilmington-17338

Lab Sample No: **792580**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31834.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733812120601**
Site: GM Wilmington-17338

Lab Sample No: **792580**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31834.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	5.35	15	
2.	Unknown	11.59	13	
3.				
4.				
5.				
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7.				
8.				
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10.				
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16.				
17.				
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TOTAL ESTIMATED CONCENTRATION: 28

Client ID: **GW1733812120602**
Site: GM Wilmington-17338

Lab Sample No: **792582**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31835.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733812120602**
Site: GM Wilmington-17338

Lab Sample No: **792582**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31835.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733812120602**
Site: GM Wilmington-17338

Lab Sample No: **792582**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31835.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	5.35	16	
2.	Unknown	11.59	13	
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 29

Client ID: **GW1733812120603**
Site: GM Wilmington-17338

Lab Sample No: **792584**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31838.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733812120603**
Site: GM Wilmington-17338

Lab Sample No: **792584**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31838.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733812120603**
Site: GM Wilmington-17338

Lab Sample No: **792584**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31838.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	5.35	16	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	16

Client ID: **RB1733812120604**
Site: GM Wilmington-17338

Lab Sample No: **792586**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31839.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	ND	11
4-Methylphenol	ND	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	ND	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.1
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
Naphthalene	ND	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11

Client ID: **RB1733812120604**
Site: GM Wilmington-17338

Lab Sample No: **792586**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31839.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Diphenyl	ND	11
Acetophenone	0.3J	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Atrazine	ND	11

Client ID: **RB1733812120604**
Site: GM Wilmington-17338

Lab Sample No: **792586**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31839.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	5.35	17	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	17

Client ID: **GW1733812120605**
Site: GM Wilmington-17338

Lab Sample No: **792588**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31840.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	ND	11
4-Methylphenol	ND	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	ND	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.1
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
Naphthalene	ND	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11

Client ID: **GW1733812120605**
Site: GM Wilmington-17338

Lab Sample No: **792588**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31840.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Diphenyl	ND	11
Acetophenone	ND	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Atrazine	ND	11

Client ID: **GW1733812120605**
Site: GM Wilmington-17338

Lab Sample No: **792588**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31840.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	5.35	17	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 17

Client ID: **GW1733812120606**
Site: GM Wilmington-17338

Lab Sample No: **792590**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31841.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	31
4-Nitrophenol	ND	31
4,6-Dinitro-2-methylphenol	ND	31
Pentachlorophenol	ND	31
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733812120606**
Site: GM Wilmington-17338

Lab Sample No: **792590**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31841.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733812120606**
Site: GM Wilmington-17338

Lab Sample No: **792590**
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31841.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	5.34	20	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 20

Client ID: **GW1733812140607**
Site: GM Wilmington-17338

Lab Sample No: **793901**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31842.d

Matrix: WATER
Level: LOW
Sample Volume: 990 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	30
4-Nitrophenol	ND	30
4,6-Dinitro-2-methylphenol	ND	30
Pentachlorophenol	ND	30
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733812140607**
Site: GM Wilmington-17338

Lab Sample No: **793901**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31842.d

Matrix: WATER
Level: LOW
Sample Volume: 990 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733812140607**
Site: GM Wilmington-17338

Lab Sample No: **793901**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31842.d

Matrix: WATER
Level: LOW
Sample Volume: 990 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	5.34	15	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 15

Client ID: **GW1733812140608**
Site: GM Wilmington-17338

Lab Sample No: **793903**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31843.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	31
4-Nitrophenol	ND	31
4,6-Dinitro-2-methylphenol	ND	31
Pentachlorophenol	ND	31
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733812140608**
Site: GM Wilmington-17338

Lab Sample No: **793903**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31843.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733812140608**
Site: GM Wilmington-17338

Lab Sample No: **793903**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31843.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	5.34	18	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	18

Client ID: **GW1733812140609**
Site: GM Wilmington-17338

Lab Sample No: **793905**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31844.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	31
4-Nitrophenol	ND	31
4,6-Dinitro-2-methylphenol	ND	31
Pentachlorophenol	ND	31
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	0.3J	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733812140609**
Site: GM Wilmington-17338

Lab Sample No: **793905**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31844.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733812140609**
Site: GM Wilmington-17338

Lab Sample No: **793905**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31844.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	5.34	16	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION	16

Client ID: **GW1733812140610**
Site: GM Wilmington-17338

Lab Sample No: **793907**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31845.d

Matrix: WATER
Level: LOW
Sample Volume: 960 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	31
4-Nitrophenol	ND	31
4,6-Dinitro-2-methylphenol	ND	31
Pentachlorophenol	ND	31
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	5.2J	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	0.6J	10
Dibenzofuran	0.3J	10

Client ID: **GW1733812140610**
Site: GM Wilmington-17338

Lab Sample No: **793907**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31845.d

Matrix: WATER
Level: LOW
Sample Volume: 960 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	0.6J	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	0.3J	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733812140610**
Site: GM Wilmington-17338

Lab Sample No: **793907**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31845.d

Matrix: WATER
Level: LOW
Sample Volume: 960 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	4.23	150	
2.	Unknown	5.34	15	
3.	Benzene, chloro-	5.47	30	
4.	Indane	7.71	92	
5.	Diethylbenzene isomer	7.85	18	
6.	Benzene, 2-butenyl-	8.16	25	
7.	Ethyldimethylbenzene isomer	8.48	14	
8.	Unknown	8.86	21	
9.	Benzoic acid, 2,4,6-trimethyl-	11.07	16	
10.	2(3H)-Benzothiazolone	13.07	24	
11.	Unknown	13.20	16	
12.	Unknown	14.50	19	
13.	Phenol, 4,4'-(1-methylethylidene)bis-	16.09	21	
14.	Unknown	21.49	11	
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 472

Client ID: **GW1733812140611**
Site: GM Wilmington-17338

Lab Sample No: **793909**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31846.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	31
4-Nitrophenol	ND	31
4,6-Dinitro-2-methylphenol	ND	31
Pentachlorophenol	ND	31
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733812140611**
Site: GM Wilmington-17338

Lab Sample No: **793909**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31846.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733812140611**
Site: GM Wilmington-17338

Lab Sample No: **793909**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31846.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	4.23	68	
2.	Unknown	5.34	17	
3.	Benzene, chloro-	5.46	38	
4.	1H-Benzotriazole, 4-methyl-	12.03	120	
5.	1H-Benzotriazole, 5-methyl-	12.34	76	
6.	2(3H)-Benzothiazolone	13.05	11	
7.	Unknown	13.20	15	
8.	Unknown	13.24	9.2	
9.	Unknown	13.60	14	
10.	Unknown	14.10	14	
11.	Unknown	15.72	97	
12.				
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TOTAL ESTIMATED CONCENTRATION 479

Client ID: **GW1733812140612**
Site: GM Wilmington-17338

Lab Sample No: **793911**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31847.d

Matrix: WATER
Level: LOW
Sample Volume: 990 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	30
4-Nitrophenol	ND	30
4,6-Dinitro-2-methylphenol	ND	30
Pentachlorophenol	0.4J	30
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	1.0J	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	0.6J	10
Dibenzofuran	ND	10

Client ID: **GW1733812140612**
Site: GM Wilmington-17338

Lab Sample No: **793911**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31847.d

Matrix: WATER
Level: LOW
Sample Volume: 990 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	1.6J	10
Pyrene	0.9J	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733812140612**
Site: GM Wilmington-17338

Lab Sample No: **793911**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31847.d

Matrix: WATER
Level: LOW
Sample Volume: 990 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	5.34	17	
2.	Indane	7.71	65	
3.	Diethylbenzene isomer	7.85	16	
4.	1,3,5-Triazine-2,4-diamine, 6-phenyl-	15.32	24	
5.	Phenol, 4,4'-(1-methylethylidene)bis-	16.13	270	
6.	Unknown	17.51	8.6	
7.	Unknown	17.72	23	
8.	Unknown	21.50	37	
9.				
10.				
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TOTAL ESTIMATED CONCENTRATION	461

Client ID: **GW1733812140613**
Site: GM Wilmington-17338

Lab Sample No: **793913**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31848.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	31
4-Nitrophenol	ND	31
4,6-Dinitro-2-methylphenol	ND	31
Pentachlorophenol	0.6J	31
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	1.3J	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	0.8J	10
Dibenzofuran	0.2J	10

Client ID: **GW1733812140613**
Site: GM Wilmington-17338

Lab Sample No: **793913**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31848.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	2.2J	10
Pyrene	1.1J	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733812140613**
Site: GM Wilmington-17338

Lab Sample No: **793913**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/19/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31848.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	5.34	14	
2.	Ethylmethylbenzene isomer	6.40	10	
3.	Indane	7.71	78	
4.	Diethylbenzene isomer	7.84	19	
5.	Benzoic acid, 2,6-dimethyl-	10.48	8.2	
6.	Benzene, 2-propenyl-	11.00	9.6	
7.	1,3,5-Triazine-2,4-diamine, 6-phenyl-	15.33	27	
8.	Phenol, 4,4'-(1-methylethylidene)bis-	16.14	320	
9.	Unknown	17.51	11	
10.	Unknown	17.73	30	
11.	Unknown	21.50	51	
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13.				
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TOTAL ESTIMATED CONCENTRATION: 578

Client ID: **GW1733812140614**
Site: GM Wilmington-17338

Lab Sample No: **793915**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31853.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	33	11
4-Methylphenol	12	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	5.4J	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.1
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
Naphthalene	2.7J	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	0.9J	11
Dibenzofuran	0.3J	11

Client ID: **GW1733812140614**
Site: GM Wilmington-17338

Lab Sample No: **793915**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31853.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	1.8J	11
Pyrene	0.8J	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Diphenyl	ND	11
Acetophenone	2.2J	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Atrazine	ND	11

Client ID: **GW1733812140614**
Site: GM Wilmington-17338

Lab Sample No: **793915**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31853.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	4.39	360	
2.	Unknown	5.34	13	
3.	Ethylbenzene	5.63	150	
4.	Xylene isomer	5.73	200	
5.	Xylene isomer	6.03	120	
6.	Unknown	7.70	15	
7.	Diethylbenzene isomer	7.84	30	
8.	Ethylphenol isomer	8.60	15	
9.	1,3,5-Triazine-2,4-diamine, 6-phenyl-	15.31	11	
10.	Phenol, 4,4'-(1-methylethylidene)bis-	16.11	230	
11.	Unknown	21.50	53	
12.				
13.				
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TOTAL ESTIMATED CONCENTRATION 1197

Client ID: **GW1733812140615**
Site: GM Wilmington-17338

Lab Sample No: **793917**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31864.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	100
2-Chlorophenol	ND	100
2-Methylphenol	7.8J	100
4-Methylphenol	22 J	100
2-Nitrophenol	ND	100
2,4-Dimethylphenol	18 J	100
2,4-Dichlorophenol	ND	100
4-Chloro-3-methylphenol	ND	100
2,4,6-Trichlorophenol	ND	100
2,4,5-Trichlorophenol	ND	100
2,4-Dinitrophenol	ND	310
4-Nitrophenol	ND	310
4,6-Dinitro-2-methylphenol	ND	310
Pentachlorophenol	ND	310
bis(2-Chloroethyl)ether	ND	10
bis(2-chloroisopropyl)ether	ND	100
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	100
bis(2-Chloroethoxy)methane	ND	100
Naphthalene	1700	100
4-Chloroaniline	ND	100
Hexachlorobutadiene	ND	21
2-Methylnaphthalene	52 J	100
Hexachlorocyclopentadiene	ND	100
2-Chloronaphthalene	ND	100
2-Nitroaniline	ND	210
Dimethylphthalate	ND	100
Acenaphthylene	ND	100
2,6-Dinitrotoluene	ND	21
3-Nitroaniline	ND	210
Acenaphthene	ND	100
Dibenzofuran	ND	100

Client ID: **GW1733812140615**
Site: GM Wilmington-17338

Lab Sample No: **793917**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31864.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	21
Diethylphthalate	ND	100
4-Chlorophenyl-phenylether	ND	100
Fluorene	ND	100
4-Nitroaniline	ND	210
N-Nitrosodiphenylamine	ND	100
4-Bromophenyl-phenylether	ND	100
Hexachlorobenzene	ND	10
Phenanthrene	ND	100
Anthracene	ND	100
Carbazole	ND	100
Di-n-butylphthalate	ND	100
Fluoranthene	ND	100
Pyrene	ND	100
Butylbenzylphthalate	ND	100
3,3'-Dichlorobenzidine	ND	210
Benzo(a)anthracene	ND	10
Chrysene	ND	100
bis(2-Ethylhexyl)phthalate	ND	100
Di-n-octylphthalate	ND	100
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	100
Diphenyl	ND	100
Acetophenone	180	100
Benzaldehyde	ND	100
Caprolactam	ND	100
Atrazine	ND	100

Client ID: **GW1733812140615**
Site: GM Wilmington-17338

Lab Sample No: **793917**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31864.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	4.39	2400	
2.	Ethylbenzene	5.64	400	
3.	Xylene isomer	5.73	1300	
4.	Xylene isomer	6.04	620	
5.	Ethylbenzene	7.20	150	
6.	Trimethylbenzene isomer	7.53	330	
7.	Unknown	7.70	390	
8.	Methylpropylbenzene isomer	7.79	290	
9.	Ethyldimethylbenzene isomer	7.85	450	
10.	Ethyldimethylbenzene isomer	8.07	290	
11.	Unknown	8.09	340	
12.	Ethyldimethylbenzene isomer	8.15	670	
13.	Ethyldimethylbenzene isomer	8.39	120	
14.	Tetramethylbenzene isomer	8.48	280	
15.	Tetramethylbenzene isomer	8.52	370	
16.	2,3-dihydro-methyl-1H-Indene isomer	8.74	170	
17.	Ethyldimethylbenzene isomer	8.86	410	
18.	Unknown	10.63	120	
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TOTAL ESTIMATED CONCENTRATION 9100

Client ID: **GW1733812140616**
Site: GM Wilmington-17338

Lab Sample No: **793919**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31855.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	0.7J	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	0.6J	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733812140616**
Site: GM Wilmington-17338

Lab Sample No: **793919**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31855.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733812140616**
Site: GM Wilmington-17338

Lab Sample No: **793919**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31855.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	4.38	9.1	
2.	Unknown	5.33	20	
3.	Xylene isomer	5.72	11	
4.	Unknown	7.97	32	
5.	Unknown	8.15	65	
6.	Unknown	10.69	280	
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
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16.				
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30.				

TOTAL ESTIMATED CONCENTRATION 417

Client ID: **GW17338121406117**
Site: GM Wilmington-17338

Lab Sample No: **793921**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31856.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	0.5J	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.1
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	21
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.1
3-Nitroaniline	ND	21
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW17338121406117**
Site: GM Wilmington-17338

Lab Sample No: **793921**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31856.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW17338121406117**
Site: GM Wilmington-17338

Lab Sample No: **793921**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31856.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Unknown	5.33	24	
2.	Ethylmethylbenzene isomer	6.39	12	
3.	Unknown	10.62	15	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
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TOTAL ESTIMATED CONCENTRATION: 51

Client ID: **GW1733812140618**
Site: GM Wilmington-17338

Lab Sample No: **793923**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31857.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	11
2-Chlorophenol	ND	11
2-Methylphenol	1.4J	11
4-Methylphenol	1.4J	11
2-Nitrophenol	ND	11
2,4-Dimethylphenol	4.9J	11
2,4-Dichlorophenol	ND	11
4-Chloro-3-methylphenol	ND	11
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2,4-Dinitrophenol	ND	32
4-Nitrophenol	ND	32
4,6-Dinitro-2-methylphenol	ND	32
Pentachlorophenol	ND	32
bis(2-Chloroethyl)ether	ND	1.1
bis(2-chloroisopropyl)ether	ND	11
N-Nitroso-di-n-propylamine	ND	1.1
Hexachloroethane	ND	1.1
Nitrobenzene	ND	1.1
Isophorone	ND	11
bis(2-Chloroethoxy)methane	ND	11
Naphthalene	17	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	2.2
2-Methylnaphthalene	2.6J	11
Hexachlorocyclopentadiene	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	22
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	2.2
3-Nitroaniline	ND	22
Acenaphthene	ND	11
Dibenzofuran	ND	11

Client ID: **GW1733812140618**
Site: GM Wilmington-17338

Lab Sample No: **793923**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31857.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.2
Diethylphthalate	ND	11
4-Chlorophenyl-phenylether	ND	11
Fluorene	ND	11
4-Nitroaniline	ND	22
N-Nitrosodiphenylamine	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	1.1
Phenanthrene	ND	11
Anthracene	ND	11
Carbazole	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	ND	11
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	22
Benzo(a)anthracene	ND	1.1
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	1.1
Benzo(k)fluoranthene	ND	1.1
Benzo(a)pyrene	ND	1.1
Indeno(1,2,3-cd)pyrene	ND	1.1
Dibenz(a,h)anthracene	ND	1.1
Benzo(g,h,i)perylene	ND	11
Diphenyl	ND	11
Acetophenone	2.6J	11
Benzaldehyde	ND	11
Caprolactam	ND	11
Atrazine	ND	11

Client ID: **GW1733812140618**
Site: GM Wilmington-17338

Lab Sample No: **793923**
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/14/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31857.d

Matrix: WATER
Level: LOW
Sample Volume: 930 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	4.38	120	
2.	Unknown	5.33	22	
3.	Ethylbenzene	5.63	150	
4.	Xylene isomer	5.73	380	
5.	Xylene isomer	6.04	130	
6.	Ethylmethylbenzene isomer	6.40	70	
7.	Benzene, propyl-	6.74	34	
8.	Unknown	7.70	12	
9.	Ethyldimethylbenzene isomer	8.16	18	
10.	Unknown	8.86	13	
11.				
12.				
13.				
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17.				
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TOTAL ESTIMATED CONCENTRATION 949

Client ID: **GW1733812150619**
Site: GM Wilmington-17338

Lab Sample No: **794265**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31865.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	100
2-Chlorophenol	ND	100
2-Methylphenol	ND	100
4-Methylphenol	41 J	100
2-Nitrophenol	ND	100
2,4-Dimethylphenol	57 J	100
2,4-Dichlorophenol	ND	100
4-Chloro-3-methylphenol	ND	100
2,4,6-Trichlorophenol	ND	100
2,4,5-Trichlorophenol	ND	100
2,4-Dinitrophenol	ND	320
4-Nitrophenol	ND	320
4,6-Dinitro-2-methylphenol	ND	320
Pentachlorophenol	ND	320
bis(2-Chloroethyl)ether	ND	10
bis(2-chloroisopropyl)ether	ND	100
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	100
bis(2-Chloroethoxy)methane	ND	100
Naphthalene	ND	100
4-Chloroaniline	ND	100
Hexachlorobutadiene	ND	21
2-Methylnaphthalene	ND	100
Hexachlorocyclopentadiene	ND	100
2-Chloronaphthalene	ND	100
2-Nitroaniline	ND	210
Dimethylphthalate	ND	100
Acenaphthylene	ND	100
2,6-Dinitrotoluene	ND	21
3-Nitroaniline	ND	210
Acenaphthene	ND	100
Dibenzofuran	ND	100

Client ID: **GW1733812150619**
Site: GM Wilmington-17338

Lab Sample No: **794265**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31865.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	21
Diethylphthalate	ND	100
4-Chlorophenyl-phenylether	ND	100
Fluorene	ND	100
4-Nitroaniline	ND	210
N-Nitrosodiphenylamine	ND	100
4-Bromophenyl-phenylether	ND	100
Hexachlorobenzene	ND	10
Phenanthrene	ND	100
Anthracene	ND	100
Carbazole	ND	100
Di-n-butylphthalate	ND	100
Fluoranthene	ND	100
Pyrene	ND	100
Butylbenzylphthalate	ND	100
3,3'-Dichlorobenzidine	ND	210
Benzo(a)anthracene	ND	10
Chrysene	ND	100
bis(2-Ethylhexyl)phthalate	ND	100
Di-n-octylphthalate	ND	100
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	100
Diphenyl	ND	100
Acetophenone	ND	100
Benzaldehyde	ND	100
Caprolactam	ND	100
Atrazine	ND	100

Client ID: **GW1733812150619**
Site: GM Wilmington-17338

Lab Sample No: **794265**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31865.d

Matrix: WATER
Level: LOW
Sample Volume: 950 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Propanoic acid, 2-methyl-	4.30	360	
2.	Toluene	4.39	1800	
3.	Butanoic acid	4.97	2700	
4.	Unknown	5.57	120	
5.	Ethylbenzene	5.64	4100	
6.	Xylene isomer	5.75	4100	
7.	Xylene isomer	6.04	480	
8.	Ethanol, 2-butoxy-	6.18	6200	
9.	Unknown	8.49	11000	
10.	Octanoic Acid	9.06	3000	
11.	Unknown	9.16	5900	
12.	Unknown	9.51	490	
13.	Unknown	10.86	14000	
14.	Unknown	11.43	100	
15.	Unknown	13.76	85	
16.				
17.				
18.				
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TOTAL ESTIMATED CONCENTRATION 54435

Client ID: **GW1733812150620**
Site: GM Wilmington-17338

Lab Sample No: **794267**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31859.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	1.5J	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	11	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	31
4-Nitrophenol	ND	31
4,6-Dinitro-2-methylphenol	ND	31
Pentachlorophenol	ND	31
bis(2-Chloroethyl)ether	ND	1.0
bis(2-chloroisopropyl)ether	ND	10
N-Nitroso-di-n-propylamine	ND	1.0
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	110	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	2.0
2-Methylnaphthalene	3.2J	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	2.0
3-Nitroaniline	ND	20
Acenaphthene	ND	10
Dibenzofuran	ND	10

Client ID: **GW1733812150620**
Site: GM Wilmington-17338

Lab Sample No: **794267**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31859.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.0
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	20
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **GW1733812150620**
Site: GM Wilmington-17338

Lab Sample No: **794267**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Extracted: 12/16/06
Date Analyzed: 12/20/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31859.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Unknown	4.70	110	
2. Ethylbenzene	5.64	270	
3. Xylene isomer	5.75	670	
4. Ethylmethylbenzene isomer	6.40	77	
5. Trimethylbenzene isomer	7.20	41	
6. Unknown	7.57	220	
7. Indane	7.70	42	
8. Unknown	7.98	39	
9. Ethyldimethylbenzene isomer	8.16	57	
10. Tetramethylbenzene isomer	8.52	38	
11. Unknown	8.86	67	
12. 1,3-Pentanediol, 2,2,4-trimethyl-	8.89	57	
13. Unknown	9.53	94	
14. Unknown	11.14	68	
15. Unknown	11.22	26	
16. Unknown	11.27	43	
17. Unknown	11.33	89	
18. Unknown	11.48	28	
19. Unknown	11.54	38	
20. Benzoic acid, 2,4,5-trimethyl-	11.65	140	
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION	2214

Client ID: **GW1733812150621**
Site: GM Wilmington-17338

Lab Sample No: **794269**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Extracted: 12/16/06
Date Analyzed: 12/18/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31820.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	26 J	100
2-Chlorophenol	ND	100
2-Methylphenol	130	100
4-Methylphenol	640	100
2-Nitrophenol	ND	100
2,4-Dimethylphenol	400	100
2,4-Dichlorophenol	ND	100
4-Chloro-3-methylphenol	ND	100
2,4,6-Trichlorophenol	ND	100
2,4,5-Trichlorophenol	ND	100
2,4-Dinitrophenol	ND	310
4-Nitrophenol	ND	310
4,6-Dinitro-2-methylphenol	ND	310
Pentachlorophenol	ND	310
bis(2-Chloroethyl)ether	ND	10
bis(2-chloroisopropyl)ether	ND	100
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	100
bis(2-Chloroethoxy)methane	ND	100
Naphthalene	5.5J	100
4-Chloroaniline	ND	100
Hexachlorobutadiene	ND	20
2-Methylnaphthalene	ND	100
Hexachlorocyclopentadiene	ND	100
2-Chloronaphthalene	ND	100
2-Nitroaniline	ND	200
Dimethylphthalate	ND	100
Acenaphthylene	ND	100
2,6-Dinitrotoluene	ND	20
3-Nitroaniline	ND	200
Acenaphthene	ND	100
Dibenzofuran	ND	100

Client ID: **GW1733812150621**
Site: GM Wilmington-17338

Lab Sample No: **794269**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Extracted: 12/16/06
Date Analyzed: 12/18/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31820.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	20
Diethylphthalate	ND	100
4-Chlorophenyl-phenylether	ND	100
Fluorene	ND	100
4-Nitroaniline	ND	200
N-Nitrosodiphenylamine	ND	100
4-Bromophenyl-phenylether	ND	100
Hexachlorobenzene	ND	10
Phenanthrene	ND	100
Anthracene	ND	100
Carbazole	ND	100
Di-n-butylphthalate	ND	100
Fluoranthene	ND	100
Pyrene	ND	100
Butylbenzylphthalate	ND	100
3,3'-Dichlorobenzidine	ND	200
Benzo(a)anthracene	ND	10
Chrysene	ND	100
bis(2-Ethylhexyl)phthalate	ND	100
Di-n-octylphthalate	ND	100
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	100
Diphenyl	ND	100
Acetophenone	25 J	100
Benzaldehyde	ND	100
Caprolactam	ND	100
Atrazine	ND	100

Client ID: **GW1733812150621**
Site: GM Wilmington-17338

Lab Sample No: **794269**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Extracted: 12/16/06
Date Analyzed: 12/18/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31820.d

Matrix: WATER
Level: LOW
Sample Volume: 980 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 10.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

COMPOUND NAME	RT	EST. CONC. ug/l	Q
1. Unknown	4.03	470	
2. Unknown	4.27	130	
3. Toluene	4.45	6900	
4. Unknown	4.49	7200	
5. Unknown	5.39	180	
6. Unknown	5.55	130	
7. Ethylbenzene	5.68	4900	
8. Xylene isomer	5.79	5600	
9. Xylene isomer	6.08	3500	
10. Unknown	6.23	280	
11. Unknown	8.29	3600	
12. Dimethylphenol Isomer	8.40	180	
13. Unknown	8.89	430	
14. Unknown	9.50	190	
15. Unknown	9.66	440	
16. Benzoic acid, 3-methyl-	9.79	96	
17. Benzoic acid, 4-methyl-	9.87	150	
18. 1H-Inden-1-one, 2,3-dihydro-	10.11	180	
19. Unknown	10.41	110	
20. Unknown	10.84	10000	
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			

TOTAL ESTIMATED CONCENTRATION 44666

Client ID: **RB1733812150622**
Site: GM Wilmington-17338

Lab Sample No: **794271**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Extracted: 12/16/06
Date Analyzed: 12/18/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31819.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
Phenol	ND	10
2-Chlorophenol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	10
4-Nitrophenol	ND	31
4,6-Dinitro-2-methylphenol	ND	31
Pentachlorophenol	ND	31
bis(2-Chloroethyl)ether	ND	31
bis(2-chloroisopropyl)ether	ND	1.0
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	1.0
Nitrobenzene	ND	1.0
Isophorone	ND	1.0
bis(2-Chloroethoxy)methane	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
2-Methylnaphthalene	ND	2.1
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	10
Dimethylphthalate	ND	21
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	10
3-Nitroaniline	ND	2.1
Acenaphthene	ND	21
Dibenzofuran	ND	10
	ND	10

Client ID: **RB1733812150622**
Site: GM Wilmington-17338

Lab Sample No: **794271**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Extracted: 12/16/06
Date Analyzed: 12/18/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31819.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
METHOD 8270C

Parameter	Analytical Result Units: ug/l	Quantitation Limit Units: ug/l
2,4-Dinitrotoluene	ND	2.1
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	21
N-Nitrosodiphenylamine	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	1.0
Phenanthrene	ND	10
Anthracene	ND	10
Carbazole	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	21
Benzo(a)anthracene	ND	1.0
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Indeno(1,2,3-cd)pyrene	ND	1.0
Dibenz(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	10
Diphenyl	ND	10
Acetophenone	ND	10
Benzaldehyde	ND	10
Caprolactam	ND	10
Atrazine	ND	10

Client ID: **RB1733812150622**
Site: GM Wilmington-17338

Lab Sample No: **794271**
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/15/06
Date Extracted: 12/16/06
Date Analyzed: 12/18/06
GC Column: DB-5
Instrument ID: BNAMS1.i
Lab File ID: r31819.d

Matrix: WATER
Level: LOW
Sample Volume: 970 ml
Extract Final Volume: 2.0 ml
Dilution Factor: 1.0

SEMI-VOLATILE ORGANICS - GC/MS
TENTATIVELY IDENTIFIED COMPOUNDS
METHOD 8270C

	COMPOUND NAME	RT	EST. CONC. ug/l	Q
1.	Toluene	4.43	110	
2.	Ethylbenzene	5.67	18	
3.	Xylene isomer	5.76	20	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ESTIMATED CONCENTRATION 148

Client ID: **GW1733812120601**
Site: **GM Wilmington-17338**

Lab Sample No: 792580
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	2300	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	122	1.7	B	P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	28200	42.5		P
Chromium	5.0	1.6	B	P
Cobalt	2.0	1.7	B	P
Copper	4.4	3.7	B	P
Iron	7590	39.2		P
Lead	ND	2.7		P
Magnesium	12900	41.6		P
Manganese	161	1.2		P
Mercury	ND	0.10		CV
Nickel	5.6	2.4	B	P
Potassium	5050	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	27600	396		P
Thallium	ND	4.7		P
Vanadium	6.9	4.7	B	P
Zinc	14.6	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812120601D**
Site: **GM Wilmington-17338**

Lab Sample No: 792581
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	117	1.7	B	P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	30400	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	175	39.2		P
Lead	ND	2.7		P
Magnesium	13700	41.6		P
Manganese	105	1.2		P
Mercury	ND	0.10		CV
Nickel	3.0	2.4	B	P
Potassium	5110	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	29100	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812120602**
Site: **GM Wilmington-17338**

Lab Sample No: 792582
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	1370	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	47.1	1.7	B	P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	9740	42.5		P
Chromium	3.4	1.6	B	P
Cobalt	3.5	1.7	B	P
Copper	4.7	3.7	B	P
Iron	924	39.2		P
Lead	ND	2.7		P
Magnesium	8880	41.6		P
Manganese	544	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	2520	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	60400	396		P
Thallium	ND	4.7		P
Vanadium	5.9	4.7	B	P
Zinc	13.0	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812120602D**
Site: **GM Wilmington-17338**

Lab Sample No: 792583
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	94.1	62.6	B	P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	46.2	1.7	B	P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	10200	42.5		P
Chromium	ND	1.6		P
Cobalt	2.8	1.7	B	P
Copper	ND	3.7		P
Iron	180	39.2		P
Lead	ND	2.7		P
Magnesium	9330	41.6		P
Manganese	571	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	2160	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	63100	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	8.2	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812120603**
Site: **GM Wilmington-17338**

Lab Sample No: 792584
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	16000	62.6		P
Antimony	ND	5.8		P
Arsenic	3.8	3.2	B	P
Barium	274	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	44300	42.5		P
Chromium	25.4	1.6		P
Cobalt	5.3	1.7	B	P
Copper	17.5	3.7	B	P
Iron	12500	39.2		P
Lead	11.2	2.7		P
Magnesium	12300	41.6		P
Manganese	461	1.2		P
Mercury	ND	0.10		CV
Nickel	12.4	2.4	B	P
Potassium	6020	315		P
Selenium	ND	4.2		P
Silver	1.7	1.4	B	P
Sodium	59100	396		P
Thallium	ND	4.7		P
Vanadium	39.6	4.7	B	P
Zinc	80.4	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812120603D**
Site: **GM Wilmington-17338**

Lab Sample No: 792585
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	187	62.6	B	P
Antimony	ND	5.8		P
Arsenic	3.2	3.2	B	P
Barium	188	1.7	B	P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	44600	42.5		P
Chromium	2.1	1.6	B	P
Cobalt	ND	1.7		P
Copper	3.9	3.7	B	P
Iron	3020	39.2		P
Lead	ND	2.7		P
Magnesium	11600	41.6		P
Manganese	422	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	5140	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	56800	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	8.9	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **RB1733812120604**
Site: **GM Wilmington-17338**

Lab Sample No: 792586
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	97.4	62.6	B	P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	ND	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	ND	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	ND	39.2		P
Lead	ND	2.7		P
Magnesium	ND	41.6		P
Manganese	ND	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	514	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	450	396	B	P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	8.3	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **RB1733812120604D**
Site: **GM Wilmington-17338**

Lab Sample No: 792587
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	ND	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	ND	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	ND	39.2		P
Lead	ND	2.7		P
Magnesium	ND	41.6		P
Manganese	ND	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	521	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	482	396	B	P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	7.5	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812120605**
Site: **GM Wilmington-17338**

Lab Sample No: 792588
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	541	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	163	1.7	B	P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	30100	42.5		P
Chromium	1.7	1.6	B	P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	1250	39.2		P
Lead	ND	2.7		P
Magnesium	13400	41.6		P
Manganese	238	1.2		P
Mercury	ND	0.10		CV
Nickel	3.2	2.4	B	P
Potassium	5380	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	42100	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	6.7	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812120605D**
Site: **GM Wilmington-17338**

Lab Sample No: 792589
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	153	62.6	B	P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	174	1.7	B	P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	32600	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	ND	39.2		P
Lead	ND	2.7		P
Magnesium	14400	41.6		P
Manganese	258	1.2		P
Mercury	ND	0.10		CV
Nickel	2.6	2.4	B	P
Potassium	5600	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	44600	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812120606**
Site: **GM Wilmington-17338**

Lab Sample No: 792590
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	328	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	158	1.7	B	P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	29700	42.5		P
Chromium	3.5	1.6	B	P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	1280	39.2		P
Lead	ND	2.7		P
Magnesium	13100	41.6		P
Manganese	227	1.2		P
Mercury	ND	0.10		CV
Nickel	3.7	2.4	B	P
Potassium	5180	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	40900	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	10.6	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812120606D**
Site: **GM Wilmington-17338**

Lab Sample No: 792591
Lab Job No: A753

Date Sampled: 12/12/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	176	1.7	B	P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	32000	42.5		P
Chromium	6.7	1.6	B	P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	ND	39.2		P
Lead	ND	2.7		P
Magnesium	14300	41.6		P
Manganese	285	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	5580	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	44900	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	9.6	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140607**
Site: **GM Wilmington-17338**

Lab Sample No: 793901
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	2610	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	247	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	25600	42.5		P
Chromium	5.2	1.6	B	P
Cobalt	66.8	1.7		P
Copper	ND	3.7		P
Iron	19300	39.2		P
Lead	ND	2.7		P
Magnesium	18500	41.6		P
Manganese	1130	1.2		P
Mercury	ND	0.10		CV
Nickel	6.0	2.4	B	P
Potassium	5680	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	85700	396		P
Thallium	ND	4.7		P
Vanadium	5.2	4.7	B	P
Zinc	31.5	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140607D**
Site: **GM Wilmington-17338**

Lab Sample No: 793902
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	231	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	27300	42.5		P
Chromium	ND	1.6		P
Cobalt	68.0	1.7		P
Copper	ND	3.7		P
Iron	8080	39.2		P
Lead	ND	2.7		P
Magnesium	19400	41.6		P
Manganese	1180	1.2		P
Mercury	ND	0.10		CV
Nickel	3.5	2.4	B	P
Potassium	5780	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	89500	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	21.0	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140608**
Site: **GM Wilmington-17338**

Lab Sample No: 793903
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	632	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	141	1.7	B	P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	30200	42.5		P
Chromium	2.3	1.6	B	P
Cobalt	2.8	1.7	B	P
Copper	ND	3.7		P
Iron	844	39.2		P
Lead	ND	2.7		P
Magnesium	14800	41.6		P
Manganese	75.8	1.2		P
Mercury	ND	0.10		CV
Nickel	5.2	2.4	B	P
Potassium	5990	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	65500	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	7.3	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140608D**
Site: **GM Wilmington-17338**

Lab Sample No: 793904
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	148	1.7	B	P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	32600	42.5		P
Chromium	ND	1.6		P
Cobalt	2.9	1.7	B	P
Copper	ND	3.7		P
Iron	ND	39.2		P
Lead	ND	2.7		P
Magnesium	15900	41.6		P
Manganese	75.5	1.2		P
Mercury	ND	0.10		CV
Nickel	3.0	2.4	B	P
Potassium	6230	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	69300	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140609**
Site: **GM Wilmington-17338**

Lab Sample No: 793905
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	6710	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	255	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	33400	42.5		P
Chromium	11.6	1.6		P
Cobalt	1.8	1.7	B	P
Copper	7.7	3.7	B	P
Iron	6850	39.2		P
Lead	ND	2.7		P
Magnesium	20600	41.6		P
Manganese	40.3	1.2		P
Mercury	ND	0.10		CV
Nickel	11.7	2.4	B	P
Potassium	5250	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	153000	396		P
Thallium	ND	4.7		P
Vanadium	14.8	4.7	B	P
Zinc	27.7	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140609D**
Site: **GM Wilmington-17338**

Lab Sample No: 793906
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	101	62.6	B	P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	156	1.7	B	P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	34900	42.5		P
Chromium	2.0	1.6	B	P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	ND	39.2		P
Lead	ND	2.7		P
Magnesium	20800	41.6		P
Manganese	25.2	1.2		P
Mercury	ND	0.10		CV
Nickel	6.0	2.4	B	P
Potassium	5110	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	162000	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	22.9	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140610**
Site: **GM Wilmington-17338**

Lab Sample No: 793907
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	293	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	302	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	51400	42.5		P
Chromium	1.6	1.6	B	P
Cobalt	21.6	1.7	B	P
Copper	ND	3.7		P
Iron	56700	39.2		P
Lead	ND	2.7		P
Magnesium	32900	41.6		P
Manganese	1980	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	3150	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	55100	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140610D**
Site: **GM Wilmington-17338**

Lab Sample No: 793908
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	305	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	51100	42.5		P
Chromium	9.3	1.6	B	P
Cobalt	21.4	1.7	B	P
Copper	ND	3.7		P
Iron	56600	39.2		P
Lead	ND	2.7		P
Magnesium	33100	41.6		P
Manganese	1990	1.2		P
Mercury	ND	0.10		CV
Nickel	4.6	2.4	B	P
Potassium	3140	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	56000	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	12.5	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140611**
Site: **GM Wilmington-17338**

Lab Sample No: 793909
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	1280	58.6		P
Antimony	ND	5.8		P
Arsenic	9.9	3.2		P
Barium	230	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	23400	42.5		P
Chromium	2.5	1.6	B	P
Cobalt	17.3	1.7	B	P
Copper	ND	3.7		P
Iron	51400	39.2		P
Lead	ND	2.7		P
Magnesium	21600	41.6		P
Manganese	1970	1.2		P
Mercury	ND	0.10		CV
Nickel	3.2	2.4	B	P
Potassium	2680	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	42400	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	11.1	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140611D**
Site: **GM Wilmington-17338**

Lab Sample No: 793910
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	86.4	58.6	B	P
Antimony	ND	5.8		P
Arsenic	10.1	3.2		P
Barium	240	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	24900	42.5		P
Chromium	ND	1.6		P
Cobalt	18.0	1.7	B	P
Copper	ND	3.7		P
Iron	54100	39.2		P
Lead	ND	2.7		P
Magnesium	22700	41.6		P
Manganese	2060	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	2730	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	45500	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140612**
Site: **GM Wilmington-17338**

Lab Sample No: 793911
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	543	58.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	357	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	58200	42.5		P
Chromium	ND	1.6		P
Cobalt	1.9	1.7	B	P
Copper	ND	3.7		P
Iron	10000	39.2		P
Lead	ND	2.7		P
Magnesium	17300	41.6		P
Manganese	354	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	13100	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	86700	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140612D**
Site: **GM Wilmington-17338**

Lab Sample No: 793912
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	96.9	58.6	B	P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	384	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	62500	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	10800	39.2		P
Lead	ND	2.7		P
Magnesium	18700	41.6		P
Manganese	380	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	13900	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	93000	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	9.2	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140613**
Site: **GM Wilmington-17338**

Lab Sample No: 793913
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	641	58.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	359	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	58600	42.5		P
Chromium	3.6	1.6	B	P
Cobalt	2.1	1.7	B	P
Copper	ND	3.7		P
Iron	10100	39.2		P
Lead	2.9	2.7	B	P
Magnesium	17400	41.6		P
Manganese	359	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	13100	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	86700	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	10.6	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140613D**
Site: **GM Wilmington-17338**

Lab Sample No: 793914
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	84.4	58.6	B	P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	379	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	61500	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	10600	39.2		P
Lead	ND	2.7		P
Magnesium	18400	41.6		P
Manganese	373	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	13800	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	92100	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140614**
Site: **GM Wilmington-17338**

Lab Sample No: 793915
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	1850	58.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	412	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	64500	42.5		P
Chromium	2.2	1.6	B	P
Cobalt	ND	1.7		P
Copper	4.6	3.7	B	P
Iron	20300	39.2		P
Lead	ND	2.7		P
Magnesium	24200	41.6		P
Manganese	930	1.2		P
Mercury	ND	0.10		CV
Nickel	2.5	2.4	B	P
Potassium	13300	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	88700	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	15.7	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140614D**
Site: **GM Wilmington-17338**

Lab Sample No: 793916
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	220	58.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	418	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	68200	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	19400	39.2		P
Lead	ND	2.7		P
Magnesium	25200	41.6		P
Manganese	946	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	13700	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	92500	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140615**
Site: **GM Wilmington-17338**

Lab Sample No: 793917
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	524	58.6		P
Antimony	ND	5.8		P
Arsenic	23.8	3.2		P
Barium	322	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	43600	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	52400	39.2		P
Lead	ND	2.7		P
Magnesium	23200	41.6		P
Manganese	566	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	6510	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	100000	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140615D**
Site: **GM Wilmington-17338**

Lab Sample No: 793918
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	61.9	58.6	B	P
Antimony	ND	5.8		P
Arsenic	23.3	3.2		P
Barium	340	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	46300	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	54500	39.2		P
Lead	ND	2.7		P
Magnesium	24400	41.6		P
Manganese	587	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	6820	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	106000	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140616**
Site: **GM Wilmington-17338**

Lab Sample No: 793919
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	293	58.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	268	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	34700	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	3.8	3.7	B	P
Iron	28700	39.2		P
Lead	ND	2.7		P
Magnesium	19200	41.6		P
Manganese	726	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	5340	315		P
Selenium	ND	4.2		P
Silver	3.6	1.4	B	P
Sodium	55400	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	7.0	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140616D**
Site: **GM Wilmington-17338**

Lab Sample No: 793920
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	151	58.6	B	P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	276	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	36000	42.5		P
Chromium	2.8	1.6	B	P
Cobalt	2.2	1.7	B	P
Copper	ND	3.7		P
Iron	29100	39.2		P
Lead	ND	2.7		P
Magnesium	19900	41.6		P
Manganese	750	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	5510	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	57000	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	8.5	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140617**
Site: **GM Wilmington-17338**

Lab Sample No: 793921
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	175	58.6	B	P
Antimony	ND	5.8		P
Arsenic	9.8	3.2		P
Barium	439	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	37300	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	60800	39.2		P
Lead	ND	2.7		P
Magnesium	27800	41.6		P
Manganese	949	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	5660	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	122000	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	16.1	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140617D**
Site: **GM Wilmington-17338**

Lab Sample No: 793922
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	137	58.6	B	P
Antimony	ND	5.8		P
Arsenic	11.2	3.2		P
Barium	435	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	36600	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	59900	39.2		P
Lead	ND	2.7		P
Magnesium	27500	41.6		P
Manganese	917	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	5650	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	120000	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140618**
Site: **GM Wilmington-17338**

Lab Sample No: 793923
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	3400	58.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	385	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	34400	42.5		P
Chromium	7.1	1.6	B	P
Cobalt	2.8	1.7	B	P
Copper	5.0	3.7	B	P
Iron	24400	39.2		P
Lead	3.9	2.7		P
Magnesium	27200	41.6		P
Manganese	1290	1.2		P
Mercury	ND	0.10		CV
Nickel	3.7	2.4	B	P
Potassium	4800	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	61600	396		P
Thallium	ND	4.7		P
Vanadium	5.9	4.7	B	P
Zinc	11.0	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812140618D**
Site: **GM Wilmington-17338**

Lab Sample No: 793924
Lab Job No: A753

Date Sampled: 12/14/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	138	58.6	B	P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	384	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	35900	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	23000	39.2		P
Lead	ND	2.7		P
Magnesium	27700	41.6		P
Manganese	1410	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	4830	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	65300	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812150619**
Site: **GM Wilmington-17338**

Lab Sample No: 794265
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	4730	58.6		P
Antimony	ND	5.8		P
Arsenic	40.0	3.2		P
Barium	355	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	73400	42.5		P
Chromium	7.4	1.6	B	P
Cobalt	176	1.7		P
Copper	ND	3.7		P
Iron	120000	39.2		P
Lead	5.3	2.7		P
Magnesium	57800	41.6		P
Manganese	1260	1.2		P
Mercury	ND	0.10		CV
Nickel	8.2	2.4	B	P
Potassium	4700	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	82000	396		P
Thallium	ND	4.7		P
Vanadium	9.6	4.7	B	P
Zinc	14.8	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812150619D**
Site: **GM Wilmington-17338**

Lab Sample No: 794266
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	207	58.6		P
Antimony	ND	5.8		P
Arsenic	47.4	3.2		P
Barium	357	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	77300	42.5		P
Chromium	3.0	1.6	B	P
Cobalt	171	1.7		P
Copper	ND	3.7		P
Iron	121000	39.2		P
Lead	ND	2.7		P
Magnesium	60900	41.6		P
Manganese	1290	1.2		P
Mercury	ND	0.10		CV
Nickel	4.4	2.4	B	P
Potassium	4590	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	87500	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	9.4	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812150620**
Site: **GM Wilmington-17338**

Lab Sample No: 794267
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	63900	58.6		P
Antimony	ND	5.8		P
Arsenic	10.7	3.2		P
Barium	518	1.7		P
Beryllium	1.7	0.30	B	P
Cadmium	ND	0.40		P
Calcium	28000	42.5		P
Chromium	127	1.6		P
Cobalt	21.5	1.7	B	P
Copper	65.7	3.7		P
Iron	127000	39.2		P
Lead	83.5	2.7		P
Magnesium	27000	41.6		P
Manganese	875	1.2		P
Mercury	0.12	0.10	B	CV
Nickel	56.1	2.4		P
Potassium	8500	315		P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	27800	396		P
Thallium	ND	4.7		P
Vanadium	196	4.7		P
Zinc	237	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812150620D**
Site: **GM Wilmington-17338**

Lab Sample No: 794268
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	499	58.6		P
Antimony	ND	5.8		P
Arsenic	6.6	3.2		P
Barium	192	1.7	B	P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	27000	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	64000	39.2		P
Lead	3.3	2.7		P
Magnesium	22000	41.6		P
Manganese	512	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	2690	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	27800	396		P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	6.9	5.8	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812150621**
Site: **GM Wilmington-17338**

Lab Sample No: 794269
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	226	125	B	P
Antimony	ND	11.6		P
Arsenic	ND	6.4		P
Barium	470	3.4		P
Beryllium	ND	0.60		P
Cadmium	ND	0.80		P
Calcium	70100	85.0		P
Chromium	ND	3.2		P
Cobalt	ND	3.4		P
Copper	ND	7.4		P
Iron	210000	78.4		P
Lead	ND	5.4		P
Magnesium	73000	83.2		P
Manganese	17600	2.4		P
Mercury	ND	0.10		CV
Nickel	ND	4.8		P
Potassium	4790	631	B	P
Selenium	ND	8.4		P
Silver	ND	2.8		P
Sodium	60600	791		P
Thallium	ND	9.4		P
Vanadium	ND	9.4		P
Zinc	ND	11.6		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **GW1733812150621D**
Site: **GM Wilmington-17338**

Lab Sample No: 794270
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	125		P
Antimony	ND	11.6		P
Arsenic	ND	6.4		P
Barium	489	3.4		P
Beryllium	ND	0.60		P
Cadmium	ND	0.80		P
Calcium	72100	85.0		P
Chromium	4.6	3.2	B	P
Cobalt	ND	3.4		P
Copper	ND	7.4		P
Iron	215000	78.4		P
Lead	ND	5.4		P
Magnesium	75200	83.2		P
Manganese	18100	2.4		P
Mercury	ND	0.10		CV
Nickel	ND	4.8		P
Potassium	4870	631	B	P
Selenium	ND	8.4		P
Silver	ND	2.8		P
Sodium	62200	791		P
Thallium	ND	9.4		P
Vanadium	ND	9.4		P
Zinc	12.6	11.6	B	P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **RB1733812150622**
Site: **GM Wilmington-17338**

Lab Sample No: 794271
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	ND	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	ND	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	ND	39.2		P
Lead	ND	2.7		P
Magnesium	ND	41.6		P
Manganese	2.0	1.2	B	P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	541	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	469	396	B	P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

Client ID: **RB1733812150622D**
Site: **GM Wilmington-17338**

Lab Sample No: 794272
Lab Job No: A753

Date Sampled: 12/15/06
Date Received: 12/12/06

Matrix: WATER
Level: LOW

METALS ANALYSIS

Analyte	Analytical Result Units: ug/l	Instrument Detection Limit	Qual	M
Aluminum	ND	62.6		P
Antimony	ND	5.8		P
Arsenic	ND	3.2		P
Barium	ND	1.7		P
Beryllium	ND	0.30		P
Cadmium	ND	0.40		P
Calcium	ND	42.5		P
Chromium	ND	1.6		P
Cobalt	ND	1.7		P
Copper	ND	3.7		P
Iron	ND	39.2		P
Lead	ND	2.7		P
Magnesium	ND	41.6		P
Manganese	ND	1.2		P
Mercury	ND	0.10		CV
Nickel	ND	2.4		P
Potassium	513	315	B	P
Selenium	ND	4.2		P
Silver	ND	1.4		P
Sodium	501	396	B	P
Thallium	ND	4.7		P
Vanadium	ND	4.7		P
Zinc	ND	5.8		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)
M Column - Method Code (See Section 2 of Report)

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MEMORANDUM

TO: Greg Carli

REF. NO.: 017307-091008-0001

FROM: Susan C. Scrocchi/jbh/6-NF

DATE: February 12, 2007

E-Mail and Regular Mail

RE: Data Quality Assessment and Validation
OU-2 Area Investigation – Groundwater Sampling
Wilmington, Delaware
December 2006

The following details a quality assessment and validation of the analytical data resulting from the collection of 18 water and six quality control (QC) samples from the General Motors Assembly Plant Site in Wilmington, Delaware, during December 2006. The sample summary detailing sample identification, sample location, QC samples, and analytical parameters is presented in Table 1. Sample analysis was completed by Severn Trent Laboratories (STL) in Edison, New Jersey, in accordance with the methodologies presented in Table 2.

The QC criteria used to assess the data were established by the methods and the Quality Assurance Project Plan (QAPP). Application of quality assurance criteria was consistent with the following guidance documents:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99/008, October 1999; and

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Review", USEPA 540/R-94/013, February 1994.

Sample Quantitation

The laboratory reported detected concentrations of volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), and inorganics below the laboratory's practical quantitation limit (PQL)/report limit (RL) but above the laboratory's method detection limit (MDL). The laboratory flagged these sample concentrations with a "J" or a "B" for organics and inorganics respectively. These concentrations should be qualified as estimated (J) values unless qualified otherwise in this memorandum. The laboratory "B" flags may be disregarded.

Sample Preservation and Holding Times

Sample holding time periods and preservation requirements are presented in the analytical methods. All samples were prepared and analyzed within the method-required holding times.

All samples were properly preserved and cooled to 4°C (±2°C) after collection.

Gas Chromatography/Mass Spectrometer (GC/MS) –
Tuning and Mass Calibration (Instrument Performance Check) – Organic Analyses

Prior to analysis, GC/MS instrumentation is tuned to ensure optimization over the mass range of interest. To evaluate instrument tuning, the VOC and SVOC methods require the analysis of the specific tuning compounds bromofluorobenzene (BFB) and decafluorotriphenylphosphine (DFTPP), respectively. The resulting spectra must meet the criteria cited in the method before analysis is initiated. Analysis of the tuning compound must then be repeated every 12 hours throughout sample analysis to ensure the continued optimization of the instrument.

Instrument tuning data were reviewed. Tuning compounds were analyzed at the required frequency throughout the VOC and SVOC analysis periods. All tuning criteria were met for the analyses, indicating proper optimization of the instrument.

Initial Calibration – Organic Analyses

To quantify compounds of interest in samples, calibration of the GC/MS over a specific concentration range must be performed. Initially, a five-point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific concentration range.

Calibration data were reviewed for all samples. Linearity of the calibration curve and instrument sensitivity were evaluated against the following criteria:

i) GC/MS (all compounds) – must meet a minimum mean relative response factor (RRF) of 0.05; and

ii) GC/MS (all compounds) – the percent relative standard deviation (%RSD) values must not exceed 30.0 percent or a minimum coefficient of determination of 0.99 if quadratic equation calibration curves is used.

Initial calibration standards were analyzed as required and the data showed acceptable sensitivity and linearity with the exception of benzaldehyde for linearity and acetone, and 2-butanone, which did not exhibit an adequate instrument response.

All associated sample data for benzaldehyde were qualified as estimated (see Table 3).

All associated positive sample data for acetone and 2-butanone were qualified as estimated and all non-detect results were rejected (see Table 3).

Continuing Calibration – Organic Analyses

To ensure that instrument calibration is acceptable throughout the sample analysis period, continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours. The following criteria were employed to evaluate the continuing calibration data:

i) GC/MS (all compounds) – must meet a minimum mean RRF of 0.05; and

ii) GC/MS (all compounds) - the percent difference (%D) between the mean initial calibration RRF and the continuing calibration RRF must not exceed 25 percent; and

iii) GC/MS (compounds determined by quadratic curve) – the percent drift between the true value and the continuing value must not exceed 25 percent.

Calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity and linearity of response with the exception of 2,4-dinitrophenol and benzo(g,h,i)perylene exhibiting variability between the initial and continuing response factors.

All associated sample data that did not meet the linearity criteria were qualified as estimated (see Table 4).

Initial Calibration – Inorganic Analyses

The initial calibration includes a blank and at least one standard for inductively coupled plasma/mass spectrometer (ICP/MS) to establish the analytical curve. Mercury analyses requires the analysis of a calibration blank and a minimum of five standards to establish the analytical curve. The coefficient of variation for calibration curves must be at least 0.995.

Initial calibration is verified with an initial calibration verification (ICV) standard which must recover within 90 to 110 percent.

A review of the laboratory data showed that the inorganic initial calibration curves and ICVs were analyzed at the appropriate frequency and were within the acceptance criteria.

Continuing Calibration – Inorganic Analyses

To ensure the instrument calibration is acceptable throughout the sample analysis period, continuing calibration verification (CCV) standards are analyzed on a regular basis. The CCVs must meet the percent recovery control limits specified above for the ICVs. Criteria for inorganic analyses are the same criteria as used for assessing the initial calibration data.

A review of the laboratory data showed that CCVs were analyzed at the appropriate frequency and the data were within the acceptance criteria.

Method Blank Samples

Method blank samples are prepared and analyzed with the investigative samples to assess the presence and the magnitude of sample contamination introduced during sample analysis. Additionally, continuing calibration blanks (CCBs) are routinely analyzed after each CCV for metals.

For this study, method blanks were analyzed at a minimum frequency of one per analytical batch and CCBs were analyzed for metals after each CCV. The method blanks and calibration blanks yielded low levels of various metals. All associated sample results with concentrations similar to the blanks were qualified as non-detect (see Table 5).

Surrogate Compounds – Organic Analyses

In accordance with the methods employed, all samples, blanks, and standards analyzed for VOCs and SVOCs are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of individual sample matrices on analytical efficiency and are assessed against method control limits. For the SVOC methods, it is acceptable for one surrogate recovery per fraction (base neutral or acid phenolic) to fall outside of these limits, provided it is greater than 10 percent.

All surrogate recoveries were within the laboratory control limits demonstrating acceptable analytical efficiency.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

MS/MSD samples are prepared using a representative subset of analytes for each parameter and analyzed with each sample batch for the organic parameters. Matrix spike/duplicate (MS/Dup) samples are prepared and analyzed with the samples for inorganics. The recoveries of spike analyses are used to assess the analytical accuracy achieved on individual sample matrices. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed. The RPD between the MS and MSD or the original sample and the Dup are used to assess analytical precision.

MS/MSD analyses were performed on sample GW-17338-121206-MJW-02. The MS/MSD recoveries were within laboratory control limits for all analytes of interest, demonstrating acceptable overall analytical accuracy and precision.

MS/Dup analyses were performed on sample GW-17338-121206-MJW-02. The MS/Dup recoveries were within laboratory control limits for all analytes of interest demonstrating acceptable overall analytical accuracy and precision.

Laboratory Control Sample (LCS) Analysis

The LCS serves as a measure of the overall analytical performance. LCSs are prepared with all analytes of interest and analyzed with each sample batch.

LCSs were prepared and analyzed for all parameters. The LCS recoveries were within the laboratory control limits for all analytes of interest demonstrating acceptable overall analytical accuracy.

Internal Standard (IS) Summaries

To correct for changes in GC/MS response and sensitivity, IS compounds are added to all investigative samples and QC samples prior to VOC and SVOC analyses. All results are calculated as a ratio of the IS response. The criteria by which the IS results are assessed is as follows:

i) IS standard area counts must not vary by more than a factor of two (-50 percent to +100 percent) from the associated continuing calibration standard IS area counts; and

ii) the retention time (RT) of the IS must not vary by more than ±30 seconds from the associated calibration standard.

All sample IS results met the above criteria.

Inductively Coupled Plasma (ICP) Interference Check Sample (ICS) Analysis – Inorganic Analyses

To verify that proper inter-element and background correction factors had been established by the laboratory ICSs are analyzed. These samples contain high concentrations of aluminum, calcium, magnesium, and iron and are analyzed at the beginning and end of each sample analysis period. The ICSs are evaluated against recovery control limits of 80 to 120 percent.

The ICS analysis results were evaluated for all samples and were within the control limits.

Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and mass spectra (if applicable) were evaluated according to identification criteria established by the methods. The samples identified in Table 1 were reviewed. The organic compounds reported adhered to the specified identification criteria.

Target Compound Quantitation

The reported quantitation results and detection limits were checked to ensure results reported were accurate. The samples identified in Table 1 were reviewed. No discrepancies were found between the raw data and the sample results reported by the laboratory.

Field Quality Assurance/Quality Control (QA/QC)

The field QA/QC consisted of five trip blank samples, three field blank samples, and two field duplicate samples.

Trip Blanks – VOCs

Trip blanks are transported, stored, and analyzed with the investigative samples to identify potential cross-contamination of VOCs. Trip blanks were collected at the proper frequency, and all results were non-detect for the analytes of interest.

Field Blanks

Field blanks are collected and submitted for analysis to identify possible contamination introduced during sample collection and/or analysis. Three field blanks were collected and analyzed as summarized in Table 1. The field blanks yielded low levels of various metals and acetophenone. All associated sample results with similar concentrations were qualified as non-detect (see Table 6).

Field Duplicates

To assess overall analytical and sampling precision, field duplicates were collected and submitted "blind" to the laboratory for analysis as shown in Table 1.

A comparison of the results showed good analytical and sampling precision.

System Performance

System performance between various quality control checks was evaluated to monitor for changes that may have caused the degradation of data quality. No technical problems or chromatographic anomalies were observed which would require qualification of the data.

Tentatively Identified Compounds (TICs)

TICs were evaluated for all samples submitted for volatile and semi-volatile analyses. A summary of the TICs reported and the estimated concentrations is presented in Table 7. TICs which were present in the blanks or which were identified as aldol condensation products and/or siloxanes have been eliminated.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the exceptions and qualifications noted.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
DECEMBER 2006

				Analysis/Parameters				
Sample I.D.	*Location I.D.*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*VOCs*	*SVOCs*	*Total Metals*	*Dissolved Metals*	*Comments*
GW-17338-121206-MJW-01	MW-17	12/12/06	11:15	X	X	X	X	
GW-17338-121206-MJW-02	MW-18	12/12/06	12:10	X	X	X	X	
GW-17338-121206-MJW-03	MW-19	12/12/06	13:55	X	X	X	X	
RB-17338-121206-MJW-04	Rinse Blank	12/12/06	14:05	X	X	X	X	
GW-17338-121206-MJW-05	MW-9	12/12/06	14:55	X	X	X	X	
GW-17338-121206-MJW-06	MW-9	12/12/06	15:10	X	X	X	X	GW-17338-121206-MJW-05
TB-17338-121206	Trip Blank	12/12/06	-	X				
GW-17338-121406-MJW-07	MW-11R	12/14/06	8:45	X	X	X	X	
GW-17338-121406-MJW-08	MW-15	12/14/06	9:00	X	X	X	X	
GW-17338-121406-MJW-09	MW-14	12/14/06	9.:50	X	X	X	X	
GW-17338-121406-MJW-10	MW-8	12/14/06	10:20	X	X	X	X	
GW-17338-121406-MJW-11	MW-7	12/14/06	11:00	X	X	X	X	
GW-17338-121406-MJW-12	MW-16	12/14/06	11:50	X	X	X	X	
GW-17338-121406-MJW-13	MW-16	12/14/06	12:10	X	X	X	X	GW-17338-121406-MJW-12
GW-17338-121406-MJW-14	MW-6	12/14/06	12:40	X	X	X	X	
GW-17338-121406-MJW-15	MW-13	12/14/06	13:45	X	X	X	X	
GW-17338-121406-MJW-16	MW3D	12/14/06	13:45	X	X	X	X	
GW-17338-121406-MJW-17	MW-2	12/14/06	14:45	X	X	X	X	
GW-17338-121406-MJW-18	MW-10	12/14/06	15:25	X	X	X	X	
TB-17338-121416	Trip Blank	12/14/06	-	X				
GW-17338-121506-MJW-19	MW-11	12/15/06	9:25	X	X	X	X	
GW-17338-121506-MJW-20	MW-12	12/15/06	10:40	X	X	X	X	
GW-17338-121506-MJW-21	MW-3	12/15/06	11:40	X	X	X	X	
RB-17338-121506-MJW-22	Rinse Blank	12/15/06	11:50	X	X	X	X	

Notes:
- Not applicable.
SVOCs Semi-Volatile Organic Compounds.
VOCs Volatile Organic Compounds.

TABLE 2

SUMMARY OF ANALYTICAL METHODS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
DECEMBER 2006

Parameter	*Method* [1]
TCL VOCs plus TICs	SW-846 8260B
TCL SVOCs plus TICs	SW-846 8270C
Metals (total and dissolved)	SW-846 6010/7470

Notes:

[1] "Test Methods for Solid Waste/Physical Chemical Methods", SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

SVOCs Semi-Volatile Organic Compounds.
TCL Target Compound List.
TICs Tentatively Identified Compounds.
VOCs Volatile Organic Compounds.

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INITIAL CALIBRATION RESULTS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
DECEMBER 2006

Parameter	*Compound*	*Calibration Date*	*%RSD*	*RRF*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
VOCs	2-Butanone (Methyl Ethyl Ketone)	12/14/06	-	0.044	GW-17338-121206-MJW-01	5.0 U	µg/L	R
					GW-17338-121206-MJW-05	5.0 U	µg/L	R
					GW-17338-121206-MJW-06	5.0 U	µg/L	R
					GW-17338-121406-MJW-07	5.0 U	µg/L	R
					GW-17338-121406-MJW-08	5.0 U	µg/L	R
					GW-17338-121406-MJW-09	5.0 U	µg/L	R
					GW-17338-121406-MJW-10	5.0 U	µg/L	R
					GW-17338-121406-MJW-11	5.0 U	µg/L	R
					GW-17338-121406-MJW-12	5.0 U	µg/L	R
					GW-17338-121406-MJW-13	5.0 U	µg/L	R
					GW-17338-121406-MJW-14	50 U	µg/L	R
					GW-17338-121406-MJW-15	5.0 U	µg/L	R
					GW-17338-121406-MJW-16	250 U	µg/L	R
					GW-17338-121406-MJW-17	5.0 U	µg/L	R
					GW-17338-121406-MJW-18	25 U	µg/L	R
					GW-17338-121506-MJW-19	500 U	µg/L	R
					GW-17338-121506-MJW-20	100 U	µg/L	R
					GW-17338-121506-MJW-21	25000 U	µg/L	R
					GW-17338-121206-MJW-02	5.0 U	µg/L	R
					GW-17338-121206-MJW-03	5.0 U	µg/L	R
VOCs	Acetone	12/14/06	-	0.04	GW-17338-121206-MJW-01	5.0 U	µg/L	R
					GW-17338-121206-MJW-05	5.0 U	µg/L	R
					GW-17338-121206-MJW-06	5.0 U	µg/L	R
					GW-17338-121406-MJW-07	5.0 U	µg/L	R
					GW-17338-121406-MJW-08	5.0 U	µg/L	R
					GW-17338-121406-MJW-09	5.0 U	µg/L	R
					GW-17338-121406-MJW-10	5.0 U	µg/L	R
					GW-17338-121406-MJW-11	5.0 U	µg/L	R
					GW-17338-121406-MJW-12	5.0 U	µg/L	R
					GW-17338-121406-MJW-13	5.0 U	µg/L	R
					GW-17338-121406-MJW-14	50 U	µg/L	R
					GW-17338-121406-MJW-15	5.0 U	µg/L	R
					GW-17338-121406-MJW-16	250 U	µg/L	R
					GW-17338-121406-MJW-17	5.0 U	µg/L	R
					GW-17338-121406-MJW-18	25 U	µg/L	R
					GW-17338-121506-MJW-19	500 U	µg/L	R
					GW-17338-121506-MJW-20	100 U	µg/L	R
					GW-17338-121506-MJW-21	370000	µg/L	J
					RB-17338-121206-MJW-04	5.0 U	µg/L	R
					GW-17338-121206-MJW-02	5.0 U	µg/L	R
					GW-17338-121206-MJW-03	5.0 U	µg/L	R
SVOCs	Benzaldehyde	11/30/06	37	-	GW-17338-121206-MJW-01	10 U	µg/L	UJ
					GW-17338-121206-MJW-05	11 U	µg/L	UJ
					GW-17338-121206-MJW-06	10 U	µg/L	UJ
					GW-17338-121406-MJW-07	10 U	µg/L	UJ
					GW-17338-121406-MJW-08	10 U	µg/L	UJ
					GW-17338-121406-MJW-09	10 U	µg/L	UJ
					GW-17338-121406-MJW-10	10 U	µg/L	UJ
					GW-17338-121406-MJW-11	10 U	µg/L	UJ
					GW-17338-121406-MJW-12	10 U	µg/L	UJ
					GW-17338-121406-MJW-13	10 U	µg/L	UJ
					GW-17338-121406-MJW-14	11 U	µg/L	UJ
					GW-17338-121406-MJW-15	100 U	µg/L	UJ
					GW-17338-121406-MJW-16	10 U	µg/L	UJ
					GW-17338-121406-MJW-17	10 U	µg/L	UJ
					GW-17338-121406-MJW-18	11 U	µg/L	UJ

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INITIAL CALIBRATION RESULTS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
DECEMBER 2006

Parameter	*Compound*	*Calibration Date*	*%RSD*	*RRF*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
SVOCs (Cont'd.)	Benzaldehyde	11/30/06	37	-	GW-17338-121506-MJW-19	100 U	µg/L	UJ
					GW-17338-121506-MJW-20	10 U	µg/L	UJ
					GW-17338-121506-MJW-21	100 U	µg/L	UJ
					GW-17338-121206-MJW-02	10 U	µg/L	UJ
					GW-17338-121206-MJW-03	10 U	µg/L	UJ

Notes:

-	Not applicable.
%RSD	Percent Relative Standard Deviation.
J	Estimated.
R	Rejected.
RRF	Relative Response Factor.
SVOCs	Semi-Volatile Organic Compounds.
U	Non-detect at associated value.
UJ	The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.
VOCs	Volatile Organic Compounds.

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
DECEMBER 2006

Parameter	*Calibration Date*	*Compound*	*%D*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
SVOCs	12/20/06	2,4-Dinitrophenol	48	GW-17338-121406-MJW-14	32 U	µg/L	UJ
				GW-17338-121406-MJW-15	310 U	µg/L	UJ
				GW-17338-121406-MJW-16	32 U	µg/L	UJ
				GW-17338-121406-MJW-17	32 U	µg/L	UJ
				GW-17338-121406-MJW-18	32 U	µg/L	UJ
				GW-17338-121506-MJW-19	320 U	µg/L	UJ
				GW-17338-121506-MJW-20	31 U	µg/L	UJ
SVOCs	12/20/06	Benzo(g,h,i)perylene	26	GW-17338-121406-MJW-14	11 U	µg/L	UJ
				GW-17338-121406-MJW-15	100 U	µg/L	UJ
				GW-17338-121406-MJW-16	10 U	µg/L	UJ
				GW-17338-121406-MJW-17	10 U	µg/L	UJ
				GW-17338-121406-MJW-18	11 U	µg/L	UJ
				GW-17338-121506-MJW-19	100 U	µg/L	UJ
				GW-17338-121506-MJW-20	10 U	µg/L	UJ

Notes:
%D Percent Difference.
J Estimated.
SVOCs Semi-Volatile Organic Compounds.
UJ The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE METHOD BLANKS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
DECEMBER 2006

Parameter	*Analysis Date*	*Analyte*	*Blank Result*	*Sample ID*	*Sample Result*	*Qualified Result*
Metals	ICB	Aluminum	76.9	GW-17338-121406-MJW-16	293	190 U
				GW-17338-121406-MJW-17	175 J	190 U
Metals	ICB	Aluminum (Dissolved)	76.9	GW-17338-121406-MJW-11	86.4 J	190 U
				GW-17338-121406-MJW-12	96.9 J	190 U
				GW-17338-121406-MJW-13	84.4 J	190 U
				GW-17338-121406-MJW-14	220	190 U
				GW-17338-121406-MJW-15	61.9 J	190 U
				GW-17338-121406-MJW-16	151 J	190 U
				GW-17338-121406-MJW-17	137 J	190 U
				GW-17338-121406-MJW-18	138 J	190 U
				GW-17338-121506-MJW-19	207	190 U
Metals	ICB	Copper	3.8	GW-17338-121206-MJW-01	4.4 J	25 U
				GW-17338-121206-MJW-02	4.7 J	25 U
				GW-17338-121406-MJW-09	7.7 J	25 U
				GW-17338-121406-MJW-14	4.6 J	25 U
				GW-17338-121406-MJW-16	3.8 J	25 U
				GW-17338-121406-MJW-18	5.0 J	25 U
Metals	ICB	Copper (Dissolved)	3.8	GW-17338-121206-MJW-03	3.9 J	25 U
Metals	ICB	Silver	1.5	GW-17338-121206-MJW-03	1.7 J	10 U
Metals	12/26/06	Aluminum (Dissolved)	67.61	GW-17338-121206-MJW-02	94.1 J	200 U
				GW-17338-121206-MJW-03	187 J	200 U
				GW-17338-121206-MJW-05	153 J	200 U
				GW-17338-121406-MJW-09	101 J	200 U
Metals	12/26/06	Chromium Total	2.26	GW-17338-121206-MJW-01	5.0 J	10 U
				GW-17338-121206-MJW-02	3.4 J	10 U
				GW-17338-121206-MJW-05	1.7 J	10 U
				GW-17338-121206-MJW-06	3.5 J	10 U
				GW-17338-121406-MJW-07	5.2 J	10 U
				GW-17338-121406-MJW-08	2.3 J	10 U
				GW-17338-121406-MJW-10	1.6 J	10 U
Metals	12/26/06	Chromium Total	3.18	GW-17338-121406-MJW-11	2.5 J	10 U
				GW-17338-121406-MJW-13	3.6 J	10 U
				GW-17338-121406-MJW-14	2.2 J	10 U
				GW-17338-121406-MJW-18	7.1 J	10 U
Metals	12/27/06	Chromium Total	2.803	GW-17338-121506-MJW-19	7.4 J	10 U
Metals	12/26/06	Chromium Total (Dissolved)	2.26	GW-17338-121206-MJW-03	2.1 J	10 U
				GW-17338-121206-MJW-06	6.7 J	10 U
				GW-17338-121406-MJW-09	2.0 J	10 U
				GW-17338-121406-MJW-10	9.3 J	10 U
Metals	12/26/06	Chromium Total (Dissolved)	3.18	GW-17338-121406-MJW-16	2.8 J	10 U
				GW-17338-121506-MJW-19	3.0 J	10 U

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE METHOD BLANKS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
DECEMBER 2006

Parameter	*Analysis Date*	*Analyte*	*Blank Result*	*Sample ID*	*Sample Result*	*Qualified Result*
Metals	12/27/06	Chromium Total (Dissolved)	2.803	GW-17338-121506-MJW-21	4.6 J	20 U
Metals	12/26/06	Cobalt	3.958	GW-17338-121206-MJW-01	2.0 J	50 U
				GW-17338-121206-MJW-02	3.5 J	50 U
				GW-17338-121206-MJW-03	5.3 J	50 U
				GW-17338-121406-MJW-08	2.8 J	50 U
				GW-17338-121406-MJW-09	1.8 J	50 U
Metals	12/26/06	Cobalt	3.838	GW-17338-121406-MJW-11	17.3 J	50 U
				GW-17338-121406-MJW-12	1.9 J	50 U
				GW-17338-121406-MJW-13	2.1 J	50 U
				GW-17338-121406-MJW-18	2.8 J	50 U
Metals	12/26/06	Cobalt (Dissolved)	3.958	GW-17338-121206-MJW-02	2.8 J	50 U
				GW-17338-121406-MJW-08	2.9 J	50 U
Metals	12/26/06	Cobalt (Dissolved)	3.838	GW-17338-121406-MJW-11	18.0 J	50 U
				GW-17338-121406-MJW-16	2.2 J	50 U
Metals	12/26/06	Nickel	3.838	GW-17338-121406-MJW-11	3.2 J	40 U
				GW-17338-121406-MJW-14	2.5 J	40 U
				GW-17338-121406-MJW-18	3.7 J	40 U
Metals	12/27/06	Nickel	3.543	GW-17338-121506-MJW-19	8.2 J	40 U
Metals	12/26/06	Nickel (Dissolved)	3.838	GW-17338-121506-MJW-19	4.4 J	40 U

Notes:
ICB Initial Calibration Blank.
J Estimated.
U Non-detect at associated value.

TABLE 6

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE RINSE BLANKS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
DECEMBER 2006

Parameter	*Rinse Blank Date*	*Analyte*	*Blank Result*	*Sample ID*	*Sample Result*	*Qualified Sample Result*	*Units*
Metals	12/12/06	Aluminum	97.4	GW-17338-121206-MJW-06	328	328 U	µg/L
Metals	12/12/06	Potassium	514	GW-17338-121206-MJW-02	2520 J	5000 U	µg/L
				GW-17338-121406-MJW-11	2680 J	5000 U	µg/L
Metals	12/12/06	Potassium (Dissolved)	521	GW-17338-121206-MJW-02	2160 J	5000 U	µg/L
Metals	12/12/06	Zinc	8.3	GW-17338-121206-MJW-01	14.6 J	30 U	µg/L
				GW-17338-121206-MJW-02	13.0 J	30 U	µg/L
				GW-17338-121206-MJW-05	6.7 J	30 U	µg/L
				GW-17338-121206-MJW-06	10.6 J	30 U	µg/L

Notes:
J Estimated.
U Non-detect at associated value.

TABLE 7

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
DECEMBER 2006

Sample Location	*Volatile Organics*	*Estimated Concentration (µg/L)*	*Semi-Volatile Organics*	*Estimated Concentration (µg/L)*
GW-17338-121206-MJW-01	None	-	Unknowns	28 J
GW-17338-121206-MJW-02	None	-	Unknowns	29 J
GW-17338-121206-MJW-03	None	-	Unknown	16 J
GW-17338-121206-MJW-05	None	-	Unknown	17 J
GW-17338-121206-MJW-06	None	-	Unknown	20 J
GW-17338-121406-MJW-07	None	-	Unknown	15 J
GW-17338-121406-MJW-08	None	-	Unknown	18 J
GW-17338-121406-MJW-09	None	-	Unknown	16 J
GW-17338-121406-MJW-10	2,3-Dihydro-methyl-1H-Indene Isomer	31 J	2(3H)-Benzothiazolone	24 J
	C10H12 aromatics	23 J	2,4,6-Trimethyl-benzoicacid	16 J
	C10H12 aromatic	8.6 J	2-Butenyl-benzene	25 J
	C9H10 aromatic	120 J	Bisphenol A	21 J
	Diethylbenzene Isomers	21 J	Diethylbenzene Isomer	18 J
	Ethyl Dimethyl Benzene Isomer	5.4 J	Ethyl Dimethyl Benzene Isomer	14 J
	Tetramethylbenzene Isomer	17 J	Indane	92 J
			Unknowns	230 J
GW-17338-121406-MJW-11	None	-	1H-Benzotriazole,5-Methyl	76
			2(3H)-Benzothiazolone	11
			4-Methyl-1H-benzotriazole	120
			Unknowns	230 J
GW-17338-121406-MJW-12	2,3-Dihydro-methyl-1H-Indene Isomer	6.0 J	6-Phenyl-1,3,5-Triazine-2,4-Diamine	24
	C10H12 aromatic	6.1 J	Bisphenol A	270
	C9H10 aromatic	98 J	Diethylbenzene Isomer	16
	Diethylbenzene Isomer	16 J	Indane	65
			Unknowns	69 J
GW-17338-121406-MJW-13	C9H10 aromatic	100 J	Unknowns	110 J
	1,4-Diethylbenzene	18 J	Indane	78 J
	2,3-Dihydro-methyl-1H-Indene Isomers	12 J	Diethylbenzene Isomer	19 J
	C10H12 aromatic	6.8 J	Ethlymethylbenzene isomer	10 J
			Bisphenol A	320 J
			6-Phenyl-1,3,5-Triazine-2,4-Diamine	27 J
			Benzene, 2-propenyl-	9.6 J
			2,6-Dimethyl-benzoicacid	8.2 J
GW-17338-121406-MJW-14	None	-	Unknown isomer of xylenes	320 J
			Unknowns	81 J
			Ethyl phenol isomer	15 J
			Diethylbenzene Isomer	30 J
			Bisphenol A	230 J
			6-Phenyl-1,3,5-Triazine-2,4-Diamine	11 J

TABLE 7

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION - GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
DECEMBER 2006

Sample Location	*Volatile Organics*	*Estimated Concentration (µg/L)*	*Semi-Volatile Organics*	*Estimated Concentration (µg/L)*
GW-17338-121406-MJW-15	Diisopropyl ether	7.8 J	Unknown isomer of xylenes	1900 J
	C9H10 aromatic	6.5 J	Tetramethylbenzene Isomers	650 J
			Trimethylbenzene isomer	330 J
			Unknowns	850 J
			Methylpropylbenzene isomer	290 J
			Ethyl Dimethyl Benzene Isomers	1900 J
			2,3-Dihydro-methyl-1H-Indene Isomer	170 J
GW-17338-121406-MJW-16	C10H12 aromatic	510 J	Unknowns	410 J
	C9H10 aromatic	520 J	Unknown isomer of xylene	11 J
	Ethyl Dimethyl Benzene Isomers	1500 J		
	Tetramethylbenzene Isomers	1400 J		
	Trimethylbenzene isomer	370 J		
GW-17338-121406-MJW-17	C5H12 Alkane	5.2 J	Ethlymethylbenzene isomer	12
			Unknowns	39 J
GW-17338-121406-MJW-18	n-Propylbenzene	35 J	Unknown isomer of xylenes	510 J
	Diisopropyl ether	27 J	Unknowns	47 J
			Ethlymethylbenzene isomer	70 J
			Ethyl Dimethyl Benzene Isomer	18 J
GW-17338-121506-MJW-19	None	-	2-Butoxy-Ethanol	6200 J
			2-Ethyl-ethanoic acid	2700 J
			2-Methyl-propanoicacid	360 J
			Octanoic acid	3000 J
			Unknowns	32000 J
			Unknown isomer of xylenes	4600 J
GW-17338-121506-MJW-20	None	-	1,3-Pentanediol, 2,2,4-trime	57 J
			2,4,5-Trimethyl-benzoicacid	140 J
			Ethlymethylbenzene isomer	77 J
			Ethyl Dimethyl Benzene Isomer	57 J
			Indane	42 J
			Tetramethylbenzene Isomer	38 J
			Trimethylbenzene isomer	41 J
			Unknowns	820 J
			Unknown isomer of xylene	670 J
GW-17338-121506-MJW-21	None	-	Unknowns	23000 J
			Unknown Dimethylphenol Isomer	180 J
			Unknown isomers of xylene	9100 J
			p-Toluic acid	150 J
			Benzoic acid, 3-methyl-	96 J
			1H-Inden-1-one,2,3-dihydro-	180 J

Notes:
- Not applicable.
J Estimated.

APPENDIX C

WATER RESOURCE PROTECTIONS AREAS MAP

DEFINITIONS

(From New Castle County Unified Development Code, Adopted on December 31, 1997, and as amended.)

COCKEYSVILLE FORMATION WATER RESOURCE PROTECTION AREAS

The Cockeysville Formation Water Resource Protection Areas consist of: (1) areas that are directly underlain (outcrop) by the Cockeysville Formation, and (2) land surface areas which drain to the areas underlain by the Cockeysville Formation (Cockeysville Formation Drainage Area). (Map 1 only) The locations of the Cockeysville Formation were obtained from Plate 1 of a report prepared by the Delaware Geological Survey in 1991 titled "Summary Report, Geology and Hydrology of the Cockeysville Formation, New Castle County, Delaware." Areas draining to and across the Cockeysville Formation were derived from the U. S. Geological Survey 7.5 minute topographic quadrangle maps.

The brown areas depicted on Plate 1 in the "Summary Report" mark areas underlain by the Wissahickon or Setters formations where inter-formational groundwater flow to the Cockeysville Formation is considered greater than average. These are shown on Map 1. For land use regulation purposes, these areas are considered as being in the Cockeysville Formation Drainage Area.

The Cockeysville Formation forms environmentally sensitive areas because the rocks which comprise the formation (calcite and dolomite) are fractured and subject to dissolution. The associated complex sub-surface drainage system, potential for rapid groundwater movement, and sinkhole formation make the groundwater in this area highly susceptible to contamination. In addition, recharge to this formation, essential for maintaining the groundwater resource, is limited by the relatively small outcrop areas. The Cockeysville Formation in the Hockessin area currently supports public and private water supply wells producing an average of more than 1.5 million gallons per day.

WELLHEAD WATER RESOURCE PROTECTION AREAS

Wellhead Water Resource Protection Areas are surface and sub-surface areas surrounding public water supply wells or wellfields where the quantity or quality of groundwater moving toward such wells or wellfields may be adversely affected by land use activity. Such activity may result in a reduction of recharge or may lead to introduction of contaminants to groundwater used for public supply.

Three classes of Wellhead Water Resource Protection Areas are shown on the maps.

Class A - (Map 1,2 and 3) The area within a 300 foot radius circle around all public water supply wells which are classified as water systems, as defined by Section 22.146 (Public Water Systems) in the State of Delaware Regulations Governing Public Drinking Water Systems. Class A wells are community, transient non-community, and non-transient non-community.

Class B - (Map 2 only) The Glendale and Eastern States Wellfields. These Wellhead Protection Areas have been delineated through the use of hydrogeologic mapping, analytical methods, and application of U.S. EPA modular semi-analytical models using a five year time-of-travel by the Delaware Geological Survey as discussed in a report prepared by the Delaware Geological Survey entitled "Application of the EPA WHPA Models for Delineation of Wellhead Protection Areas in the Glendale and Eastern States Wellfields, New Castle County, Delaware" dated January 1993.

Class C - (Map 1 and 2 only) Wellhead Protection Areas delineated by the Delaware Geological Survey and the Delaware Department of Natural Resources and Environmental Control through the interpretion of geologic and hydrologic reports and maps, water-table maps, and professional judgment. Such areas are considered preliminary designations.

SURFACE WATER RESOURCE PROTECTION AREAS

Surface Water Resource Protection Areas consist of - (1) the areas which drain on the surface or underground to existing public water supply reservoirs, (2) the land surfaces in the Flood Plain upstream of an approved public water supply intake. (Map 1 and 2 only) The Flood Plain is comprised of the 100-year Flood Plain as defined in Article 33 of New Castle County Unified Development Code and the following flood hazard soils - Colonia Silt Loam, Cornish Silt Loam, Hatboro Silt Loam, Johnston Silt Loam, Mixed Alluvial Land and Tidal Marsh as mapped by the Soil Survey of New Castle County (1970); and (3) Erosion Prone Slopes contiguous to and draining toward a Flood Plain as defined above or a water course upstream of an approved public water supply intake. Erosion Prone Slopes consist of land with soils of United States Department of Agriculture Soil Conservation Service capability classifications IVe, VIe, VIs, and VIIe as mapped by the Soil Survey of New Castle County (1970).

Surface water sources are susceptible to pollutants released in proximity to and upstream of intakes or storage facilities. Currently, these sources provide approximately 70% of the daily public water supply and most of the emergency water supply for New Castle County.

The drainage areas, flood plains, and erosion prone slopes were derived from the following maps and report: (1) U. S. Geological Survey Topographic Quadrangle maps, (2) WATER 2000, Volume VII, 1984, Water Resources Agency for New Castle County (1984), (3) Digital Flood Plain Mapping, Federal Emergency Management Agency, 1997, and (4) Soil Survey of New Castle County, U. S. Department of Agriculture, 1970.

RECHARGE WATER RESOURCE PROTECTION AREAS

Recharge Water Resource Protection Areas are designated as having excellent potential for groundwater recharge. (Map 1,2 and 3) They were delineated using methodology described in a report prepared by the Delaware Geological Survey entitled "Delineation of Ground-Water Recharge Resource Protection Areas in the Coastal Plain of New Castle County, Delaware (1993)."

ACKNOWLEDGEMENTS

This map was prepared by the University of Delaware, College of Human Services, Education and Public Policy, Institute for Public Administration, Water Resources Agency with technical assistance from the Delaware Geological Survey, Delaware Department of Natural Resources and Environmental Control, New Castle County Department of Special Services, New Castle County Department of Land Use and the New Castle County Resource Protection Area Technical Advisory Committee. Technical reports completed by private consultants on individual development proposals were also used to revise WRPA boundaries.

REFERENCE

Delaware Department of Transportation, Roads, May 2001.

Delaware Department of Natural Resources and Environmental Control, Public Surface Water Supply Intakes Database and Public Water Supply Wells Database, 2001.

Delaware Geological Survey, "Delineation of Ground-Water Recharge Resource Protection Areas in the Coastal Plain of New Castle County, Delaware" (1993).

Delaware Geological Survey, "Application of the EPA WHPA Models for Delineation of Wellhead Protection Areas in the Glendale and Eastern States Wellfields New Castle County, Delaware" (1993).

Delaware Geological Survey, Letter to Water Resources Agency for New Castle County, (September 27, 1993).

Delaware Geological Survey, "Summary Report Geology and Hydrology of the Cockeysville Formation, New Castle County, Delaware" (1991).

Federal Emergency Management Agency, Digital Flood Plain Maps (1996).

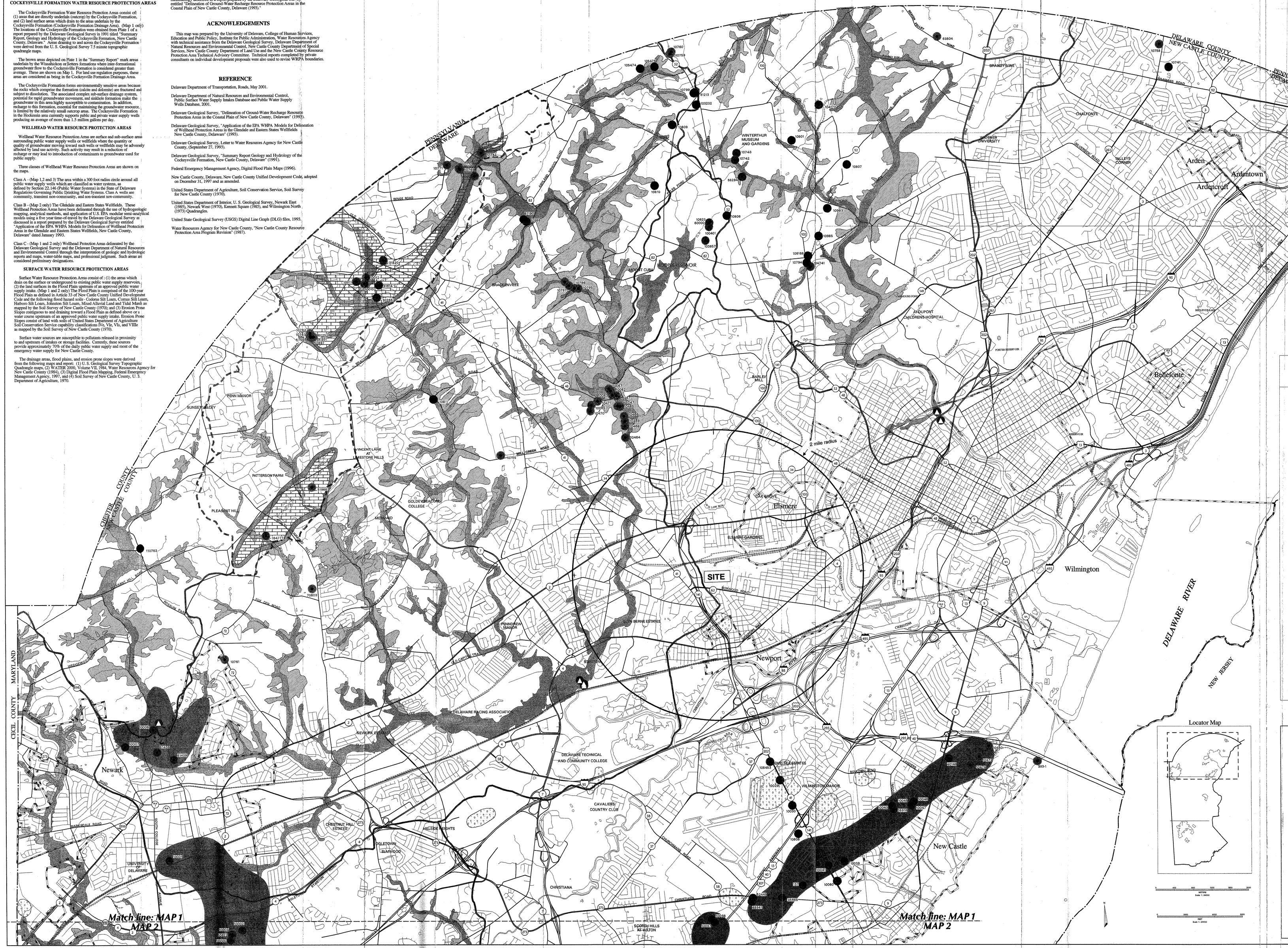
New Castle County, Delaware, New Castle County Unified Development Code, adopted on December 31, 1997 and as amended.

United States Department of Agriculture, Soil Conservation Service, Soil Survey for New Castle County (1970).

United States Department of Interior, U. S. Geological Survey, Newark East (1985), Newark West (1970), Kennett Square (1985), and Wilmington North (1973) Quadrangles.

United State Geological Survey (USGS) Digital Line Graph (DLG) files, 1993.

Water Resources Agency for New Castle County, "New Castle County Resource Protection Area Program Revision" (1987).



Match line: MAP 1 MAP 2

Match line: MAP 1 MAP 2

SOURCE WATERSHEDS

Watersheds upstream from Public Surface Water Intakes

WATER RESOURCE PROTECTION AREAS (WRPAs)

COCKEYSVILLE FORMATION WRPA

- Outcrop
- Wissahickon
- Drainage Area

WELLHEAD WRPA

Class A (with DNREC IDs)

- Public Community Wells (Public Water Purveyors)
- Transient, Non- Community Wells (Restaurants, Stores, Hotels, Parks, etc.)
- Non-Transient,Non- Communtity Wells (Schools, Daycare Centers, Office, Factory, etc.)
- Class C

SURFACE WATER WRPA

- Reservoir Watershed
- Flood Plain
- Erosion Prone Slopes
- Public Surface Water Supply Intake

RECHARGE WRPA

- Recharge Area

WATER RESOURCE PROTECTION AREAS FOR CITY OF NEWARK CITY OF WILMINGTON NEW CASTLE COUNTY DELAWARE

1993, Revised May 2001

Map 1 of 3

University of Delaware
College of Human Services, Education and Public Policy
Institute for Public Administration
Water Resources Agency

Map composed by Nicole M. Mimni
Water Resources Agency, University of Delaware

APPENDIX D

ECOLOGICALLY SENSITIVE AREAS ANALYSIS

APPENDIX D.1

ECSA RATIONALE

ECOLOGICALLY SENSITIVE AREAS ANALYSIS

The Delaware Department of Natural Resources and Environmental Control (DNREC) Remediation Standards Guidance was used in order to determine if ecologically sensitive areas (ESCA) exist at the GM Wilmington Assembly Plant in Wilmington, Delaware (Site) and if endangered and/or threatened species are expected to be present at the Site currently.

The initial screening tools provided in the guidance provide a method for ascertaining whether further ecological evaluation is warranted at the Site. The answers to these preliminary screening questions are discussed in detail below.

a) There are no federal or state parks, preserves, forests, wildlife refuges or other federal or state administered natural or recreational areas, as well as other recognized parklands, open spaces, or other mapped natural areas managed by local governments, non-profit organizations, or others present on-Site or immediately adjacent to the Site.

b) There are no developed and/or undeveloped private and/or public beaches present on-Site or immediately adjacent to the Site.

c) There are no waterways (streams, rivers, lakes, tidal waters), including associated wetlands, floodplains, and riparian zones present on-Site or immediately adjacent to the Site.

d) There are no woodlands/forests in excess of 20 acres in size present on-Site or immediately adjacent to the Site.

e) Based on the answers to a) through d), therefore, the Site is not within 2,000 feet of an ecologically sensitive area.

f) The Site does not support a sufficient area (i.e., greater than ¼ acre) of vegetation which could offer fauna either shelter or a food source.

g) There is no evidence of stressed vegetation, barren soil, dead animals, fish kills, or other ecological detriments in the OU-2 Area.

In addition, General Motors Corporation (GM) obtained data from DNREC Division of Fish and Wildlife (Delaware Natural Heritage Program) with regards to Critical Habitats. A data search was conducted in order to provide GM with the following information under the jurisdiction of the DNREC Fish and Wildlife Division:

- Critical Habitat, including breeding areas, migratory areas, and wintering areas for State or Federal designated endangered or threatened species, or habitat known to be used by designated, proposed, or under review endangered or threatened species;

- Spawning, migration, and feeding areas critical for the maintenance or anadromous fish/shellfish species within river, lake, or coastal tidal water; and

- Recognized critical habitats for State listed species having the Delaware Natural Heritage Program Ranking of S1, S2, S3, S4, SU, SH, SX, and SE.

Correspondence from the Division of Fish and Wildlife is provided in Appendix D.2.

Based on these observations, and the results of the Critical Habitat data search, no environmentally sensitive habitats exist at the Site and no endangered and/or threatened species are expected to be present at the Site currently. In addition, the Site is located in a highly developed area bordered by residential properties, railway tracks and Delaware State Road 141, which further supports that ecologically sensitive areas are not present at the Site.

APPENDIX D.2

ECSA DOCUMENTATION

17338

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENTAL CONTROL
DIVISION OF FISH & WILDLIFE
NATURAL HERITAGE & ENDANGERED SPECIES
4876 HAY POINT LANDING ROAD
SMYRNA, DELAWARE 19977
TELEPHONE: (302) 653-2880
FAX: (302) 653-3431

September 25, 2007
(Request received September 4, 2007)

Leanne Whiteley
Conestoga-Rovers & Associates
261 Martindale Road, Unit #3
St. Catharines, Ontario L2W 1A2

RE: Request for Critical Habitat Data, Reference No. 17338
Assembly Plant off Boxwood Rd in Wilmington, Delaware
Applicant: General Motors Corporation

Dear Ms. Whiteley:

Thank you for contacting the Natural Heritage and Endangered Species program about information on rare, threatened and endangered species, unique natural communities, and other significant natural resources as they relate to the above referenced project.

A review of our database indicates that there are currently no records of state-rare or federally listed plants, animals or natural communities at or adjacent to this project site. As a result, at present this project does not lie within a State Natural Heritage Site, nor does it lie within a Delaware National Estuarine Research Reserve, which are two of the criteria used to determine the presence of Critical Resource Waters. The final decision regarding Critical Resource Waters – if this is an issue – will be made by the U.S. Army Corps of Engineers (ACOE).

We are continually updating records on Delaware's rare, threatened and endangered species, unique natural communities and other significant natural resources. If the start of the project is delayed more than a year past the date of this letter, please contact us again for the latest information. If you have any questions, please contact me at (302) 653-2883 ext. 101.

Sincerely,
Edna J. Stetzar
Edna J. Stetzar
Biologist/Environmental Review Coordinator

Rec'd CRA
OCT 2 3 2007

Delaware's Good Nature Depends on You!

APPENDIX E

HUMAN HEALTH RISK ASSESSMENT SUPPORTING INFORMATION AND CALCULATIONS

ATTACHMENT E1

Toxicity values, Physical and Chemical Properties, and Exposure Factors

Attachment E1: Toxicity Values
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	Cancer Classification			SF_{oral} $(mg/kg/d)^{-1}$			SF_{derm} $(mg/kg/d)^{-1}$			URF $(mg/m^3)^{-1}$			RfD_{oral} (mg/kg/d)				RfD_{derm} (mg/kg/d)				RfC (mg/m^3)			
			Value	Ref	Note	Value	Ref	Note	Value	Ref	Note	Value	Ref	Note	Value	UF	Ref	Note	Value	UF	Ref	Note	Value	UF	Ref	Note
VOC	Acetone	67-64-1	ID	1											9.00E-01	1000	1		9.00E-01	1000	125	104	3.09E+01	100	129	111
VOC	Benzene	71-43-2	A	1		5.50E-02	1	68	5.50E-02	125	104	7.80E-03	1	60	4.00E-03	300	1		4.00E-03	300	125	104	3.00E-02	300	1	
VOC	2-Butanone	78-93-3	ID	1											6.00E-01	1000	1		6.00E-01	1000	125	104	5.00E+00	300	1	
VOC	Chlorobenzene	108-90-7	D	1											2.00E-02	1000	1		2.00E-02	1000	125	104	5.00E-02	1000	126	
VOC	Cumene	98-82-8	D	1											1.00E-01	1000	1		1.00E-01	1000	125	104	4.00E-01	1000	1	
VOC	Cyclohexane	110-82-7	ID	1																			6.00E+00	300	1	
VOC	1,2-Dichlorobenzene	95-50-1	D	1											9.00E-02	1000	1		9.00E-02	1000	125	104	2.00E-01	1000	2	3
VOC	1,3-Dichlorobenzene	541-73-1	D	1											9.00E-02	1000	1	10	9.00E-02	1000	125	104	1.40E-01	1000	2	3, 10, 44
VOC	1,4-Dichlorobenzene	106-46-7	C	2		2.40E-02	2	6	2.40E-02	125	104	6.29E-03	3	45	3.00E-02		3		3.00E-02		125	104	8.00E-01	100	1	
VOC	cis-1,2-Dichloroethene	156-59-2	ID	126											1.00E-02	3000	126		1.00E-02	3000	125	104	3.50E-02	3000	126	4, 44
VOC	trans-1,2-Dichloroethene	156-60-5													2.00E-02	1000	1		2.00E-02	1000	125	104	6.00E-02	3000	126	
VOC	Ethyl Benzene	100-41-4	D	1											1.00E-01	1000	1		1.00E-01	1000	125	104	1.00E+00	300	1	
VOC	Methyl Acetate	79-20-9													1.00E+00	1000	2		1.00E+00	1000	125	104	3.50E+00	1000	2	4, 44
VOC	Methyl tert-butyl ether	1634-04-4																					3.00E+00	100	1	
VOC	4-Methyl-2-pentanone	108-10-1	ID	1													1	90			125	104	3.00E+00	300	1	
VOC	Methylcyclohexane	108-87-2																					3.00E+00	100	2	
VOC	Styrene	100-42-5													2.00E-01	1000	1	6	2.00E-01	1000	125	104	1.00E+00	30	1	
VOC	Tetrachloroethene	127-18-4	C-B2	77		5.20E-02	77		5.20E-02	125	104	3.06E-03	77		1.00E-02	1000	1		1.00E-02	1000	125	104	4.00E-01	300	109	94
VOC	Toluene	108-88-3	ID	1											8.00E-02	3000	1		8.00E-02	3000	125	104	5.00E+00	10	1	
VOC	1,2,4-Trichlorobenzene	120-82-1	D	1											1.00E-02	1000	1		1.00E-02	1000	125	104	3.50E-03		4	44
VOC	Trichloroethene	79-01-6	C-B2	49	18	1.10E-02	49		1.10E-02	125	104	1.70E-03	49		6.00E-03	3000	46	6, 97	6.00E-03	3000	125	104				
VOC	Xylenes (total)	1330-20-7	ID	1											2.00E-01	1000	1		2.00E-01	1000	125	104	1.00E-01	300	1	
SVOC	Acenaphthene	83-32-9													6.00E-02	3000	1		6.00E-02	3000	125	104	2.10E-01	3000	1	4, 44
SVOC	Acetophenone	98-86-2	D	1											1.00E-01	3000	1		1.00E-01	3000	125	104	3.50E-01	3000	1	4, 44
SVOC	Anthracene	120-12-7	D	1											3.00E-01	3000	1		3.00E-01	3000	125	104			2	90
SVOC	Benzaldehyde	100-52-7													1.00E-01	1000	1		1.00E-01	1000	125	104	3.50E-01	1000	1	4, 44
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1		1.40E-02	1		1.40E-02	125	104	4.00E-03	1	4, 45	2.00E-02	1000	1		2.00E-02	1000	125	104	7.00E-02	1000	1	4, 44
SVOC	Caprolactam	105-60-2													5.00E-01	100	1		5.00E-01	100	125	104	1.75E+00	100	1	4, 44
SVOC	Carbazole	86-74-8	B2	2		2.00E-02	2		2.00E-02	125	104	5.71E-03	2	4, 45												
SVOC	4-Chloroaniline	106-47-8													4.00E-03	3000	1		4.00E-03	3000	125	104	1.40E-02	3000	1	4, 44
SVOC	2-Chlorophenol	95-57-8													5.00E-03	1000	1		5.00E-03	1000	125	104	1.75E-02	1000	1	4, 44
SVOC	Dibenzofuran	132-64-9	D	1											2.00E-03		4		2.00E-03		125	104	7.00E-03		4	4, 44
SVOC	2,4-Dimethylphenol	105-67-9													2.00E-02	3000	1		2.00E-02	3000	125	104	7.00E-02	3000	1	4, 44
SVOC	2,6-Dinitrotoluene	606-20-2	B2	1	28	6.80E-01	1	28	6.80E-01	125	104	1.94E-01	1	28, 4, 45	1.00E-03	3000	126		1.00E-03	3000	125	104	3.50E-03	3000	126	4, 44
SVOC	Fluoranthene	206-44-0	D	1											4.00E-02	3000	1		4.00E-02	3000	125	104	1.40E-01	3000	1	4, 44
SVOC	Fluorene	86-73-7	D	1											4.00E-02	3000	1		4.00E-02	3000	125	104	1.40E-01	3000	1	4, 44
SVOC	2-Methylnaphthalene	91-57-6	ID	1											4.00E-03	1000	1		4.00E-03	1000	125	104	3.00E-03	3000	1	61
SVOC	Methylphenol (total)	1319-77-3													5.00E-02	1000	1	99	5.00E-02	1000	125	104			1	90, 99
SVOC	Naphthalene	91-20-3	C	1											2.00E-02	3000	1		2.00E-02	3000	125	104	3.00E-03	3000	1	
SVOC	Pentachlorophenol	87-86-5	B2	1		1.20E-01	1		1.20E-01	125	104	3.43E-02	1	4, 45	3.00E-02	100	1		3.00E-02	100	125	104	1.05E-01	100	1	4, 44
SVOC	Phenanthrene	85-01-8	D	1											3.00E-02	3000	1	20	3.00E-02	3000	125	104	1.05E-01	3000	1	20, 4, 44
SVOC	Phenol	108-95-2	ID	1											3.00E-01	300	1		3.00E-01	300	125	104			1	90,98
SVOC	Pyrene	129-00-0	D	1											3.00E-02	3000	1		3.00E-02	3000	125	104	1.05E-01	3000	1	4, 44
INORG	Arsenic	7440-38-2	A	1		1.50E+00	1		1.50E+00	125	104	4.30E+00	1		3.00E-04	3	1		3.00E-04	3	125	104				
INORG	Barium	7440-39-3	NC	1											2.00E-01	300	1		1.40E-02	300	125	104			1	90
INORG	Beryllium	7440-41-7	B1	1								2.40E+00	1		2.00E-03	300	1		1.40E-05	300	125	104	2.00E-05	10	1	
INORG	Chromium (total)	7440-47-3										1.20E+01	1	8	3.00E-03	900	1	8	7.50E-05	900	125	104	1.00E-04	300	1	59, 8
INORG	Cobalt	7440-48-4	B1	126								2.80E+00	126		2.00E-02	10	126		2.00E-02	10	125	104	2.00E-05	100	126	
INORG	Copper	7440-50-8	D	1											4.00E-02	2	50	49	4.00E-02	2	125	104	1.40E-01	2	50	49, 4, 44
INORG	Manganese	7439-96-5	D	1											1.40E-01	1	1		8.40E-03	1	125	104	5.00E-05	1000	1	
INORG	Mercury	7439-97-6	D	1											3.00E-04	1000	1	51	2.10E-05	1000	125	104	3.00E-04	30	1	
INORG	Nickel	7440-02-0	A	1								2.40E-01	1		2.00E-02	300	1		8.00E-04	300	125	104	9.00E-05	30	129	111
INORG	Silver	7440-22-4	D	1											5.00E-03	3	1		2.00E-04	3	125	104	1.00E-05	1000	83	
INORG	Vanadium	7440-62-2													1.00E-03		3		2.60E-05		125	104	3.50E-03		3	4, 44
INORG	Zinc	7440-66-6	ID	1											3.00E-01	3	1		3.00E-01	3	125	104	1.05E+00	3	1	4, 44

Attachment E1: Toxicity Values
GM Wilmington Assembly Plant, Wilmington, Delaware

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Attachment E1: Toxicity Values GM Wilmington Assembly Plant, Wilmington, Delaware	
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123	NCEA. 2003. Personal Communication -- phone call with Teresa Shannon. September 22.
125	USEPA. 2004. Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. July.
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128	USEPA. Region 6. 2005. Human Health Medium-Specific Screening Levels. December.
129	ATSDR. 2005. Minimal Risk Levels. December.
Notes:	
2	USEPA adopted chronic value as subchronic value.
3	HEAST Alternate Method.
4	ENVIRON obtained value by route-to-route extrapolation.
5	Based on analogy to Benzo(a)pyrene [CASRN 50-32-8] using USEPA relative potency described in the indicated reference.
6	Under review, according to IRIS.
8	ENVIRON used Chromium VI [CASRN 18540-29-9] value from IRIS (reference 1) as a surrogate.
10	ENVIRON used 1,2-Dichlorobenzene [CASRN 95-50-1] value from the indicated reference as a surrogate.
11	ENVIRON used 1,3-Dichloropropene (total) [CASRN 542-75-6] value from the indicated reference as a surrogate.
12	ENVIRON used Chlordane [CASRN 57-74-9] value from IRIS (reference 1) or HEAST (reference 2) as a surrogate.
13	ENVIRON used Endosulfan [CASRN 115-29-7] value from IRIS (reference 1) or HEAST (reference 2) as a surrogate.
18	Not verifiable, according to IRIS.

Attachment E1: Toxicity Values GM Wilmington Assembly Plant, Wilmington, Delaware	
20	ENVIRON used Pyrene [CASRN 129-00-0] value from IRIS (reference 1) as a surrogate.
26	USEPA obtained value by route-to-route extrapolation.
28	USEPA used 2,4-,2,6-Dinitrotolunene mixture value from IRIS (reference 1) as a surrogate.
30	Upper-bound slope factor.
32	High risk & persistence tier for: food chain exposure; sediment/soil ingestion; dust/aerosol inhalation; dermal exposure, if an absorption factor is applied; presence of dioxin-like, tumor-promoting/persistent congeners; and all early life exposures.
34	Lowest risk & persistence tier. Criteria for use: congener or isomer analyses verify that congeners with more than 4 chlorines comprise less than 1/2 % of total PCBs.
44	ENVIRON derived inhalation RfC from inhalation RfD value presented in the indicated reference, using standard USEPA methodology presented in HEAST.
45	ENVIRON derived inhalation URF from Inhalation Slope Factor value presented in the indicated reference, using standard USEPA methodology presented in HEAST.
48	ENVIRON used Endrin [CASRN 72-20-8] value from IRIS (reference 1) as a surrogate.
49	ENVIRON derived oral RfD from adverse health effect level value presented in the indicated reference.
51	ENVIRON used Mercuric Chloride [CASRN 7487-94-7] value from the indicated reference as a surrogate.
55	Under EPA review. Number subject to change.
56	This toxicity value already incorporates the absorption factor of 75% that is recommended in the cited reference.
59	This RfD is for particulates. The RfD for chromic acid mists and dissolved Chromium VI aerosols is 0.000008 mg/m3.
60	IRIS provides a range of 2.2E-6 to 7.8E-6 (ug/m3)-1 as the inhalation URF for Benzene.
61	ENVIRON used Naphthalene [CASRN 91-20-3] value from indicated reference as a surrogate.
62	ENVIRON used chronic value as a surrogate for the subchronic value.
68	IRIS provides a range of 1.5E-2 to 5.5E-2 (mg/kg/d)-1 as the oral Slope Factor for Benzene.
72	ENVIRON used Aroclor 1254 [CASRN 11097-69-1] value from the indicated reference as a surrogate for PCBs [CASRN 1336-36-3].
77	IRIS provides an alternate slope factor of 5E-2; however, EPA does not recommend its use, due to the higher uncertainty in the delivered dose in the supporting study.
78	IRIS recommends an oral Slope Factor for Vinyl Chloride of 7.2E-1 (mg/kg/d)-1 to account for continuous lifetime exposure during adulthood; a twofold increase to 1.4 (mg/kg/d)-1 is recommended to account for continuous exposure from birth.
79	IRIS recommends an inhalation URF for Vinyl Chloride of 4.4E-6 (ug/m3)-1 to account for continuous lifetime exposure during adulthood; a twofold increase to 8.8E-6 (ug/m3)-1 is recommended to account for continuous exposure from birth.
83	ENVIRON used PCBs (total) [CASRN 1336-36-3] value as a surrogate.
86	This is a DRAFT toxicity value.
90	Inadequate data exist to derive a toxicity value, according to the indicated reference.
92	NCEA directed ENVIRON to use outdated value.
93	Personal communication with NCEA indicated the HEAST LOAEL of 1000 mg and the subchronic RfD of 7E-1mg/kg-day both appear to be incorrect and recommended using the IRIS RfD of 3E-1 as the subchronic RfD.
94	Two provisional RfC values are presented in the indicated reference (4E-1 and 6E-1 mg/m3). Personal communication with NCEA indicated that either RfC is acceptable and the RfC should be chosen on a case-by-case basis.
95	This RfD is for dietary exposure. The RfD for drinking water exposure is 0.0005 mg/kg/day.
97	ENVIRON used withdrawn source.
98	Route-to-route extrapolation is not appropriate, according to the indicated reference.
99	ENVIRON used 3-Methylphenol [CASRN 108-39-4] values from the indicated reference as a surrogate.

Attachment E1: Toxicity Values GM Wilmington Assembly Plant, Wilmington, Delaware	
102	A dose equivalency factor of 4.5 was applied to the chronic RfC to derive the subchronic RfC.
104	Dermal toxicity value is extrapolated from oral toxicity value in accordance with the referenced EPA guidance.
105	Adjustment for gastrointestinal absorption efficiencies should not be applied according to the indicated reference.
106	This ABSGI is for dietary exposure. The ABSGI for drinking water exposure is 0.050.
107	Per Exhibit 4-1 in the indicated reference, the ABSGI value ranges from 30 to 80 percent.
108	Assumes an inhalation absoption factor of 0.5.
109	ENVIRON used 1,3,5-Trimethylbenzene [CASRN 108-67-8] values from the indicated reference as a surrogate.
110	The value is based on discussion in the indicated reference regarding the principal study EPA used in extrapolating from subchronic to chronic.
111	Value as published is an MRL in the indicated reference.
113	The exposure duration is 15-364 days, rather than the standard subchronic exposure duration of 14-2557 days.

Attachment E1: Physical and Chemical Properties
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	MW (g/mol)			K_{ow} (unitless)			K_{oc} (L/kg)			Kd (L/kg)			H (unitless)			Solubility (mg/L)			VP (mm Hg)			D_{air} (m^2/day)			D_{water} (m^2/day)			Kp (cm/hr)			FA (unitless)		
			Value	Ref	Note	Value	Ref	Note	Value	Ref	Note	Value	Ref	Note	Value	Ref	Note	Value	Ref	Note	Value	Ref	Note	Value	Ref	Note	Value	Ref	Note	Value	Ref	Note	Value	Ref	Note
VOC	Acetone	67-64-1	5.81E+01	50.1		5.75E-01	44		5.81E-01	44	82				1.59E-03	44		1.00E+06	44		2.30E+02	50.1	92	1.07E+00	44		9.85E-05	44		5.20E-04	44	115	1.00E+00	62	114
VOC	Benzene	71-43-2	7.81E+01	50.1		1.35E+02	44		5.82E+01	44	111				2.28E-01	44		1.75E+03	44		9.50E+01	50.1	92	7.60E-01	44		8.47E-05	44		1.47E-02	44	115	1.00E+00	62	
VOC	2-Butanone	78-93-3	7.21E+01	50.1		1.91E+00	69		2.00E+00	69	111				2.28E-03	50.1	92	2.20E+05	50.2		9.53E+01	50.1	92	6.98E-01	69		8.47E-05	69		9.57E-04	69	115	1.00E+00	62	
VOC	Chlorobenzene	108-90-7	1.13E+02	50.1		7.24E+02	44		2.20E+02	44	111				1.52E-01	44		4.72E+02	44		1.20E+01	50.1	92	6.31E-01	44		7.52E-05	44		2.87E-02	44	115	1.00E+00	62	
VOC	Cumene	98-82-8	1.20E+02	50.1		3.15E+03	69		7.05E+02	69	111				5.32E-01	69		6.13E+01	50.1	92	4.50E+00	50.1	92	5.62E-01	69		6.13E-05	69		6.85E-02	69	115	1.00E+00	62	114
VOC	Cyclohexane	110-82-7	8.42E+01	50.1		2.75E+03	39		6.35E+02	39	111				7.97E+00	50.1	92	5.50E+01	50.1	92	9.69E+01	50.1	92	7.25E-01	69		7.86E-05	69		9.98E-02	39	115	1.00E+00	62	114
VOC	1,2-Dichlorobenzene	95-50-1	1.47E+02	50.1		2.69E+03	44		6.23E+02	44	111				7.79E-02	44		1.56E+02	44		1.36E+00	50.1	92	5.96E-01	44		6.83E-05	44		4.37E-02	44	115	1.00E+00	62	
VOC	1,3-Dichlorobenzene	541-73-1	1.47E+02	50.1		2.40E+03	69		5.69E+02	69	111				1.27E-01	50.1	92	1.33E+02	50.1	93	2.15E+00	50.1	92	5.98E-01	69		6.79E-05	69		4.05E-02	69	115	1.00E+00	62	
VOC	1,4-Dichlorobenzene	106-46-7	1.47E+02	50.1		2.63E+03	44		6.12E+02	44	111				9.96E-02	44		7.38E+01	44		1.00E+00	50.1	92	5.96E-01	44		6.83E-05	44		4.31E-02	44	115	1.00E+00	62	
VOC	cis-1,2-Dichloroethene	156-59-2	9.69E+01	50.1		7.24E+01	44		3.56E+01	44	111				1.67E-01	44		3.50E+03	44		2.03E+02	50.1	92	6.36E-01	44		9.76E-05	44		7.67E-03	44	115	1.00E+00	62	114
VOC	trans-1,2-Dichloroethene	156-60-5	9.69E+01	50.1		1.17E+02	44		5.22E+01	44	111				3.85E-01	44		6.30E+03	44		3.33E+02	50.1	92	6.11E-01	44		1.03E-04	44		1.06E-02	44	115	1.00E+00	62	114
VOC	Ethyl Benzene	100-41-4	1.06E+02	50.1		1.38E+03	44		3.67E+02	44	111				3.23E-01	44		1.69E+02	44		9.60E+00	50.1	92	6.48E-01	44		6.74E-05	44		4.76E-02	44	115	1.00E+00	62	
VOC	Methyl Acetate	79-20-9	7.41E+01	55		1.51E+00	39		1.66E+00	39	111				3.71E-03	69		2.44E+05	39		2.16E+02	39		8.27E-01	69		9.50E-05	69		8.02E-04	39	115	1.00E+00	62	114
VOC	Methyl tert-butyl ether	1634-04-4	8.82E+01	1		1.74E+01	39		1.15E+01	39	111				2.40E-02	69		5.10E+04	69		2.50E+02	69		7.42E-01	69		8.73E-05	69		3.35E-03	39	115	1.00E+00	62	114
VOC	4-Methyl-2-pentanone	108-10-1	1.00E+02	50.1		1.55E+01	62		1.05E+01	62	111				5.64E-03	50.1	92	1.90E+04	39		1.99E+01	50.1	92	6.48E-01	40		6.74E-05	40		2.66E-03	62	115	1.00E+00	62	
VOC	Methylcyclohexane	108-87-2	9.82E+01	55		9.21E+02	69		2.66E+02	69	111				1.76E+01	69		1.40E+01	69		4.30E+01	69		6.35E-01	69		7.36E-05	69		4.04E-02	69	115	1.00E+00	62	114
VOC	Styrene	100-42-5	1.04E+02	50.1		8.71E+02	44		7.77E+02	44	82				1.13E-01	44		3.10E+02	44		6.12E+00	50.1	92	6.13E-01	44		6.91E-05	44		3.61E-02	44	115	1.00E+00	62	
VOC	Tetrachloroethene	127-18-4	1.66E+02	50.1		4.68E+02	44		1.56E+02	44	111				7.54E-01	44		2.00E+02	44		1.86E+01	50.1	92	6.22E-01	44		7.08E-05	44		1.08E-02	44	115	1.00E+00	62	
VOC	Toluene	108-88-3	9.21E+01	50.1		5.62E+02	44		1.80E+02	44	111				2.72E-01	44		5.26E+02	44		2.84E+01	50.1	92	7.52E-01	44		7.43E-05	44		3.16E-02	44	115	1.00E+00	62	
VOC	1,2,4-Trichlorobenzene	120-82-1	1.81E+02	50.1		1.02E+04	44		1.79E+03	44	111				5.82E-02	44		3.00E+02	44		4.31E-01	50.1	92	2.59E-01	44		7.11E-05	44		6.77E-02	44	115	1.00E+00	62	
VOC	Trichloroethene	79-01-6	1.31E+02	50.1		5.13E+02	44		1.68E+02	44	111				4.22E-01	44		1.10E+03	44		7.35E+01	50.1	92	6.83E-01	44		7.86E-05	44		1.79E-02	44	115	1.00E+00	62	
VOC	Xylenes (total)	1330-20-7	1.06E+02	50.1		1.47E+03	44		3.86E+02	44	111				2.76E-01	44		1.75E+02	44		7.99E+00	50.1	92	6.74E-01	44		7.56E-05	44		4.96E-02	44	115	1.00E+00	62	114
SVOC	Acenaphthene	83-32-9	1.54E+02	1		8.32E+03	44		7.14E+03	44	82				6.36E-03	44		4.24E+00	44		2.50E-03	50.1	92	3.64E-01	44		6.64E-05	44		8.39E-02	44	115	1.00E+00	62	114
SVOC	Acetophenone	98-86-2	1.20E+02	50.1		3.80E+01	1		3.58E+01	1	82				4.37E-04	50.1	92	6.13E+03	50.1	92	3.97E-01	50.1	92	6.91E-01	40		6.91E-05	40		3.72E-03	1	115	1.00E+00	62	114
SVOC	Anthracene	120-12-7	1.78E+02	50.1		3.55E+04	44		2.97E+04	44	82				2.67E-03	44		4.34E-02	44		2.67E-06	50.1	92	2.80E-01	44		6.69E-05	44		1.60E-01	44	115	1.00E+00	62	114
SVOC	Benzaldehyde	100-52-7	1.06E+02	39		3.02E+01	39		2.85E+01	39	82				9.73E-04	69		3.00E+03	39		9.00E-01	69		6.23E-01	69		7.84E-05	69		3.82E-03	39	115	1.00E+00	62	114
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	3.91E+02	50.1		2.00E+07	44		1.50E+07	44	82				4.18E-06	44		3.40E-01	44		6.45E-06	50.1	94	3.03E-01	44		3.16E-05	44		6.77E-01	44	115	4.00E-01	62	117
SVOC	Caprolactam	105-60-2	1.13E+02	39		6.46E-01	39		6.51E-01	39	82				2.06E-07	69		7.72E+05	68		1.60E-03	39		5.98E-01	69		7.77E-05	69		2.76E-04	39	115	1.00E+00	62	114
SVOC	Carbazole	86-74-8	1.67E+02	50.1		3.89E+03	44		3.38E+03	44	82				6.26E-07	44		7.48E+00	44		5.19E-07	50.1	90	3.37E-01	44		6.07E-05	44		4.30E-02	44	115	1.00E+00	62	114
SVOC	4-Chloroaniline	106-47-8	1.28E+02	50.1		7.08E+01	44		6.61E+01	44					1.36E-05	44		5.30E+03	44		1.23E-02	50.1	92	4.17E-01	44		8.73E-05	44		5.09E-03	44	115	1.00E+00	62	114
SVOC	2-Chlorophenol	95-57-8	1.29E+02	50.1		1.41E+02	44		3.88E+02	44	43				1.60E-02	44		2.20E+04	44		2.34E+00	50.1	92	4.33E-01	44		8.17E-05	44		7.93E-03	44	115	1.00E+00	62	
SVOC	Dibenzofuran	132-64-9	1.68E+02	50.1		2.45E+04	69		2.07E+04	69	82				5.15E-04	50.1	92	1.00E+01	50.1	93	1.80E-04	50.1	92	2.06E-01	69		5.18E-05	69		1.43E-01	69	115	1.00E+00	62	114
SVOC	2,4-Dimethylphenol	105-67-9	1.22E+02	50.1		2.29E+02	44		2.09E+02	44					8.20E-05	44		7.87E+03	44		9.80E-02	50.1	92	5.05E-01	44		7.51E-05	44		1.18E-02	44	115	1.00E+00	62	
SVOC	2,6-Dinitrotoluene	606-20-2	1.82E+02	50.1		7.41E+01	44		6.89E+01	44	82				3.06E-05	44		1.82E+02	44		5.67E-04	50.1	92	2.83E-01	44		6.27E-05	44		2.60E-03	44	115	1.00E+00	62	
SVOC	Fluoranthene	206-44-0	2.02E+02	50.1		1.32E+05	44		1.08E+05	44	82				6.60E-04	44		2.06E-01	44		7.80E-06	50.1	94	2.61E-01	44		5.49E-05	44		2.80E-01	44	115	1.00E+00	62	
SVOC	Fluorene	86-73-7	1.66E+02	50.1		1.62E+04	44		1.38E+04	44	82				2.61E-03	44		1.98E+00	44		6.33E-04	50.1	92	3.14E-01	44		6.81E-05	44		1.12E-01	44	115	1.00E+00	62	114
SVOC	2-Methylnaphthalene	91-57-6	1.42E+02	50.1		7.24E+03	39		6.23E+03	39	82				2.12E-02	50.1	92	2.46E+01	50.1	92	5.50E-02	50.1	92	4.51E-01	69		6.70E-05	69		8.94E-02	39	115	1.00E+00	62	114
SVOC	Methylphenol (total)	1319-77-3	1.08E+02	50.1	99	9.12E+01	1	99	8.45E+01	1	99, 82				3.54E-05	50.1	92, 99	2.27E+04	50.1	92, 99	1.38E-01	50.1	92, 99	6.39E-01	40	99	8.64E-05	40	99	7.73E-03	1	99, 115	1.00E+00	62	114
SVOC	Naphthalene	91-20-3	1.28E+02	50.1		2.29E+03	44		2.01E+03	44	82				1.98E-02	44		3.10E+01	44		8.50E-02	50.1	92	5.10E-01	44		6.48E-05	44		5.01E-02	44	115	1.00E+00	62	
SVOC	Pentachlorophenol	87-86-5	2.66E+02	50.1		1.23E+05	44		5.92E+02	44	43				1.00E-06	44		1.95E+03	44		3.17E-05	50.1	92	4.84E-01	44		5.27E-05	44		1.17E-01	44	115	9.00E-01	62	
SVOC	Phenanthrene	85-01-8	1.78E+02	50.1		2.88E+04	69		2.42E+04	69	82				9.52E-04	50.1	92	1.15E+00	50.1	92	1.12E-04	50.1	92	3.24E-01	69		6.45E-05	69		1.40E-01	69	115	1.00E+00	62	
SVOC	Phenol	108-95-2	9.41E+01	50.1		3.02E+01	44		2.88E+01	44					1.63E-05	44		8.28E+04	44		2.76E-01	50.1	92	7.08E-01	44		7.86E-05	44		4.46E-03	44	115	1.00E+00	62	
SVOC	Pyrene	129-00-0	2.02E+02	50.1		1.29E+05	44		1.06E+05	44	82				4.51E-04	44		1.35E-01	44		4.59E-06	50.1	92	2.35E-01	44		6.26E-05	44		2.75E-01	44	115	1.00E+00	62	114
INORG	Arsenic	7440-38-2	7.49E+01	50.1								2.90E+01	44	43					1	61					40	48		40	48	1.00E-03	62				
INORG	Barium	7440-39-3	1.37E+02	50.1								4.10E+01	44	43					1	60					40	48		40	48	1.00E-03	62				
INORG	Beryllium	7440-41-7	9.01E+00	50.1								7.90E+02	44	43					1	61					40	48		40	48	1.00E-03	62				
INORG	Chromium (total)	7440-47-3	5.20E+01	50.1								1.90E+01	44	43, 45					1	61					40	48		40	48	2.00E-03	62	45			
INORG	Cobalt	7440-48-4	5.89E+01	50.1								4.50E+01	35						1	61										4.00E-04	62				
INORG	Copper	7440-50-8	6.35E+01	50.1								3.50E+01	35						1	61					40	48		40	48	1.00E-03	62				
INORG	Manganese	7439-96-5	5.49E+01	50.1								6.50E+01	35																	1.00E-03	62				
INORG	Mercury	7439-97-6	2.01E+02	67			1	48				1.00E+03	67		2.90E-01	67		5.60E-02	1		1.96E-03	50.1	92	2.65E-01	44		5.44E-05	44		1.00E-03	62				
INORG	Nickel	7440-02-0	5.87E+01	50.1								6.50E+01	44	43					1	61					40	48		40	48	2.00E-04	62				
INORG	Silver	7440-22-4	1.08E+02	50.1								8.30E+00	44	43					1	61					40	48		40	48	6.00E-04	62				
INORG	Vanadium	7440-62-2	5.09E+01	50.1								1.00E+03	44	43					1	61					40	48		40	48	1.00E-03	62				
INORG	Zinc	7440-66-6	6.54E+01	50.1								6.20E+01	44	43					1	61					40	48		40	48	6.00E-04	62				

Attachment E1: Physical and Chemical Properties
GM Wilmington Assembly Plant, Wilmington, Delaware

References:	
1	USEPA. 1992. Handbook of RCRA Ground-Water Monitoring Constituents. Chemical and Physical Properties (40 CFR Part 264, Appendix IX). EPA-530-R-92-022. September.
7	Lyman, W., W. Reehl, D. Rosenblatt. 1982. Handbook of Chemical Property Estimation Methods. American Chemical Society, Washington, DC. (note: reprinted in 1990).
35	Baes III, C.F., R.D. Sharp, A.L. Sjoreen, and R.W. Shor. 1984. A Review and Analysis of Parameters for Assessing Transport of Released Radionuclides through Agriculture (AD-89-T-2-A-106) (formerly EPA078-D-X0304), Oak Ridge National Laboratory, ORNL-5786.
38	USEPA. Region IV. 1994. Comments to TGPL on Draft HSL Screening Methodology document. December 27.
39	CHEMFATE data base. Syracuse Research Corporation.
40	Research Triangle Institute, Center for Environmental Analysis. 1995. Supplemental Technical Support Document for Hazardous Waste Identification Rule: Risk Assessment for Human and Ecological Receptors--Volume 1, TABLE A-1. November 1995.
44	USEPA. 1996. Soil Screening Guidance: Technical Background Document and User Guide. Office of Emergency and Remedial Response. EPA/540/R-95/128. May.
46	Lide et al. 1991. CRC Handbook of Chemistry and Physics.
47	USEPA. 1990. Guidance on Remedial Actions for Superfund Sites with PCB Contamination. EPA/540/G-90/007. August.
48	US Department of Health and Human Services. 1995. DRAFT Toxicological Profile for Polychlorinated Biphenyls. Agency for Toxic Substances and Disease Registry. August.
50.1	USEPA. 1997. Superfund Chemical Data Matrix (SCDM). Office of Emergency and Remedial Response. September 12.
50.2	USEPA. 2004. Superfund Chemical Data Matrix (SCDM). Office of Emergency and Remedial Response. January.
55	W.G. Mallard and P.J. Linstrom, Eds., NIST Chemistry WebBook, NIST Standard Reference Database Number 69, March, 2003, National Institute of Standards and Technology, Gaithersburg MD, 20899
62	USEPA. 2004. Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. July.
64	Agency for Toxic Substances and Disease Registry (ATSDR). November 2000. Toxicological Profile for Polychlorindated Biphenyls (PCBs).
67	USEPA. 1997. Mercury Study Report to Congress. EPA's Office of Air Quality Planning and Standards and Office of Research and Development. December
68	PHYSPROP data base. Syracuse Research Corporation.
69	USEPA. 2004. WATER9. Version 2.0.0. Office of Air Quality Planning and Standards. July.
70	USEPA. 2003. User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings. June 19.
Notes:	
43	pH associated with value is 6.8.
44	ENVIRON used the value for Chlordane [CASRN 57-74-9] value from reference 44 as a surrogate.
45	ENVIRON used the value for Chromium VI [CASRN 18540-29-9] presented in indicated reference as a surrogate.
48	Not Available or Not Applicable
49	At 25 degrees Celsius
50	At 20 degrees Celsius
53	min, max 1.32
55	Reference temperature is unspecified.

Attachment E1: Physical and Chemical Properties GM Wilmington Assembly Plant, Wilmington, Delaware	
60	Hydrolyzes
61	Insoluble
63	min temperature: max is 25C
64	min temperature: max is 30
66	Slightly soluble
82	ENVIRON used Equation (70) from Reference 44 to calculate Koc value using Log Kow value from indicated reference.
90	Indicated source cites CHEMCALC.
91	Indicated source cites CHEMEST.
92	Indicated source cites CHEMFATE.
93	Indicated source cites FATE.
94	Indicated source cites LIVECHEM.
99	ENVIRON used the value for 3-Methylphenol [CASRN 108-39-4] value as a surrogate.
109	RAGS E indicates that a value of 0.001 is appropriate if the soil organic content is >10% (pp. 3-20, EPA 2001).
110	ENVIRON used the value for 4-Chlorobiphenyl [CASRN 2051-62-9] from the indicated reference as a surrogate.
111	ENVIRON used Equation (71) from Reference 44 to calculate Koc value using Log Kow value from indicated reference.
113	Personal communication with RCRA, Superfund & EPCRA Hotline on 9/15/2000; indicated reference presents the value which is off by an order of magnitude (1.23E-06 cm2/s). The database has the correct value of 1.23E-05 cm2/s.
114	A value of 1 is conservatively used because EPA guidance does not provide a default value.
115	ENVIRON calculated Kp value using equation 3.8 (p.3-7) in reference 62 with log Kow from the indicated reference and the MW presented in table.
116	ENVIRON used the value for Aroclor-1254 [CASRN 11097-69-1] from the indicated reference as a surrogate.
117	ENVIRON derived the FA based on Exhibit A-4 in the indicated reference.
118	From the 2001 Fact Sheet, "Correcting the Henry's Law Constant for Soil Temperature".
120	ENVIRON used the value for 4,4'-DDT [50-29-3] from the indicated reference as a surrogate.
121	ENVIRON used the value for gamma-BHC [CASRN 58-89-9] from the indicated reference as a surrogate

Attachment E1: Occupational Criteria
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	PEL (mg/m^3)			TLV (mg/m^3)			REL (mg/m^3)	
			Value	Ref	Note	Value	Ref	Note	Value	Ref
VOC	Acetone	67-64-1	2.40E+03	46		1.19E+03	47		5.90E+02	46
VOC	Benzene	71-43-2	3.19E+00	46		1.60E+00	47		3.19E-02	46
VOC	2-Butanone	78-93-3	5.90E+02	46		5.90E+02	47		5.90E+02	46
VOC	Chlorobenzene	108-90-7	3.50E+02	46		4.60E+01	47			
VOC	Cumene	98-82-8	2.45E+02	46		2.46E+02	47		2.45E+02	46
VOC	Cyclohexane	110-82-7	1.05E+03	46		3.44E+02	47		1.05E+03	46
VOC	1,2-Dichlorobenzene	95-50-1	3.00E+02	46	360	1.50E+02	47			
VOC	1,3-Dichlorobenzene	541-73-1								
VOC	1,4-Dichlorobenzene	106-46-7	4.50E+02	46		6.01E+01	47			
VOC	cis-1,2-Dichloroethene	156-59-2				7.93E+02	47			
VOC	trans-1,2-Dichloroethene	156-60-5				7.93E+02	47			
VOC	Ethyl Benzene	100-41-4	4.35E+02	46		4.34E+02	47		4.35E+02	46
VOC	Methyl Acetate	79-20-9	6.10E+02	46		6.06E+02	47		6.10E+02	46
VOC	Methyl tert-butyl ether	1634-04-4				1.80E+02	47			
VOC	4-Methyl-2-pentanone	108-10-1	4.10E+02	46		2.05E+02	47		2.05E+02	46
VOC	Methylcyclohexane	108-87-2	2.00E+03	46		1.61E+03	47		1.60E+03	46
VOC	Styrene	100-42-5	4.26E+02	46		8.52E+01	47		2.15E+02	46
VOC	Tetrachloroethene	127-18-4	6.78E+02	46		1.70E+02	47			
VOC	Toluene	108-88-3	7.54E+02	46		1.88E+02	47		3.75E+02	46
VOC	1,2,4-Trichlorobenzene	120-82-1				3.71E+01	47	360		
VOC	Trichloroethene	79-01-6	5.37E+02	46		2.69E+02	47			
VOC	Xylenes (total)	1330-20-7	4.35E+02	46		4.34E+02	47			
SVOC	Acenaphthene	83-32-9	2.00E-01	46	361					
SVOC	Acetophenone	98-86-2				4.91E+01	47			
SVOC	Anthracene	120-12-7	2.00E-01	46	361					
SVOC	Benzaldehyde	100-52-7								
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	5.00E+00	46		5.00E+00	47		5.00E+00	46
SVOC	Caprolactam	105-60-2				5.00E+00	47		1.00E+00	46
SVOC	Carbazole	86-74-8								
SVOC	4-Chloroaniline	106-47-8								
SVOC	2-Chlorophenol	95-57-8								
SVOC	Dibenzofuran	132-64-9								
SVOC	2,4-Dimethylphenol	105-67-9								
SVOC	2,6-Dinitrotoluene	606-20-2								
SVOC	Fluoranthene	206-44-0	2.00E-01	46	361					
SVOC	Fluorene	86-73-7	2.00E-01	46	361					
SVOC	2-Methylnaphthalene	91-57-6	2.00E-01	46	361					
SVOC	Methylphenol (total)	1319-77-3	2.20E+01	46		2.21E+01	47			
SVOC	Naphthalene	91-20-3	5.00E+01	46		5.24E+01	47		5.00E+01	46
SVOC	Pentachlorophenol	87-86-5	5.00E-01	46		5.00E-01	47		5.00E-01	46
SVOC	Phenanthrene	85-01-8	2.00E-01	46	361					
SVOC	Phenol	108-95-2	1.90E+01	46		1.92E+01	47		1.90E+01	46
SVOC	Pyrene	129-00-0	2.00E-01	46	361					
INORG	Arsenic	7440-38-2	5.00E-01	46		1.00E-02	47			
INORG	Barium	7440-39-3	5.00E-01	46		5.00E-01	47			
INORG	Beryllium	7440-41-7	2.00E-03	46		2.00E-03	47			
INORG	Chromium (total)	7440-47-3	1.00E+00	46					5.00E-01	46
INORG	Cobalt	7440-48-4	1.00E-01	46		2.00E-02	47		5.00E-02	46
INORG	Copper	7440-50-8	1.00E+00	46	325, 326	1.00E+00	47	325	1.00E+00	46
INORG	Manganese	7439-96-5	5.00E+00	46	360	2.00E-01	47		1.00E+00	46
INORG	Mercury	7439-97-6				2.50E-02	47		5.00E-02	46
INORG	Nickel	7440-02-0	1.00E+00	46		1.50E+00	47		1.50E-02	46
INORG	Silver	7440-22-4	1.00E-02	46		1.00E-01	47	326	1.00E-02	46
INORG	Vanadium	7440-62-2	1.00E-01	46	330, 360					
INORG	Zinc	7440-66-6								
Note:										
Occupational inhalation limits are based on the following hierarchy: permissible exposure limits (PELs), threshold limit values (TLVs), and the recommended exposure limits (RELs).										

Attachment E1: Occupational Criteria GM Wilmington Assembly Plant, Wilmington, Delaware	
References:	
46	National Institute for Occupational Safety and Health (NIOSH). 1997. NIOSH Pocket Guide to Chemical Hazards. DHHS. 97-140. June.
47	American Conference of Government Industrial Hygienists. 2005. 2005 TLVs and BEIs. ISBN: 1-882417-40-2.
84	OSHA. 29 CFR Parts 1910, 1915 et al. Occupational Exposure to Hexavalent Chromium; Final Rule. February 28, 2006.
Notes:	
325	Dust criterion.
326	Metal criterion.
328	Insoluble criterion.
330	Fume criterion.
350	Exposure by all routes should be carefully controlled to levels as low as possible.
351	ENVIRON used Aroclor 1254 [CASRN 11097-69-1] value from the indicated reference as a surrogate.
360	Criteria are ceiling levels.
361	Value from coal tar pitch volalitiles, as recommended in source document.

Attachment E1: High-End Exposure Factors
GM Wilmington Assembly Plant, Wilmington, Delaware

			Routine Worker		Construction Worker	
Groundwater Ingestion						
Drinking Rate	L-water/hr	**DR**			0.005	e
Exposure Time	hr	**t**			2	e
Exposure Frequency	days/year	**EF**			5	e
Exposure Duration	years	**ED**			10	e
Body Weight	kg	**BW**			70	a
Averaging Time, cancer	days	**AT_c**			25,550	a
Averaging Time, noncancer	days	**AT_{nc}**			3,650	a
Groundwater Dermal Contact						
Event Time	hr	**t**			2	e
Skin Surface Area	cm^2	**SA**			3,300	d
Events per Day	1/d	**EV**			1	e
Exposure Frequency	days/year	**EF**			5	e
Exposure Duration	years	**ED**			10	e
Body Weight	kg	**BW**			70	a
Averaging Time, cancer	days	**AT_c**			25,550	a
Averaging Time, noncancer	days	**AT_{nc}**			3,650	a
Inhalation of Groundwater Vapors						
Exposure Frequency	days/year	**EF**	250	b	5	e
Expoure Duration	years	**ED**	25	b	10	e
Averaging Time, cancer	days	**AT_c**	25,550	a	25,550	a
Averaging Time, noncancer	days	**AT_{nc}**	9,125	a	3,650	a
Notes:						

a. Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part A) Interim Final (EPA 1989)

d. Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment). (EPA 2004b)

e. Based on professional judgment and site-specific considerations as follows:

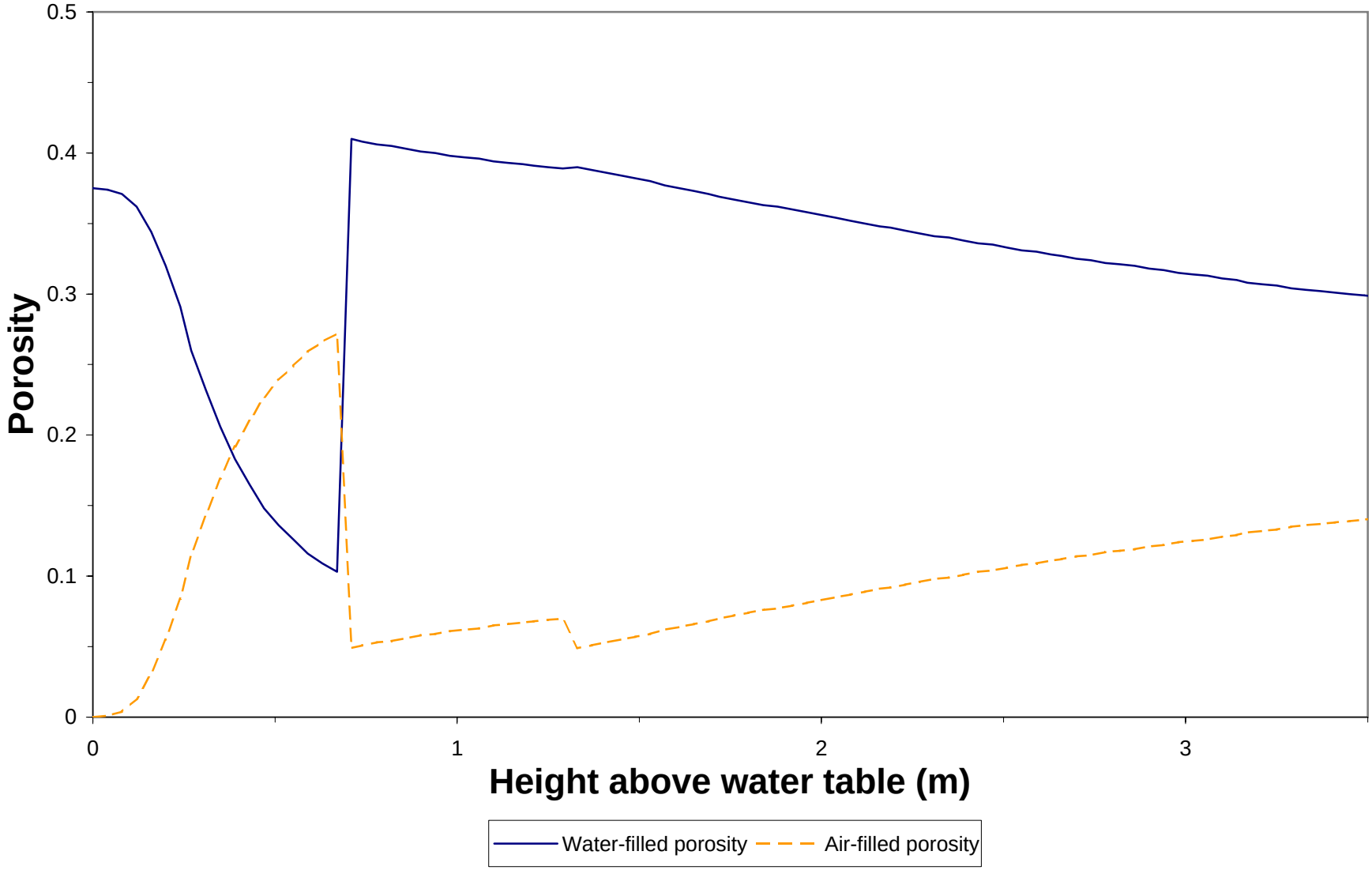
- Construction Workers: The exposure time and frequency is based on anticipated excavation time for minor underground repairs by a worker, during which the worker is assumed to be partially in contact with groundwater. The exposure duration for a construction worker at a given site is assumed to be 10 years. The incidental groundwater drinking rate is based on 10% of the drinking rate for swimming.

ATTACHMENT E2

Risk Calculations for Routine Workers

Attachment E2: Building Parameters GM Wilmington Assembly Plant, Wilmington, Delaware				
			Pump House	**Weld Water Bldg**
Basement?			Yes	No
Depth to groundwater	m	**DTW**	3.35	3.35
Building foundation thickness	m	**L_{crack}**	0.20	0.15
Building foundation length	m		12.19	24.38
Building foundation width	m		9.14	15.24
Bldg occupied height	m		2.44	2.44
Occupied depth below ground	m		1.37	0.00
Air exchange rate	$hour^{-1}$	**ac/h**	6	2

Figure E2: Soil Moisture Profile for Water Weld Bldg

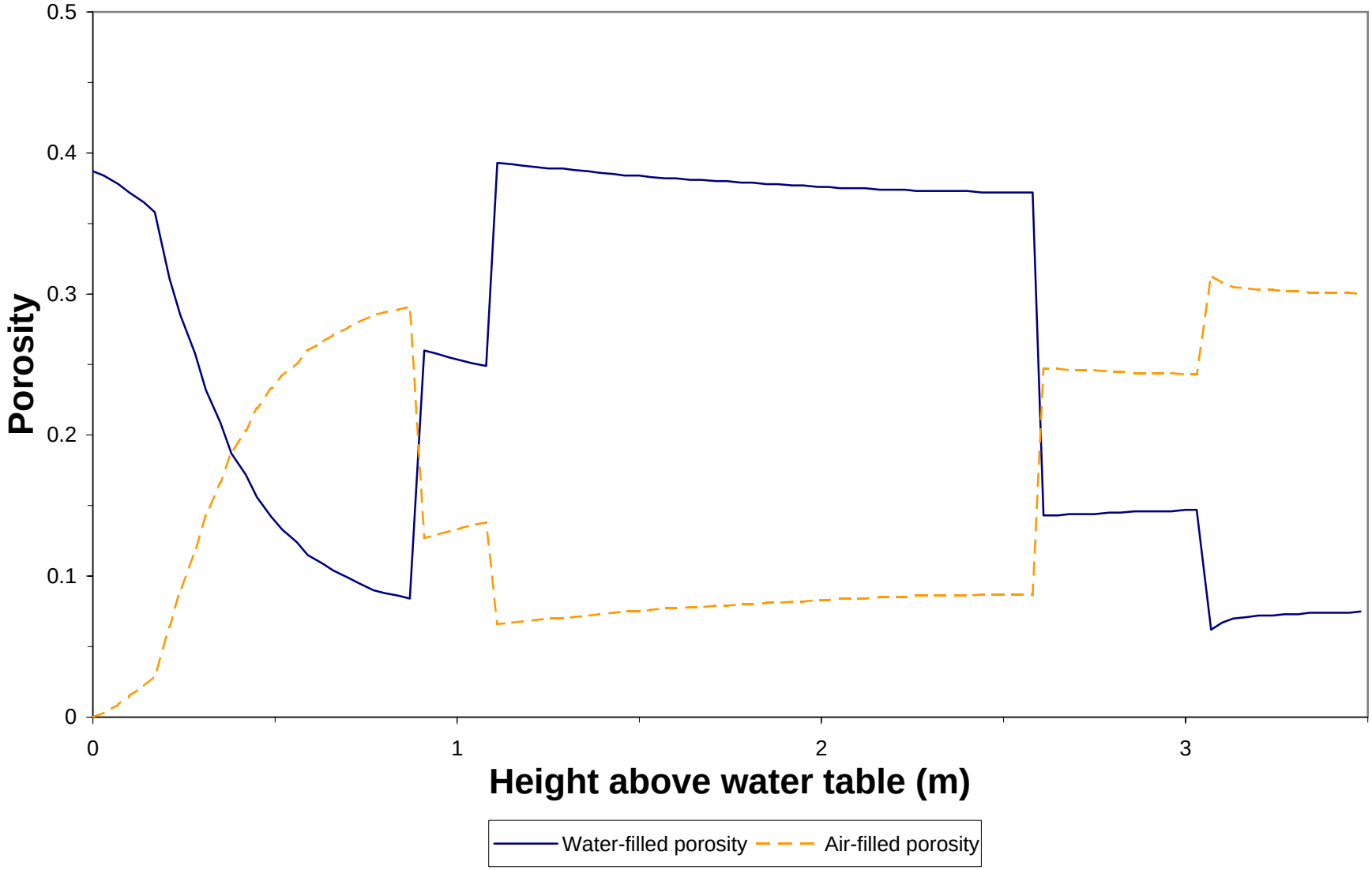


Attachment E2: Normalized Indoor Air Concentrations at the Weld Water Bldg due to Vapor Intrusion from Groundwater
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	D_{air} (m^2/day)	D_{water} (m^2/day)	H (unitless)	D_{crack} (m^2/day)	D_{eff}^T (m^2/day)	α_∞	C_{bldg} (L-water/m^3)
VOC	Acetone	67-64-1	1.07E+00	9.85E-05	7.95E-04	1.74E-01	2.45E-02	3.70E-05	2.94E-05
VOC	Benzene	71-43-2	7.60E-01	8.47E-05	1.14E-01	1.24E-01	8.02E-04	2.08E-06	2.38E-04
VOC	2-Butanone	78-93-3	6.98E-01	8.47E-05	1.14E-03	1.14E-01	1.49E-02	2.71E-05	3.09E-05
VOC	Chlorobenzene	108-90-7	6.31E-01	7.52E-05	7.60E-02	1.03E-01	8.19E-04	2.13E-06	1.62E-04
VOC	Cumene	98-82-8	5.62E-01	6.13E-05	2.66E-01	9.14E-02	4.15E-04	1.09E-06	2.90E-04
VOC	Cyclohexane	110-82-7	7.25E-01	7.86E-05	3.98E+00	1.18E-01	1.16E-04	3.08E-07	1.23E-03
VOC	1,2-Dichlorobenzene	95-50-1	5.96E-01	6.83E-05	3.90E-02	9.70E-02	1.05E-03	2.72E-06	1.06E-04
VOC	1,3-Dichlorobenzene	541-73-1	5.98E-01	6.79E-05	6.33E-02	9.73E-02	8.26E-04	2.15E-06	1.36E-04
VOC	1,4-Dichlorobenzene	106-46-7	5.96E-01	6.83E-05	4.98E-02	9.70E-02	9.29E-04	2.41E-06	1.20E-04
VOC	cis-1,2-Dichloroethene	156-59-2	6.36E-01	9.76E-05	8.35E-02	1.03E-01	8.89E-04	2.31E-06	1.93E-04
VOC	trans-1,2-Dichloroethene	156-60-5	6.11E-01	1.03E-04	1.93E-01	9.94E-02	6.15E-04	1.61E-06	3.10E-04
VOC	Ethyl Benzene	100-41-4	6.48E-01	6.74E-05	1.62E-01	1.05E-01	5.75E-04	1.51E-06	2.43E-04
VOC	Methyl Acetate	79-20-9	8.27E-01	9.50E-05	1.85E-03	1.35E-01	1.14E-02	2.23E-05	4.14E-05
VOC	Methyl tert-butyl ether	1634-04-4	7.42E-01	8.73E-05	1.20E-02	1.21E-01	2.66E-03	6.55E-06	7.86E-05
VOC	4-Methyl-2-pentanone	108-10-1	6.48E-01	6.74E-05	2.82E-03	1.05E-01	5.93E-03	1.33E-05	3.76E-05
VOC	Methylcyclohexane	108-87-2	6.35E-01	7.36E-05	8.78E+00	1.03E-01	5.84E-05	1.55E-07	1.36E-03
VOC	Styrene	100-42-5	6.13E-01	6.91E-05	5.65E-02	9.98E-02	8.92E-04	2.31E-06	1.31E-04
VOC	Tetrachloroethene	127-18-4	6.22E-01	7.08E-05	3.77E-01	1.01E-01	4.03E-04	1.06E-06	4.00E-04
VOC	Toluene	108-88-3	7.52E-01	7.43E-05	1.36E-01	1.22E-01	7.01E-04	1.83E-06	2.49E-04
VOC	1,2,4-Trichlorobenzene	120-82-1	2.59E-01	7.11E-05	2.91E-02	4.22E-02	9.07E-04	2.35E-06	6.84E-05
VOC	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.11E-01	1.11E-01	5.66E-04	1.48E-06	3.13E-04
VOC	Xylenes (total)	1330-20-7	6.74E-01	7.56E-05	1.38E-01	1.10E-01	6.58E-04	1.72E-06	2.37E-04
SVOC	Acenaphthene	83-32-9	3.64E-01	6.64E-05	3.18E-03	5.92E-02	4.70E-03	1.09E-05	3.47E-05
SVOC	Acetophenone	98-86-2	6.91E-01	6.91E-05	2.19E-04	1.13E-01	5.08E-02	5.23E-05	1.14E-05
SVOC	Anthracene	120-12-7	2.80E-01	6.69E-05	1.34E-03	4.56E-02	9.26E-03	1.91E-05	2.56E-05
SVOC	Benzaldehyde	100-52-7	6.23E-01	7.84E-05	4.86E-04	1.01E-01	2.82E-02	3.99E-05	1.94E-05
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	3.03E-01	3.16E-05	2.09E-06	5.54E-02	9.68E-01	8.24E-05	1.72E-07
SVOC	Caprolactam	105-60-2	5.98E-01	7.77E-05	1.03E-07	3.97E-01	4.22E+01	8.50E-05	8.76E-09
SVOC	Carbazole	86-74-8	3.37E-01	6.07E-05	3.13E-07	1.32E-01	1.09E+01	8.49E-05	2.66E-08
SVOC	4-Chloroaniline	106-47-8	4.17E-01	8.73E-05	6.80E-06	7.30E-02	8.76E-01	8.21E-05	5.58E-07
SVOC	2-Chlorophenol	95-57-8	4.33E-01	8.17E-05	8.00E-03	7.04E-02	2.84E-03	6.96E-06	5.56E-05
SVOC	Dibenzofuran	132-64-9	2.06E-01	5.18E-05	2.57E-04	3.35E-02	2.85E-02	4.02E-05	1.03E-05
SVOC	2,4-Dimethylphenol	105-67-9	5.05E-01	7.51E-05	4.10E-05	8.28E-02	1.97E-01	7.32E-05	3.00E-06
SVOC	2,6-Dinitrotoluene	606-20-2	2.83E-01	6.27E-05	1.53E-05	4.76E-02	3.21E-01	7.74E-05	1.18E-06
SVOC	Fluoranthene	206-44-0	2.61E-01	5.49E-05	3.30E-04	4.25E-02	2.54E-02	3.77E-05	1.24E-05
SVOC	Fluorene	86-73-7	3.14E-01	6.81E-05	1.31E-03	5.11E-02	9.75E-03	1.99E-05	2.60E-05
SVOC	2-Methylnaphthalene	91-57-6	4.51E-01	6.70E-05	1.06E-02	7.34E-02	2.05E-03	5.14E-06	5.44E-05
SVOC	Methylphenol (total)	1319-77-3	6.39E-01	8.64E-05	1.77E-05	1.06E-01	4.41E-01	7.94E-05	1.40E-06
SVOC	Naphthalene	91-20-3	5.10E-01	6.48E-05	9.90E-03	8.30E-02	2.19E-03	5.45E-06	5.40E-05
SVOC	Pentachlorophenol	87-86-5	4.84E-01	5.27E-05	5.00E-07	1.21E-01	6.08E+00	8.47E-05	4.23E-08
SVOC	Phenanthrene	85-01-8	3.24E-01	6.45E-05	4.76E-04	5.28E-02	2.21E-02	3.48E-05	1.66E-05
SVOC	Phenol	108-95-2	7.08E-01	7.86E-05	8.15E-06	1.19E-01	7.65E-01	8.17E-05	6.66E-07
SVOC	Pyrene	129-00-0	2.35E-01	6.26E-05	2.26E-04	3.84E-02	3.80E-02	4.62E-05	1.04E-05
INORG	Arsenic	7440-38-2							
INORG	Barium	7440-39-3							
INORG	Beryllium	7440-41-7							
INORG	Chromium (total)	7440-47-3							
INORG	Cobalt	7440-48-4							
INORG	Copper	7440-50-8							
INORG	Manganese	7439-96-5							
INORG	Mercury	7439-97-6	2.65E-01	5.44E-05	1.45E-01	4.32E-02	3.29E-04	8.67E-07	1.26E-04
INORG	Nickel	7440-02-0							
INORG	Silver	7440-22-4							
INORG	Vanadium	7440-62-2							
INORG	Zinc	7440-66-6							

Notes:	Crack Soil and Building Characteristics			
	Building Type		Weld Water Bldg	
	Crack Soil Type		Sand	
	Bulk density	kg/L	ρ_b	1.66
	Total porosity	L/L-soil	θ_T	0.375
	Water-filled porosity	L/L-soil	θ_w	0.053
	Air-filled porosity	L/L-soil	θ_a	0.322
	Residual saturation	L/L-soil	θ_r	0.053
	Hydraulic conductivity	cm/s	**K**	7.4E-03
	Dynamic viscosity of water	g/cm-s	μ_w	0.01307
	Density of water	g/cm^3	ρ_w	1.0
	Gravitational acceleration	cm/s^2	**g**	980.7
	Intrinsic permeability	cm^2	**k**	9.9E-08
	Relative saturation	unitless	S_e	0
	van Genuchten N	unitless	**N**	3.177
	van Genuchten M	unitless	**M**	0.685
	Relative air permeability	unitless	k_{rg}	1.000
	Permeability to vapor	cm^2	k_v	9.91E-08
	Distance from building foundation to source	m	L_T	3.20
	Bldg foundation thickness	m	L_{crack}	0.15
	Bldg foundation length	m		24.38
	Bldg foundation width	m		15.24
	Bldg occupied height	m		2.44
	Bldg occupied volume	m^3		906.58
	Occupied depth below ground	m		0.00
	Bldg area for vapor intrusion	m^2	A_B	371.6
	Ratio of A_{crack} to A_B		η	1E-04
	Area of cracks	m^2	A_{crack}	3.96E-02
	Air exchange rate	$hour^{-1}$	**ach**	2.0
	Building ventilation rate	m^3/day	Q_{bldg}	4.35E+04
	Pressure difference between outdoors-indoors	$kg/m\text{-}s^2$	ΔP	1.0
	Viscosity of air	kg/m-s	μ_a	1.8E-05
	Crack length (bldg perimeter)	m	X_{crack}	79.24
	Crack depth below ground	m	Z_{crack}	0.15
	Crack radius	m	r_{crack}	5E-04
	Soil gas flow rate into bldg	m^3/day	Q_{soil}	3.70E+00

Figure E2: Soil Moisture Profile for Pump House



Attachment E2: Normalized Indoor Air Concentrations at the Pump House due to Vapor Intrusion from Groundwater
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	D_{air} (m^2/day)	D_{water} (m^2/day)	H (unitless)	D_{crack} (m^2/day)	D_{eff}^T (m^2/day)	α_∞	C_{bldg} (L-water/m^3)
VOC	Acetone	67-64-1	1.07E+00	9.85E-05	7.95E-04	1.74E-01	3.00E-02	2.47E-05	1.96E-05
VOC	Benzene	71-43-2	7.60E-01	8.47E-05	1.14E-01	1.24E-01	9.31E-04	2.14E-06	2.44E-04
VOC	2-Butanone	78-93-3	6.98E-01	8.47E-05	1.14E-03	1.14E-01	1.84E-02	2.04E-05	2.32E-05
VOC	Chlorobenzene	108-90-7	6.31E-01	7.52E-05	7.60E-02	1.03E-01	9.96E-04	2.28E-06	1.74E-04
VOC	Cumene	98-82-8	5.62E-01	6.13E-05	2.66E-01	9.14E-02	4.17E-04	9.91E-07	2.64E-04
VOC	Cyclohexane	110-82-7	7.25E-01	7.86E-05	3.98E+00	1.18E-01	8.15E-05	1.98E-07	7.89E-04
VOC	1,2-Dichlorobenzene	95-50-1	5.96E-01	6.83E-05	3.90E-02	9.70E-02	1.33E-03	2.98E-06	1.16E-04
VOC	1,3-Dichlorobenzene	541-73-1	5.98E-01	6.79E-05	6.33E-02	9.73E-02	1.01E-03	2.32E-06	1.47E-04
VOC	1,4-Dichlorobenzene	106-46-7	5.96E-01	6.83E-05	4.98E-02	9.70E-02	1.16E-03	2.63E-06	1.31E-04
VOC	cis-1,2-Dichloroethene	156-59-2	6.36E-01	9.76E-05	8.35E-02	1.03E-01	1.09E-03	2.49E-06	2.08E-04
VOC	trans-1,2-Dichloroethene	156-60-5	6.11E-01	1.03E-04	1.93E-01	9.94E-02	7.04E-04	1.64E-06	3.16E-04
VOC	Ethyl Benzene	100-41-4	6.48E-01	6.74E-05	1.62E-01	1.05E-01	6.29E-04	1.47E-06	2.38E-04
VOC	Methyl Acetate	79-20-9	8.27E-01	9.50E-05	1.85E-03	1.35E-01	1.48E-02	1.83E-05	3.40E-05
VOC	Methyl tert-butyl ether	1634-04-4	7.42E-01	8.73E-05	1.20E-02	1.21E-01	3.51E-03	6.96E-06	8.35E-05
VOC	4-Methyl-2-pentanone	108-10-1	6.48E-01	6.74E-05	2.82E-03	1.05E-01	7.92E-03	1.27E-05	3.59E-05
VOC	Methylcyclohexane	108-87-2	6.35E-01	7.36E-05	8.78E+00	1.03E-01	4.21E-05	1.03E-07	9.00E-04
VOC	Styrene	100-42-5	6.13E-01	6.91E-05	5.65E-02	9.98E-02	1.10E-03	2.51E-06	1.42E-04
VOC	Tetrachloroethene	127-18-4	6.22E-01	7.08E-05	3.77E-01	1.01E-01	3.81E-04	9.07E-07	3.42E-04
VOC	Toluene	108-88-3	7.52E-01	7.43E-05	1.36E-01	1.22E-01	7.81E-04	1.81E-06	2.47E-04
VOC	1,2,4-Trichlorobenzene	120-82-1	2.59E-01	7.11E-05	2.91E-02	4.22E-02	1.19E-03	2.70E-06	7.86E-05
VOC	Trichloroethene	79-01-6	6.83E-01	7.86E-05	2.11E-01	1.11E-01	6.02E-04	1.41E-06	2.98E-04
VOC	Xylenes (total)	1330-20-7	6.74E-01	7.56E-05	1.38E-01	1.10E-01	7.45E-04	1.73E-06	2.39E-04
SVOC	Acenaphthene	83-32-9	3.64E-01	6.64E-05	3.18E-03	5.92E-02	6.15E-03	1.07E-05	3.40E-05
SVOC	Acetophenone	98-86-2	6.91E-01	6.91E-05	2.19E-04	1.13E-01	4.99E-02	2.85E-05	6.24E-06
SVOC	Anthracene	120-12-7	2.80E-01	6.69E-05	1.34E-03	4.56E-02	1.07E-02	1.53E-05	2.05E-05
SVOC	Benzaldehyde	100-52-7	6.23E-01	7.84E-05	4.86E-04	1.01E-01	3.06E-02	2.49E-05	1.21E-05
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	3.03E-01	3.16E-05	2.09E-06	5.54E-02	3.18E-01	3.55E-05	7.43E-08
SVOC	Caprolactam	105-60-2	5.98E-01	7.77E-05	1.03E-07	3.97E-01	1.04E+01	3.72E-05	3.83E-09
SVOC	Carbazole	86-74-8	3.37E-01	6.07E-05	3.13E-07	1.32E-01	2.77E+00	3.70E-05	1.16E-08
SVOC	4-Chloroaniline	106-47-8	4.17E-01	8.73E-05	6.80E-06	7.30E-02	3.19E-01	3.55E-05	2.42E-07
SVOC	2-Chlorophenol	95-57-8	4.33E-01	8.17E-05	8.00E-03	7.04E-02	3.82E-03	7.46E-06	5.97E-05
SVOC	Dibenzofuran	132-64-9	2.06E-01	5.18E-05	2.57E-04	3.35E-02	2.39E-02	2.27E-05	5.86E-06
SVOC	2,4-Dimethylphenol	105-67-9	5.05E-01	7.51E-05	4.10E-05	8.28E-02	1.21E-01	3.31E-05	1.36E-06
SVOC	2,6-Dinitrotoluene	606-20-2	2.83E-01	6.27E-05	1.53E-05	4.76E-02	1.40E-01	3.36E-05	5.14E-07
SVOC	Fluoranthene	206-44-0	2.61E-01	5.49E-05	3.30E-04	4.25E-02	2.33E-02	2.25E-05	7.43E-06
SVOC	Fluorene	86-73-7	3.14E-01	6.81E-05	1.31E-03	5.11E-02	1.14E-02	1.59E-05	2.07E-05
SVOC	2-Methylnaphthalene	91-57-6	4.51E-01	6.70E-05	1.06E-02	7.34E-02	2.74E-03	5.66E-06	5.99E-05
SVOC	Methylphenol (total)	1319-77-3	6.39E-01	8.64E-05	1.77E-05	1.06E-01	2.25E-01	3.49E-05	6.17E-07
SVOC	Naphthalene	91-20-3	5.10E-01	6.48E-05	9.90E-03	8.30E-02	2.91E-03	5.96E-06	5.90E-05
SVOC	Pentachlorophenol	87-86-5	4.84E-01	5.27E-05	5.00E-07	1.21E-01	1.63E+00	3.69E-05	1.84E-08
SVOC	Phenanthrene	85-01-8	3.24E-01	6.45E-05	4.76E-04	5.28E-02	2.20E-02	2.20E-05	1.05E-05
SVOC	Phenol	108-95-2	7.08E-01	7.86E-05	8.15E-06	1.19E-01	3.38E-01	3.56E-05	2.90E-07
SVOC	Pyrene	129-00-0	2.35E-01	6.26E-05	2.26E-04	3.84E-02	3.05E-02	2.48E-05	5.60E-06
INORG	Arsenic	7440-38-2							
INORG	Barium	7440-39-3							
INORG	Beryllium	7440-41-7							
INORG	Chromium (total)	7440-47-3							
INORG	Cobalt	7440-48-4							
INORG	Copper	7440-50-8							
INORG	Manganese	7439-96-5							
INORG	Mercury	7439-97-6	2.65E-01	5.44E-05	1.45E-01	4.32E-02	3.96E-04	9.43E-07	1.37E-04
INORG	Nickel	7440-02-0							
INORG	Silver	7440-22-4							
INORG	Vanadium	7440-62-2							
INORG	Zinc	7440-66-6							

Notes:	**Crack Soil and Building Characteristics**								
	Building Type		**Pump House**						
	Crack Soil Type			**Sand**					
	Bulk density	kg/L	ρ_b	1.66					
	Total porosity	L/L-soil	θ_T	0.375					
	Water-filled porosity	L/L-soil	θ_w	0.053					
	Air-filled porosity	L/L-soil	θ_a	0.322					
	Residual saturation	L/L-soil	θ_r	0.053					
	Hydraulic conductivity	cm/s	**K**	7.4E-03					
	Dynamic viscosity of water	g/cm-s	μ_w	0.01307					
	Density of water	g/cm^3	ρ_w	1.0					
	Gravitational acceleration	cm/s^2	**g**	980.7					
	Intrinsic permeability	cm^2	**k**	9.9E-08					
	Relative saturation	unitless	S_e	0					
	van Genuchten N	unitless	**N**	3.177					
	van Genuchten M	unitless	**M**	0.685					
	Relative air permeability	unitless	k_{rg}	1.000					
	Permeability to vapor	cm^2	k_v	9.91E-08					
	Distance from building foundation to source	m	L_T	1.78					
	Bldg foundation thickness	m	L_{crack}	0.20					
	Bldg foundation length	m		12.19					
	Bldg foundation width	m		9.14					
	Bldg occupied height	m		2.44					
	Bldg occupied volume	m^3		271.86					
	Occupied depth below ground	m		1.37					
	Bldg area for vapor intrusion	m^2	A_B	169.9					
	Ratio of A_{crack} to A_B		η	1E-04					
	Area of cracks	m^2	A_{crack}	2.13E-02					
	Air exchange rate	$hour^{-1}$	**ach**	6.0					
	Building ventilation rate	m^3/day	Q_{bldg}	3.91E+04					
	Pressure difference between outdoors-indoors	$kg/m-s^2$	ΔP	1.0					
	Viscosity of air	kg/m-s	μ_a	1.8E-05					
	Crack length (bldg perimeter)	m	X_{crack}	42.66					
	Crack depth below ground	m	Z_{crack}	1.5748					
	Crack radius	m	r_{crack}	5E-04					
	Soil gas flow rate into bldg	m^3/day	Q_{soil}	1.46E+00					

Table E2: Vapor Flux to Outdoor Air from Groundwater
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	Carc Class	C_{gw} (mg/l)	Henry (unitless)	D_{air} (m^2/day)	D_{water} (m^2/day)	D_v (m^2/day)	D_w (m^2/day)	D_e (m^2/day)	J (mg/m^2-s)
VOC	Acetone	67-64-1	ID	4.70E+02	1.59E-03	1.07E+00	9.85E-05	1.71E-01	4.43E-08	1.71E-01	4.41E-04
VOC	Benzene	71-43-2	A	1.20E+00	2.28E-01	7.60E-01	8.47E-05	1.21E-01	3.81E-08	1.21E-01	1.14E-04
VOC	2-Butanone	78-93-3	ID	8.50E-01	2.28E-03	6.98E-01	8.47E-05	1.11E-01	3.81E-08	1.11E-01	7.46E-07
VOC	Chlorobenzene	108-90-7	D	7.60E-01	1.52E-01	6.31E-01	7.52E-05	1.01E-01	3.38E-08	1.01E-01	4.01E-05
VOC	Cumene	98-82-8	D	1.00E-01	5.32E-01	5.62E-01	6.13E-05	8.95E-02	2.76E-08	8.95E-02	1.64E-05
VOC	Cyclohexane	110-82-7	ID	7.90E-02	7.97E+00	7.25E-01	7.86E-05	1.16E-01	3.54E-08	1.16E-01	2.51E-04
VOC	1,2-Dichlorobenzene	95-50-1	D	6.80E-03	7.79E-02	5.96E-01	6.83E-05	9.50E-02	3.07E-08	9.50E-02	1.74E-07
VOC	1,3-Dichlorobenzene	541-73-1	D	1.00E-03	1.27E-01	5.98E-01	6.79E-05	9.53E-02	3.06E-08	9.53E-02	4.17E-08
VOC	1,4-Dichlorobenzene	106-46-7	C	1.40E-02	9.96E-02	5.96E-01	6.83E-05	9.50E-02	3.07E-08	9.50E-02	4.57E-07
VOC	cis-1,2-Dichloroethene	156-59-2	ID	7.10E-03	1.67E-01	6.36E-01	9.76E-05	1.01E-01	4.39E-08	1.01E-01	4.15E-07
VOC	trans-1,2-Dichloroethene	156-60-5		4.00E-04	3.85E-01	6.11E-01	1.03E-04	9.74E-02	4.63E-08	9.74E-02	5.18E-08
VOC	Ethyl Benzene	100-41-4	D	1.80E+01	3.23E-01	6.48E-01	6.74E-05	1.03E-01	3.03E-08	1.03E-01	2.07E-03
VOC	Methyl Acetate	79-20-9		4.50E-02	3.71E-03	8.27E-01	9.50E-05	1.32E-01	4.28E-08	1.32E-01	7.59E-08
VOC	Methyl tert-butyl ether	1634-04-4		8.10E-01	2.40E-02	7.42E-01	8.73E-05	1.18E-01	3.93E-08	1.18E-01	7.94E-06
VOC	4-Methyl-2-pentanone	108-10-1	ID	5.80E-01	5.64E-03	6.48E-01	6.74E-05	1.03E-01	3.03E-08	1.03E-01	1.17E-06
VOC	Methylcyclohexane	108-87-2		2.00E-01	1.76E+01	6.35E-01	7.36E-05	1.01E-01	3.31E-08	1.01E-01	1.23E-03
VOC	Styrene	100-42-5		3.00E-04	1.13E-01	6.13E-01	6.91E-05	9.78E-02	3.11E-08	9.78E-02	1.14E-08
VOC	Tetrachloroethene	127-18-4	C-B2	1.60E-03	7.54E-01	6.22E-01	7.08E-05	9.91E-02	3.19E-08	9.91E-02	4.13E-07
VOC	Toluene	108-88-3	ID	1.90E+02	2.72E-01	7.52E-01	7.43E-05	1.20E-01	3.34E-08	1.20E-01	2.14E-02
VOC	1,2,4-Trichlorobenzene	120-82-1	D	7.00E-04	5.82E-02	2.59E-01	7.11E-05	4.13E-02	3.20E-08	4.13E-02	5.81E-09
VOC	Trichloroethene	79-01-6	C-B2	3.00E-03	4.22E-01	6.83E-01	7.86E-05	1.09E-01	3.54E-08	1.09E-01	4.75E-07
VOC	Xylenes (total)	1330-20-7	ID	3.00E+01	2.76E-01	6.74E-01	7.56E-05	1.07E-01	3.40E-08	1.07E-01	3.07E-03
SVOC	Acenaphthene	83-32-9		2.20E-03	6.36E-03	3.64E-01	6.64E-05	5.80E-02	2.99E-08	5.80E-02	2.80E-09
SVOC	Acetophenone	98-86-2	D	1.80E-01	4.37E-04	6.91E-01	6.91E-05	1.10E-01	3.11E-08	1.10E-01	3.00E-08
SVOC	Anthracene	120-12-7	D	3.50E-04	2.67E-03	2.80E-01	6.69E-05	4.46E-02	3.01E-08	4.46E-02	1.44E-10
SVOC	Benzaldehyde	100-52-7		1.40E-01	9.73E-04	6.23E-01	7.84E-05	9.93E-02	3.53E-08	9.93E-02	4.67E-08
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1.60E-02	4.18E-06	3.03E-01	3.16E-05	4.83E-02	1.42E-08	5.17E-02	1.19E-11
SVOC	Caprolactam	105-60-2		1.70E-02	2.06E-07	5.98E-01	7.77E-05	9.53E-02	3.49E-08	2.65E-01	3.20E-12
SVOC	Carbazole	86-74-8	B2	3.00E-04	6.26E-07	3.37E-01	6.07E-05	5.37E-02	2.73E-08	9.74E-02	6.31E-14
SVOC	4-Chloroaniline	106-47-8		1.70E-03	1.36E-05	4.17E-01	8.73E-05	6.65E-02	3.93E-08	6.94E-02	5.54E-12
SVOC	2-Chlorophenol	95-57-8		4.60E-03	1.60E-02	4.33E-01	8.17E-05	6.90E-02	3.68E-08	6.90E-02	1.75E-08
SVOC	Dibenzofuran	132-64-9	D	5.50E-04	5.15E-04	2.06E-01	5.18E-05	3.28E-02	2.33E-08	3.28E-02	3.21E-11
SVOC	2,4-Dimethylphenol	105-67-9		6.00E-01	8.20E-05	5.05E-01	7.51E-05	8.04E-02	3.38E-08	8.08E-02	1.37E-08
SVOC	2,6-Dinitrotoluene	606-20-2	B2	4.00E-04	3.06E-05	2.83E-01	6.27E-05	4.50E-02	2.82E-08	4.60E-02	1.94E-12
SVOC	Fluoranthene	206-44-0	D	5.20E-03	6.60E-04	2.61E-01	5.49E-05	4.16E-02	2.47E-08	4.16E-02	4.93E-10
SVOC	Fluorene	86-73-7	D	6.00E-04	2.61E-03	3.14E-01	6.81E-05	5.00E-02	3.06E-08	5.00E-02	2.70E-10
SVOC	2-Methylnaphthalene	91-57-6	ID	6.90E-02	2.12E-02	4.51E-01	6.70E-05	7.19E-02	3.01E-08	7.19E-02	3.62E-07
SVOC	Methylphenol (total)	1319-77-3		1.06E+00	3.54E-05	6.39E-01	8.64E-05	1.02E-01	3.89E-08	1.03E-01	1.33E-08
SVOC	Naphthalene	91-20-3	C	2.40E+00	1.98E-02	5.10E-01	6.48E-05	8.12E-02	2.92E-08	8.12E-02	1.33E-05
SVOC	Pentachlorophenol	87-86-5	B2	5.00E-04	1.00E-06	4.84E-01	5.27E-05	7.71E-02	2.37E-08	1.01E-01	1.74E-13
SVOC	Phenanthrene	85-01-8	D	9.00E-04	9.52E-04	3.24E-01	6.45E-05	5.16E-02	2.90E-08	5.17E-02	1.53E-10
SVOC	Phenol	108-95-2	ID	3.80E-02	1.63E-05	7.08E-01	7.86E-05	1.13E-01	3.54E-08	1.15E-01	2.46E-10
SVOC	Pyrene	129-00-0	D	2.80E-03	4.51E-04	2.35E-01	6.26E-05	3.75E-02	2.81E-08	3.75E-02	1.64E-10
INORG	Arsenic	7440-38-2	A	4.74E-02							
INORG	Barium	7440-39-3	NC	5.55E-01							
INORG	Beryllium	7440-41-7	B1	2.40E-03							
INORG	Chromium (total)	7440-47-3		1.45E-01							
INORG	Cobalt	7440-48-4	B1	2.34E-01							
INORG	Copper	7440-50-8	D	6.57E-02							
INORG	Manganese	7439-96-5	D	2.13E+01							
INORG	Mercury	7439-97-6	D	1.50E-04	2.90E-01	2.65E-01	5.44E-05	4.23E-02	2.45E-08	4.23E-02	6.35E-09
INORG	Nickel	7440-02-0	A	6.62E-02							
INORG	Silver	7440-22-4	D	5.80E-03							
INORG	Vanadium	7440-62-2		1.99E-01							
INORG	Zinc	7440-66-6	ID	2.37E-01							
	Soil Parameters										
	Soil type			Sand							
	Total porosity	L/L-soil	θ_T	0.375							
	Water-filled porosity	L/L-soil	θ_w	0.055							
	Air-filled porosity	L/L-soil	θ_a	0.32							
	Depth to groundwater	m	**DTW**	3.35							

ATTACHMENT E3

Risk Calculations for Construction Workers

Attachment E3: Dermal Absorption of Chemicals from Water in Excavation
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	MW (g/mole)	Log K_{ow} (unitless)	K_p (cm/hr)	B (unitless)	τ (hr)	c	b	ts (hr)	FA (unitless)	DA (L/cm^2-event)
VOC	Acetone	67-64-1	5.81E+01	-2.4E-01	5.2E-04	1.5E-03	2.2E-01	3.3E-01	3.0E-01	5.3E-01	1.0E+00	1.27E-06
VOC	Benzene	71-43-2	7.81E+01	2.1E+00	1.5E-02	5.0E-02	2.9E-01	3.7E-01	3.3E-01	6.9E-01	1.0E+00	3.70E-05
VOC	2-Butanone	78-93-3	7.21E+01	2.8E-01	9.6E-04	3.1E-03	2.7E-01	3.4E-01	3.1E-01	6.4E-01	1.0E+00	2.42E-06
VOC	Chlorobenzene	108-90-7	1.13E+02	2.9E+00	2.9E-02	1.2E-01	4.5E-01	4.2E-01	3.8E-01	1.1E+00	1.0E+00	8.00E-05
VOC	Cumene	98-82-8	1.20E+02	3.5E+00	6.8E-02	2.9E-01	5.0E-01	5.5E-01	5.1E-01	1.2E+00	1.0E+00	1.93E-04
VOC	Cyclohexane	110-82-7	8.42E+01	3.4E+00	1.0E-01	3.5E-01	3.1E-01	6.0E-01	5.7E-01	7.5E-01	1.0E+00	2.30E-04
VOC	1,2-Dichlorobenzene	95-50-1	1.47E+02	3.4E+00	4.4E-02	2.0E-01	7.0E-01	4.8E-01	4.4E-01	1.7E+00	1.0E+00	1.46E-04
VOC	1,3-Dichlorobenzene	541-73-1	1.47E+02	3.4E+00	4.1E-02	1.9E-01	7.0E-01	4.7E-01	4.3E-01	1.7E+00	1.0E+00	1.35E-04
VOC	1,4-Dichlorobenzene	106-46-7	1.47E+02	3.4E+00	4.3E-02	2.0E-01	7.0E-01	4.8E-01	4.4E-01	1.7E+00	1.0E+00	1.44E-04
VOC	cis-1,2-Dichloroethene	156-59-2	9.69E+01	1.9E+00	7.7E-03	2.9E-02	3.7E-01	3.5E-01	3.2E-01	8.8E-01	1.0E+00	2.07E-05
VOC	trans-1,2-Dichloroethene	156-60-5	9.69E+01	2.1E+00	1.1E-02	4.0E-02	3.7E-01	3.6E-01	3.3E-01	8.8E-01	1.0E+00	2.83E-05
VOC	Ethyl Benzene	100-41-4	1.06E+02	3.1E+00	4.8E-02	1.9E-01	4.1E-01	4.7E-01	4.3E-01	9.9E-01	1.0E+00	1.27E-04
VOC	Methyl Acetate	79-20-9	7.41E+01	1.8E-01	8.0E-04	2.7E-03	2.7E-01	3.4E-01	3.0E-01	6.6E-01	1.0E+00	2.04E-06
VOC	Methyl tert-butyl ether	1634-04-4	8.82E+01	1.2E+00	3.3E-03	1.2E-02	3.3E-01	3.4E-01	3.1E-01	7.9E-01	1.0E+00	8.84E-06
VOC	4-Methyl-2-pentanone	108-10-1	1.00E+02	1.2E+00	2.7E-03	1.0E-02	3.8E-01	3.4E-01	3.1E-01	9.2E-01	1.0E+00	7.32E-06
VOC	Methylcyclohexane	108-87-2	9.82E+01	3.0E+00	4.0E-02	1.5E-01	3.7E-01	4.4E-01	4.0E-01	9.0E-01	1.0E+00	1.05E-04
VOC	Styrene	100-42-5	1.04E+02	2.9E+00	3.6E-02	1.4E-01	4.0E-01	4.3E-01	4.0E-01	9.7E-01	1.0E+00	9.63E-05
VOC	Tetrachloroethene	127-18-4	1.66E+02	2.7E+00	1.1E-02	5.4E-02	8.9E-01	3.7E-01	3.4E-01	2.1E+00	1.0E+00	3.99E-05
VOC	Toluene	108-88-3	9.21E+01	2.8E+00	3.2E-02	1.2E-01	3.5E-01	4.2E-01	3.8E-01	8.3E-01	1.0E+00	8.08E-05
VOC	1,2,4-Trichlorobenzene	120-82-1	1.81E+02	4.0E+00	6.8E-02	3.5E-01	1.1E+00	6.0E-01	5.6E-01	2.6E+00	1.0E+00	2.76E-04
VOC	Trichloroethene	79-01-6	1.31E+02	2.7E+00	1.8E-02	7.9E-02	5.7E-01	3.9E-01	3.5E-01	1.4E+00	1.0E+00	5.53E-05
VOC	Xylenes (total)	1330-20-7	1.06E+02	3.2E+00	5.0E-02	2.0E-01	4.1E-01	4.8E-01	4.4E-01	9.9E-01	1.0E+00	1.32E-04
SVOC	Acenaphthene	83-32-9	1.54E+02	3.9E+00	8.4E-02	4.0E-01	7.7E-01	6.4E-01	6.1E-01	1.8E+00	1.0E+00	2.96E-04
SVOC	Acetophenone	98-86-2	1.20E+02	1.6E+00	3.7E-03	1.6E-02	5.0E-01	3.4E-01	3.1E-01	1.2E+00	1.0E+00	1.11E-05
SVOC	Anthracene	120-12-7	1.78E+02	4.6E+00	1.6E-01	8.2E-01	1.0E+00	1.0E+00	1.1E+00	4.0E+00	1.0E+00	6.41E-04
SVOC	Benzaldehyde	100-52-7	1.06E+02	1.5E+00	3.8E-03	1.5E-02	4.1E-01	3.4E-01	3.1E-01	9.9E-01	1.0E+00	1.07E-05
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	3.91E+02	7.3E+00	6.8E-01	5.1E+00	1.6E+01	5.2E+00	1.9E+01	7.1E+01	4.0E-01	4.26E-03
SVOC	Caprolactam	105-60-2	1.13E+02	-1.9E-01	2.8E-04	1.1E-03	4.5E-01	3.3E-01	3.0E-01	1.1E+00	1.0E+00	8.01E-07
SVOC	Carbazole	86-74-8	1.67E+02	3.6E+00	4.3E-02	2.1E-01	9.1E-01	4.9E-01	4.5E-01	2.2E+00	1.0E+00	1.60E-04
SVOC	4-Chloroaniline	106-47-8	1.28E+02	1.9E+00	5.1E-03	2.2E-02	5.4E-01	3.5E-01	3.2E-01	1.3E+00	1.0E+00	1.56E-05
SVOC	2-Chlorophenol	95-57-8	1.29E+02	2.2E+00	7.9E-03	3.5E-02	5.5E-01	3.6E-01	3.2E-01	1.3E+00	1.0E+00	2.44E-05
SVOC	Dibenzofuran	132-64-9	1.68E+02	4.4E+00	1.4E-01	7.1E-01	9.2E-01	9.1E-01	9.6E-01	3.6E+00	1.0E+00	5.36E-04
SVOC	2,4-Dimethylphenol	105-67-9	1.22E+02	2.4E+00	1.2E-02	5.0E-02	5.1E-01	3.7E-01	3.3E-01	1.2E+00	1.0E+00	3.52E-05
SVOC	2,6-Dinitrotoluene	606-20-2	1.82E+02	1.9E+00	2.6E-03	1.3E-02	1.1E+00	3.4E-01	3.1E-01	2.6E+00	1.0E+00	1.06E-05
SVOC	Fluoranthene	206-44-0	2.02E+02	5.1E+00	2.8E-01	1.5E+00	1.4E+00	1.7E+00	2.4E+00	5.7E+00	1.0E+00	1.31E-03
SVOC	Fluorene	86-73-7	1.66E+02	4.2E+00	1.1E-01	5.5E-01	9.0E-01	7.7E-01	7.7E-01	2.2E+00	1.0E+00	4.13E-04
SVOC	2-Methylnaphthalene	91-57-6	1.42E+02	3.9E+00	8.9E-02	4.1E-01	6.6E-01	6.5E-01	6.2E-01	1.6E+00	1.0E+00	2.89E-04
SVOC	Methylphenol (total)	1319-77-3	1.08E+02	2.0E+00	7.7E-03	3.1E-02	4.2E-01	3.5E-01	3.2E-01	1.0E+00	1.0E+00	2.17E-05
SVOC	Naphthalene	91-20-3	1.28E+02	3.4E+00	5.0E-02	2.2E-01	5.5E-01	4.9E-01	4.5E-01	1.3E+00	1.0E+00	1.49E-04
SVOC	Pentachlorophenol	87-86-5	2.66E+02	5.1E+00	1.2E-01	7.3E-01	3.3E+00	9.3E-01	9.9E-01	1.3E+01	9.0E-01	7.43E-04
SVOC	Phenanthrene	85-01-8	1.78E+02	4.5E+00	1.4E-01	7.2E-01	1.0E+00	9.1E-01	9.7E-01	4.1E+00	1.0E+00	5.59E-04
SVOC	Phenol	108-95-2	9.41E+01	1.5E+00	4.5E-03	1.7E-02	3.5E-01	3.4E-01	3.1E-01	8.5E-01	1.0E+00	1.20E-05
SVOC	Pyrene	129-00-0	2.02E+02	5.1E+00	2.8E-01	1.5E+00	1.4E+00	1.6E+00	2.4E+00	5.7E+00	1.0E+00	1.29E-03
INORG	Arsenic	7440-38-2	7.49E+01		1.0E-03							2.00E-06
INORG	Barium	7440-39-3	1.37E+02		1.0E-03							2.00E-06
INORG	Beryllium	7440-41-7	9.01E+00		1.0E-03							2.00E-06
INORG	Chromium (total)	7440-47-3	5.20E+01		2.0E-03							4.00E-06
INORG	Chromium III	16065-83-1	5.20E+01		1.0E-03							2.00E-06
INORG	Cobalt	7440-48-4	5.89E+01		4.0E-04							8.00E-07
INORG	Copper	7440-50-8	6.35E+01		1.0E-03							2.00E-06
INORG	Manganese	7439-96-5	5.49E+01		1.0E-03							2.00E-06
INORG	Mercury	7439-97-6	2.01E+02		1.0E-03							2.00E-06
INORG	Nickel	7440-02-0	5.87E+01		2.0E-04							4.00E-07
INORG	Silver	7440-22-4	1.08E+02		6.0E-04							1.20E-06
INORG	Vanadium	7440-62-2	5.09E+01		1.0E-03							2.00E-06
INORG	Zinc	7440-66-6	6.54E+01		6.0E-04							1.20E-06
	Notes:											
	Event Time (Excavation Scenario)		hours	**t**	2							
	Dermal absorption is nonsteady-state for organics and steady-state for inorganics.											

Attachment E3: Normalized Vapor Flux to Outdoor Air from Exposed Groundwater in Excavations
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	H (unitless)	MW (g/mol)	k_G (cm/s)	k_L (cm/s)	$1/K_L$ (s/cm)	K_L (cm/s)	J_L (L/m^2-s)
VOC	Acetone	67-64-1	8.0E-04	5.8E+01	5.38E-01	1.42E-03	3.04E+03	3.29E-04	3.29E-03
VOC	Benzene	71-43-2	1.1E-01	7.8E+01	4.87E-01	1.22E-03	8.35E+02	1.20E-03	1.20E-02
VOC	2-Butanone	78-93-3	1.1E-03	7.2E+01	5.00E-01	1.27E-03	2.53E+03	3.95E-04	3.95E-03
VOC	Chlorobenzene	108-90-7	7.6E-02	1.1E+02	4.31E-01	1.02E-03	1.01E+03	9.89E-04	9.89E-03
VOC	Cumene	98-82-8	2.7E-01	1.2E+02	4.22E-01	9.87E-04	1.02E+03	9.78E-04	9.78E-03
VOC	Cyclohexane	110-82-7	4.0E+00	8.4E+01	4.75E-01	1.18E-03	8.48E+02	1.18E-03	1.18E-02
VOC	1,2-Dichlorobenzene	95-50-1	3.9E-02	1.5E+02	3.94E-01	8.92E-04	1.19E+03	8.43E-04	8.43E-03
VOC	1,3-Dichlorobenzene	541-73-1	6.3E-02	1.5E+02	3.94E-01	8.92E-04	1.16E+03	8.62E-04	8.62E-03
VOC	1,4-Dichlorobenzene	106-46-7	5.0E-02	1.5E+02	3.94E-01	8.92E-04	1.17E+03	8.54E-04	8.54E-03
VOC	cis-1,2-Dichloroethene	156-59-2	8.4E-02	9.7E+01	4.53E-01	1.10E-03	9.36E+02	1.07E-03	1.07E-02
VOC	trans-1,2-Dichloroethene	156-60-5	1.9E-01	9.7E+01	4.53E-01	1.10E-03	9.21E+02	1.09E-03	1.09E-02
VOC	Ethyl Benzene	100-41-4	1.6E-01	1.1E+02	4.40E-01	1.05E-03	9.66E+02	1.03E-03	1.03E-02
VOC	Methyl Acetate	79-20-9	1.9E-03	7.4E+01	4.96E-01	1.26E-03	1.88E+03	5.31E-04	5.31E-03
VOC	Methyl tert-butyl ether	1634-04-4	1.2E-02	8.8E+01	4.68E-01	1.15E-03	1.05E+03	9.56E-04	9.56E-03
VOC	4-Methyl-2-pentanone	108-10-1	2.8E-03	1.0E+02	4.48E-01	1.08E-03	1.72E+03	5.83E-04	5.83E-03
VOC	Methylcyclohexane	108-87-2	8.8E+00	9.8E+01	4.51E-01	1.09E-03	9.16E+02	1.09E-03	1.09E-02
VOC	Styrene	100-42-5	5.7E-02	1.0E+02	4.42E-01	1.06E-03	9.83E+02	1.02E-03	1.02E-02
VOC	Tetrachloroethene	127-18-4	3.8E-01	1.7E+02	3.79E-01	8.40E-04	1.20E+03	8.35E-04	8.35E-03
VOC	Toluene	108-88-3	1.4E-01	9.2E+01	4.61E-01	1.13E-03	9.03E+02	1.11E-03	1.11E-02
VOC	1,2,4-Trichlorobenzene	120-82-1	2.9E-02	1.8E+02	3.67E-01	8.03E-04	1.34E+03	7.47E-04	7.47E-03
VOC	Trichloroethene	79-01-6	2.1E-01	1.3E+02	4.09E-01	9.44E-04	1.07E+03	9.34E-04	9.34E-03
VOC	Xylenes (total)	1330-20-7	1.4E-01	1.1E+02	4.40E-01	1.05E-03	9.69E+02	1.03E-03	1.03E-02
SVOC	Acenaphthene	83-32-9	3.2E-03	1.5E+02	3.88E-01	8.71E-04	1.96E+03	5.11E-04	5.11E-03
SVOC	Acetophenone	98-86-2	2.2E-04	1.2E+02	4.22E-01	9.87E-04	1.19E+04	8.43E-05	8.43E-04
SVOC	Anthracene	120-12-7	1.3E-03	1.8E+02	3.70E-01	8.10E-04	3.26E+03	3.07E-04	3.07E-03
SVOC	Benzaldehyde	100-52-7	4.9E-04	1.1E+02	4.40E-01	1.05E-03	5.63E+03	1.78E-04	1.78E-03
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	2.1E-06	3.9E+02	2.84E-01	5.48E-04	1.69E+06	5.93E-07	5.93E-06
SVOC	Caprolactam	105-60-2	1.0E-07	1.1E+02	4.30E-01	1.02E-03	2.26E+07	4.43E-08	4.43E-07
SVOC	Carbazole	86-74-8	3.1E-07	1.7E+02	3.77E-01	8.37E-04	8.46E+06	1.18E-07	1.18E-06
SVOC	4-Chloroaniline	106-47-8	6.8E-06	1.3E+02	4.13E-01	9.58E-04	3.57E+05	2.80E-06	2.80E-05
SVOC	2-Chlorophenol	95-57-8	8.0E-03	1.3E+02	4.12E-01	9.54E-04	1.35E+03	7.40E-04	7.40E-03
SVOC	Dibenzofuran	132-64-9	2.6E-04	1.7E+02	3.77E-01	8.34E-04	1.15E+04	8.69E-05	8.69E-04
SVOC	2,4-Dimethylphenol	105-67-9	4.1E-05	1.2E+02	4.19E-01	9.79E-04	5.92E+04	1.69E-05	1.69E-04
SVOC	2,6-Dinitrotoluene	606-20-2	1.5E-05	1.8E+02	3.67E-01	8.02E-04	1.79E+05	5.57E-06	5.57E-05
SVOC	Fluoranthene	206-44-0	3.3E-04	2.0E+02	3.54E-01	7.61E-04	9.87E+03	1.01E-04	1.01E-03
SVOC	Fluorene	86-73-7	1.3E-03	1.7E+02	3.78E-01	8.39E-04	3.22E+03	3.11E-04	3.11E-03
SVOC	2-Methylnaphthalene	91-57-6	1.1E-02	1.4E+02	3.99E-01	9.07E-04	1.34E+03	7.47E-04	7.47E-03
SVOC	Methylphenol (total)	1319-77-3	1.8E-05	1.1E+02	4.37E-01	1.04E-03	1.30E+05	7.66E-06	7.66E-05
SVOC	Naphthalene	91-20-3	9.9E-03	1.3E+02	4.13E-01	9.56E-04	1.29E+03	7.75E-04	7.75E-03
SVOC	Pentachlorophenol	87-86-5	5.0E-07	2.7E+02	3.23E-01	6.63E-04	6.19E+06	1.61E-07	1.61E-06
SVOC	Phenanthrene	85-01-8	4.8E-04	1.8E+02	3.70E-01	8.10E-04	6.92E+03	1.45E-04	1.45E-03
SVOC	Phenol	108-95-2	8.2E-06	9.4E+01	4.58E-01	1.12E-03	2.69E+05	3.72E-06	3.72E-05
SVOC	Pyrene	129-00-0	2.3E-04	2.0E+02	3.54E-01	7.61E-04	1.38E+04	7.23E-05	7.23E-04
INORG	Arsenic	7440-38-2		7.5E+01	4.94E-01	1.25E-03			
INORG	Barium	7440-39-3		1.4E+02	4.03E-01	9.23E-04			
INORG	Beryllium	7440-41-7		9.0E+00	1.00E+00	3.60E-03			
INORG	Chromium (total)	7440-47-3		5.2E+01	5.58E-01	1.50E-03			
INORG	Chromium III	16065-83-1		5.2E+01	5.58E-01	1.50E-03			
INORG	Cobalt	7440-48-4		5.9E+01	5.35E-01	1.41E-03			
INORG	Copper	7440-50-8		6.4E+01	5.22E-01	1.36E-03			
INORG	Manganese	7439-96-5		5.5E+01	5.48E-01	1.46E-03			
INORG	Mercury	7439-97-6	1.5E-01	2.0E+02	3.55E-01	7.63E-04	1.33E+03	7.52E-04	7.52E-03
INORG	Nickel	7440-02-0		5.9E+01	5.36E-01	1.41E-03			
INORG	Silver	7440-22-4		1.1E+02	4.37E-01	1.04E-03			
INORG	Vanadium	7440-62-2		5.1E+01	5.62E-01	1.52E-03			
INORG	Zinc	7440-66-6		6.5E+01	5.17E-01	1.34E-03			
	Molecular Weight of Oxygen	g/mol	MW_{02}	32					
	Molecular Weight of Water	g/mol	MW_{H20}	18					
	Temperature	K	**T**	285					
	Liquid-phase Mass Transfer Coefficient for Oxygen	cm/s	$k_{L,02}$	0.002					
	Gas-Phase Mass Transfer Coefficient for Water Vapor at 25 °C	cm/s	$K_{G,H20}$	0.833					

APPENDIX F

SAMPLING AND ANALYSIS PLAN

REMEDIATION SECTION	FIELD METHOD GUIDELINE NO.: FMG 5.1
WORLDWIDE FACILITIES GROUP	EFFECTIVE DATE: NOVEMBER 20, 2001
GENERAL MOTORS CORPORATION	
REVISION NO.: 0	REVISION DATE:

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(Following Text)

FMG 5.1-01 GROUNDWATER LEVEL MONITORING REPORT

REMEDIATION SECTION	FIELD METHOD GUIDELINE NO.: FMG 5.1
WORLDWIDE FACILITIES GROUP	EFFECTIVE DATE: NOVEMBER 20, 2001
GENERAL MOTORS CORPORATION	
REVISION NO.: 0	REVISION DATE:

WATER LEVEL MEASUREMENTS

INTRODUCTION

This procedure describes measurement of water levels in groundwater monitoring and extraction wells, piezometers and boreholes. This procedure does not cover automated measurement of water levels with a transducer/datalogger, and does not cover measurement of phase-separated liquids.

Water levels in monitoring wells will be measured prior to each sampling event and at other times as indicated in the project Work Plan. Water levels will be acquired in a manner that provide accurate data that can be used to calculate vertical and horizontal hydraulic gradients and other hydrogeologic parameters. Accuracy in obtaining the measurements is critical to insure the useability of the data.

PROCEDURES REFERENCED

- FMG 6.5 - Non-Aqueous Phase Liquid (NAPL).
- FMG 8.0 - Field Instruments – Use/Calibration.
- FMG 9.0 - Equipment Decontamination.

PROCEDURAL GUIDELINES

In order to provide reliable data, water levels must be collected over as short a period of time as practical. Barometric pressure can affect groundwater levels and, therefore, observation of significant weather changes during the period of water level measurements must be noted. Tidal fluctuations, navigation controls on rivers, rainfall events, and groundwater pumping can also affect groundwater level measurements. Personnel collecting water level data must note if any of these controls are in effect during the groundwater level collection period. Due to possible changes during the groundwater level collection period, it is imperative that the time of data collection at each station be accurately recorded.

In conjunction with groundwater level measurements, surface water (e.g., ponds, lakes, rivers, and lagoons) often are monitored as well. This information is very helpful (and can be critical) in

understanding the hydrogeologic setting of the site and most importantly how contaminants may move beneath the site.

The depth to groundwater will be measured with an electronic depth-indicating probe. Prior to obtaining a measurement, a fixed reference point on the well casing shall be established for each well to be measured. Unless otherwise established, the reference point is typically established and marked on the north side of the well casing. Avoid using protective casings or flush-mounted road boxes for reference, due to the greater potential for damage or settlement.

If provided for in the project Work Plan, the elevation of the reference point shall be obtained by accepted surveying methods, to the nearest 0.01 foot.

The water level probe will be lowered into the well until the meter indicates (via indicator light or tone) the water is reached. The probe will be raised above water level and slowly lowered again until water is indicated. The cable will be held against the side of the inner protective casing at the point designated for water level measurements and a depth reading taken. This procedure will be followed three times or until a consistent value is obtained. The value will be recorded to the nearest 0.01 foot on Form FMG 5.1-01 - Groundwater Level Monitoring Report or other designated data recording location if specified in the project Work Plan.

Upon completion, the probe will be raised to the surface and together with the amount of cable that entered the well casing, will be decontaminated in accordance with methods described in FMG 9.0 - Equipment Decontamination.

EQUIPMENT/MATERIALS

- Battery-operated, non-stretch electronic water level probe with permanent markings at 0.01-foot increments (traceable to national measurement standards), such as the Solinst Model 101 or equivalent.
- The calibrated cable on the depth indicator will be checked against a surveyor's steel tape once per quarter year. A new cable will be installed if the cable has changed by more than 0.01 percent (0.01 foot for a 100-foot cable). See also FMG 8.0 - Field Instruments – Use/Calibration.

REFERENCES

ASTM D4750 - Test Method for Determining Subsurface Liquid Levels in a Borehole or Monitoring Well (Observation Well).

ASTM D6000 - Guide for Presentation of Water-Level Information from Ground-Water Sites.

Form FMG 5.1-01	GROUNDWATER LEVEL MONITORING REPORT	WELL NUMBER Page of

PROJECT _____ PROJECT MANAGER _____

LOCATION _____ FIELD REP. _____

CLIENT _____ DATE _____

ELEVATION REFERENCED TO: _____

Date	Time	Elapsed Time (days)	Depth of Water from ( ) in ft	Elevation of Water	Remarks	Read By

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(Following Text)

FMG 6.4-01 WELL PURGING FIELD INFORMATION

FMG 6.4-02 SAMPLE COLLECTION DATA SHEET

FMG 6.4-03 MONITORING WELL RECORD FOR LOW-FLOW PURGING

REMEDIATION SECTION	FIELD METHOD GUIDELINE NO.:	FMG 6.4
WORLDWIDE FACILITIES GROUP	EFFECTIVE DATE:	NOVEMBER 20, 2001
GENERAL MOTORS CORPORATION		
REVISION NO.: 4	REVISION DATE:	APRIL 14, 2003

GROUNDWATER SAMPLING

INTRODUCTION

This procedure is for the collection of groundwater samples for laboratory analysis.

The objective of most groundwater quality monitoring programs is to obtain samples that are representative of existing groundwater conditions, or samples that retain the physical and chemical properties of the groundwater within an aquifer.

One of the most important aspects of groundwater sampling is acquiring samples that are free of suspended silt, sediment, or other fine grained particulates. Fine grain materials may often have a variety of chemical components sorbed to the particle or have the ability to sorb chemicals from the aqueous phase to the particle which will bias the subsequent analytical results.

Constituents known to have an affinity for fine grained particulates are: polychlorinated biphenyls (PCBs), semivolatile organic compounds (SVOCs), and inorganics. Monitoring programs where these constituents are suspected or known to be prevalent must employ sampling methods that minimize particulate presence.

The sampling method of "preference" for GM sites where particulate sorption is an issue is the "low stress/low flow" technique described within this FMG. Experience has shown that the "low stress/low flow" technique typically achieves representative groundwater samples with minimal particulate interference. In addition to the "low stress/low flow" technique, a "typical sample method" has been presented for the collection of constituents less sensitive to particulates presence (i.e., VOCs), or "direct-push sample methods" generally employed as a "pre-screening tool" to evaluate VOC presence. Direct-push sample procedures will result in groundwater samples with particulates present.

Lastly, in "extreme" cases "ultra-low flow" techniques have been employed at select sites where "low stress/low flow" methods were used, yet particulate-sensitive constituents continue to bias the analytical results. Ultra-low flow techniques are conducted at purging rates below 100 mL per minute, and should only be utilized after careful review and a procedural variance has been approved.

PROCEDURES REFERENCED

- FMG 1.4 - Data Recording - Field Books/Digital Recording.
- FMG 5.1 - Water Level Measurements.
- FMG 8.0 - Field Instruments - Use/Calibration
- FMG 9.0 - Equipment Decontamination.

PROCEDURAL GUIDELINES

The following describes three techniques for groundwater sampling: "Low Stress/Low Flow Methods", "Typical Sample Methods", and "Direct-Push Methods".

"Low Stress/Low Flow Methods" will be employed when it is critical to collect groundwater samples truly representative of the groundwater present, and to minimize the impact of sediment/ colloid presence. Analysis typically sensitive to turbidity/sediment issues are PCBs, SVOCs, and inorganic constituents.

The "Typical Sample Methods" will be employed where the collection of parameters less sensitive to turbidity/sediment issues are being collected (VOCs and general chemistry).

The "Direct-Push Methods" are typically employed for pre-screening areas for chemical presence to aid in determining well placement, or the need for further study.

Note: If non-aqueous phase liquids (NAPL) (light or dense) are detected in a monitoring well, groundwater sample collection will not be conducted and the Project Manager must be contacted to determine a course of action.
If deemed necessary to sample groundwater from below a LNAPL layer, a suggested sampling procedure has been presented at the end of this Procedural Guidelines section.

Preparatory Requirements

- Verify well identification and location using borehole log details and location layout figures. Note the condition of the well and inform the Project Manager of any required repair work.
- Prior to opening the well cap, measure the breathing space above the well casing with a PID to establish baseline levels. Repeat this measurement once the well cap is opened. If either of these measurements exceeds the air quality criteria in the Health and Safety Plan, field personnel should adjust their PPE accordingly.
- Prior to commencing the groundwater purging/sampling tasks, water level and total well depth measurements must be obtained to determine the volume of water in the well. Refer to

FMG 5.1 - Water Level Measurements for details. In some settings it maybe necessary to allow time for the water level to equilibrate. This condition exists if a water tight seal exists at the well cap and the water level has fluctuated above the top of screen; creating a vacuum or pressurized area within the well casing. Three water level checks will verify static water level conditions or changing conditions.

- Calculate the water volume in the well. Typically overburden well volumes consider only the quantity of water standing in the well screen and riser; bedrock well volumes are calculated on the quantity of water within the open corehole and within the overburden casing.
- Estimate the natural groundwater flow rate into well to determine the approximate pumping rate for purging/sampling activities.

Well Purging and Stabilization Monitoring (Low Stress/Low Flow Method)

- The GM method of preference for groundwater sampling will be the low stress/low flow method described below.
- Bladder pumps/submersible variable rate pumps (i.e., Grundfos™ Rediflo or equivalent) or peristaltic pumps are typically employed.
- Slowly lower the pump, safety cable, tubing and electrical lines into the well to the depth specified by the project requirements. The pump or tubing should be placed in the well as early as possible before sampling is initiated (this is to minimize well disturbance). In some programs it may be necessary to install the pumping equipment/tubing approximately 24 hours prior to purging. Peristaltic tubing placement should include a tubing "clamp" at the well head, to minimize vibration transfer into the water column. The pump or tubing intake must be at the mid-point of the well screen to prevent disturbance and resuspension of any sediment in the screen base. Bedrock well sampling may require pump/tubing placement in specific fracture zone areas or other areas which will be identified within the project Work Plan.
- Before starting the pump, measure the water level again with the pump in the well leaving the water level measuring device in the well when completed.
- Purge the well at 100 to a maximum of 500 milliliters per minute (mL/min). During purging, the water level should be monitored approximately every 5 minutes, or as appropriate. A steady flow rate should be maintained that results in drawdown of 0.3 feet or less. The rate of pumping should not exceed the natural flow rate conditions of the well being sampled. Care should be taken to maintain pump suction and to avoid entrainment of air in the tubing. Record adjustments made to the pumping rates and water levels immediately after each adjustment.
- Calibrate field instrument and document calibration activity. Calibration shall be performed in accordance with manufacturer's recommendations and FMG 8.0 - Field Instruments - Use/Calibration.

- During the purging of the well, monitor and record the field indicator parameters (pH, temperature, conductivity, oxidation-reduction (redox) reaction potential (ORP), dissolved oxygen (DO), and turbidity) approximately every 5 minutes. Stabilization is considered to be achieved when the final groundwater flow rate is achieved, and three consecutive readings for each parameters are within the following limits:
  - pH ±0.1 pH units of the average value of the three readings;
  - temperature ±3 percent of the average value of the three readings;
  - conductivity ±0.005 milliSiemen per centimeter (mS/cm) of the average value of the three readings for conductivity <1 mS/cm and ±0.01 mS/cm of the average value of the three readings for conductivity >1 mS/cm;
  - ORP ±10 millivolts (mV) of the average value of the three readings;
  - DO ±10 percent of the average value of the three readings; and
  - turbidity ±10 percent of the average value of the three readings, or a final value of less than 5 nephelometric turbidity units (NTU).
- Should stabilization not be achieved for all field parameters, purging is continued until a maximum of 20 well screen volumes have been purged from the well. Since low-flow purging (LFP) likely will not draw groundwater from a significant distance above or below the pump intake, the screen volume is based upon a 5-foot (1.4 m) screen length. After purging 20 well screen volumes, purging is continued if the purge water remains visually turbid and appears to be clearing, or if stabilization parameters are varying slightly outside of the stabilization criteria listed above and appear to be approaching stabilization.
- If low-turbidity samples are critical to the project goals, purging will be extended until turbidity has been reduced to 5 NTU or less.
- The pump must not be removed from the well between purging and sampling.

Well Purging and Stabilization Monitoring (Typical Method)

- Typically peristaltic pumps or bladder pumps or submersible pumps are preferred. In most cases bailer use is not desirable due to the "surging" action of bailer entry and removal. Exception is noted for VOC sampling where bailers are often used.
- The pump intake/tubing is typically placed at the mid-point of the screen within overburden wells. Bedrock well sampling may require pump/tubing placement in specific fracture zone areas or other areas which will be identified within the project Work Plan.
- Purge the well until three consecutive well volume measurements of temperature and specific conductivity are approximately plus or minus 10 percent and if the pH values are within 1 pH unit of the last three value averages, and the groundwater turbidity values are less than the project Work Plan requirements. If stabilization has not occurred within the first five well volumes removed, continue purging and monitoring until eight well volumes have been pumped. Purging rates should not exceed the natural flow rate of groundwater into the well.

Elevated purging rates may result in excessive drawdown of the water column, introducing sediment/particulate presence.

- Groundwater turbidity may be evaluated by a visual examination for sediment/silt presence or use of a nephlometer. Work Plan-specific goals may exist for turbidity values which may require extending the purging, or require an alternate pumping system.
- Purging and stabilization activities using a bailer are generally performed at the top of the water column, within the riser piping/above the well screen. This will minimize sediment disturbance/suspension in the screen area, and move water from the formation into the well screen/riser area in an effort to remove stagnant groundwater within the well. Bottom-loading bailers are generally employed. The lowering and removal actions are performed slowly to minimize well disturbance. Once stabilization has been attained, the sample aliquots are collected directly from the bailer.
- In the event the well goes dry (poor yielding formations), the purging activities will be performed on 3 consecutive days, noting the field stabilization parameters on each day. After the third day of purging is complete, the sample collection will be performed once sufficient groundwater recharge has occurred.

Direct-Push Sampling Technique

Generally, the direct-push sampling methods are employed for "pre-screening" groundwater quality (typically VOCs) in selected areas. This method is generally used to evaluate the need for permanent monitoring wells, or determine the need for further study. The sampling technique is a direct-push protected-screen sampling technique as described in ASTM D6001 (Standard Guide for Direct Push Water Sampling for Geoenvironmental Investigations). The direct-push sampling technique is summarized as follows:

- Advance borehole to the target depth below the groundwater table.
- Remove the drill rod, assemble the direct–push sample tool and attach it to the drill rod.
- Lower the sample device to the bottom of the borehole using the drill rod.
- Advance the sample device approximately 3 feet into the bottom of the borehole by hydraulically pushing the drill rod.
- Withdraw the drill rods approximately 1 to 2 feet to retract the screen sleeve and to expose the sampler screen to the formation.
- Alternatively a number of direct-push tools exist that do not require an advance borehole, and can be driven directly to the target depth and retracted for sample collection.
- Allow at least 15 minutes from exposing the sampler screen to sample collection to allow silt in the sampler to settle. In tight formations, a longer wait time may be required to allow sufficient groundwater to enter the screen. In some clays the sample device may not collect sufficient water volume to obtain a sample.

- Lower a small bailer into the sampler, discard initial bail (to acclimate bailer), and collect a water sample. A few bailer volumes may be required to obtain a sufficient volume of water sample. Alternatively, a "Waterra" check ball affixed to tubing maybe employed to collect a groundwater sample, or a peristaltic pump.
- Remove and clean the sampler device after completion of sample collection. Decontaminate sampler for next sample event.

This sampling technique is prone to sediment presence due to the lack of a screen sandpack and the limited purging performed before sample collection. A project variance will be required if non-VOC constituents are being considered for analysis.

Sampling Techniques

- If an alternate pump is utilized (i.e., typical method), the first pump discharge volumes (or bailer volumes) should be discarded to allow the equipment a period of acclimation to the groundwater.
- Samples are typically collected directly from the pump with the groundwater being discharged directly into the appropriate sample container. Avoid handling the interior of the bottle or bottle cap and don new gloves for each well sampled to avoid contamination of the sample.
- Order of sample collection:
  - VOCs;
  - SVOCs and PCBs;
  - Total organic carbon (TOC);
  - Total organic halogens (TOX);
  - Extractable organics;
  - Total metals;
  - Dissolved metals;
  - Phenols;
  - Cyanide;
  - Sulfate and chloride;
  - Nitrate and ammonia; and
  - Radionuclides.
- For low stress/low flow sampling, samples should be collected at a flow rate between 100 and 250 mL/min and such that drawdown of the water level within the well does not exceed the maximum allowable drawdown of 0.3 feet.
- The pumping rate used to collect a sample for VOCs should not exceed 100 mL/min. Samples should be transferred directly to the final container 40 mL glass vials completely full

and topped with a teflon cap. Once capped the vial must be inverted and tapped to check for headspace/air presence (bubbles). If air is present the sample vial will be discarded, and re-collected until free of air.

- Field filtration will be performed if dictated by the project Work Plan. Sediment presence can interfere or bias sample results; false positive findings have been observed when turbid samples for hexavalent chromium (and other analytes) are analyzed. Field filtration can eliminate this concern; generally applicable to only inorganic/PCB analysis. In-line disposable filter cartridges are generally the easiest and quickest method for field filtration.
- Sample labels/sample identification. All samples must be labeled with:
  - A unique sample number;
  - Date and time;
  - Parameters to be analyzed;
  - Project Reference ID; and
  - Sampler's initials.
- Labels should be secured to the bottle(s) and should be written in indelible inks.

Groundwater Sampling Techniques Below LNAPL Layers

Sampling and analysis of groundwater below a LNAPL layer is typically discouraged, and not performed at REALM/ENCORE sites. The rationale for avoiding groundwater analysis below a LNAPL layer is as follows:

- The potential for sample "contamination" with a trace amount of NAPL is very possible; analytical data will be biased "high" based upon this concern.
- Analytical data generated from this scenario does not represent "dissolved" constituent presence in groundwater. Dissolved constituents are "best" determined in downgradient locations.

In some instances it may be required to perform groundwater sampling and analysis below a LNAPL layer, possibly at the request of a regulatory group. If absolutely necessary, this type of sampling may be accomplished in accordance with the following:

- Determine the LNAPL depth and thickness using an interface probe or clear bottom loading bailer.
- Determine the sampling depth, selecting a sample point as far away as possible from the LNAPL interface.
- Using a "capped" outer tube or piping (i.e., 1-inch diameter polyethylene), insert the outer tube to the selected sample interval. The cap should be a slip-on cap affixed to the outer tube using a short "leash" (i.e., stainless steel wire or equivalent). This allows cap recovery once the sampling is complete.

- Insert the sample line (3/8-inch diameter tubing) into the outer tube and "push out" the end cap for sample line entry into the sampling interval.
- Perform purging and sampling using a peristaltic pump.
- Monitor the groundwater level and/or the NAPL level to ensure the LNAPL layer is not drawn to sampling depth. If LNAPL drawdown occurs evaluate the need to proceed further, and consider terminating sampling activity.
- This sample should not be referred to on any analysis as a groundwater sample. It should always be referred to as a groundwater/NAPL mixture (GW/NAPL designation).

EQUIPMENT/MATERIALS

- pH meter, conductivity meter, nephlometer, ORP meter, DO meter, temperature gauge.
- Field filtration units (if required).
- Purging/sampling equipment:
  - Peristaltic pump (not suitable for VOCs[1]/SVOCs, or drawing water from depths greater than 25 feet[2]);
  - Suction pumps (not suitable for LFP, VOCs/SVOCs, or depths greater than 25 feet);
  - Submersible pumps (suitable for VOCs/SVOCs only at low flow rates);
  - Air lift pumps (not suitable for VOCs/SVOCs);
  - Bladder pumps (suitable for LFR and VOCs/SVOCs);
  - Inertia pumps (gaining acceptability for VOCs/SVOCs, generally not suited for GM programs); and
  - Bailers.
- Water level probe.
- Sampling materials (containers, log book/forms, coolers, chain-of-custody).
- Project Work Plan.
- Health and Safety Plan.

Note[1]: Peristaltic pump use for VOC collection is acceptable on select EPA/RCRA sites; this technique has gained acceptance in select areas. Where it is permissible to collect VOCs using a peristaltic pump, collection must be performed at a low flow rate (Michigan allows VOC sampling with the peristaltic pump).
Acceptability of the collection of VOCs using the peristaltic pump should be evaluated before the sampling program commences, commonly performed during the project Work Plan development and approval process.

Note[2]: Exception is noted in locations that the suction line can be placed at the desired sample depth (i.e., 100 feet), and the natural recharge maintains a water level within 25 feet of the ground surface.

Field Notes

Field notes must document field activities and measurements collected during the sampling activities. FMG 1.4 - Data Recording - Field Books/Digital Recording describes the data/recording procedure for field activities. The log book/field file should document the following for each well sampled:

- Identification of well.
- PID readings before and after well opening (if required).
- Well depth.
- Static water level depth and measurement technique.
- Sounded well depth.
- Presence of immiscible layers and detection/collection method.
- Well yield – high or low.
- Purge volume, pumping rate, and final disposition.
- Time well purged.
- Measured field parameters and meter calibration records.
- Purge/sampling device used.
- Well sampling sequence.
- Sample appearance.
- Sample odors.
- Sample volume.
- Types of sample containers and sample identification.
- Preservative(s) used.
- Parameters requested for analysis.
- Field analysis data and method(s).
- Sample distribution and transporter.
- Analytical laboratory.
- Chain-of-custody number for shipment to laboratory.
- Field observations on sampling event.
- Name(s) of sampling personnel.

- Climatic conditions including air temperature.
- Problems encountered and any deviations made from the established sampling protocol.

A standard log form for documentation and reporting groundwater purging and sampling events are presented on Form FMG 6.4-01 - Well Purging Field Information, Form FMG 6.4-02 - Sample Collection Data Sheet, and Form FMG 6.4-03 - Monitoring Well Record for Low-Flow Purging.

Groundwater/Decontamination Fluid Disposal

The project Work Plan will identify the required disposal procedures for groundwater and decontamination fluids. Groundwater disposal methods will vary on a case-by-case basis but may range from:

- Off-site treatment at private treatment/disposal facilities or public owned treatment facilities.
- On-site treatment at Facility-operated facilities.
- Direct discharge to the surrounding ground surface, allowing groundwater infiltration to the underlying subsurface regime.
- Direct discharge to impervious pavement surfaces, allowing evaporation to occur.

Decontamination fluids should be segregated and collected separately from wash waters/groundwater containers. Often small volumes of solvents used during the day can be allowed to evaporate if left in an open pail. In the event evaporation is not possible or practical, off-site disposal arrangements must be made.

REFERENCES

ASTM D5474 - Guide for Selection of Data Elements for Groundwater Investigations.

ASTM D4696 - Guide for Pore-Liquid Sampling from the Vadose Zone.

ASTM D5979 - Guide for Conceptualization and Characterization of Groundwater Systems.

ASTM D5903 - Guide for Planning and Preparing for a Groundwater Sampling Event.

ASTM D4448 - Standard Guide for Sampling Groundwater Wells.

ASTM D6001 - Standard Guide for Direct Push Water Sampling for Geo-Environmental Investigations.

USEPA Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures (EPA/540/S -95/504).

USEPA RCRA Groundwater Monitoring: Draft Technical Guidance (EPA/530-R-93-001).

WELL PURGING FIELD INFORMATION FORM

JOB# _____ - _____

SITE/PROJECT NAME: _____

WELL# _____

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED Y N (CIRCLE ONE)

SAMPLING EQIPMENT.....DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE [ ] A - SUBMERSIBLE PUMP D - GAS LIFT PUMP G - BAILER
B - PERISTALTIC PUMP E - PURGE PUMP H - WATERRA®
X- _____ PURGING OTHER (SPECIFY)

SAMPLING DEVICE [ ] C - BLADDER PUMP F - DIPPER BOTTLE
X- _____ SAMPLING OTHER (SPECIFY)

PURGING DEVICE [ ] A - TEFLON D - PVC
B - STAINLESS STEEL E - POLYETHYLENE
X- _____ PURGING OTHER (SPECIFY)

SAMPLING DEVICE [ ] C - POLYPROPYLENE
X- _____ SAMPLING OTHER (SPECIFY)

PURGING DEVICE [ ] A - TEFLON D - POLYPROPYLENE F - SILICONE
B - TYGON E - POLYETHYLENE G - COMBINATION TEFLON/POLYPROPYLENE
X- _____ PURGING OTHER (SPECIFY)

SAMPLING DEVICE [ ] C - ROPE X- _____ (SPECIFY)
X- _____ SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 [ ] A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION _____ (m/ft) GROUNDWATER ELEVATION _____ (m/ft)

DEPTH TO WATER _____ (m/ft) WELL DEPTH _____ (m/ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(std)	(ntu)	(µm/cm) AT 25°C	(mV)	(mg/L)	(°C)
(std)	(ntu)	(µm/cm) AT 25°C	(mV)	(mg/L)	(°C)
(std)	(ntu)	(µm/cm) AT 25°C	(mV)	(mg/L)	(°C)
(std)	(ntu)	(µm/cm) AT 25°C	(mV)	(mg/L)	(°C)
(std)	(ntu)	(µm/cm) AT 25°C	(mV)	(mg/L)	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: _____ ODOR: _____ COLOR: _____ TURBIDITY: _____

WEATHER CONDITIONS: WIND SPEED _____ DIRECTION _____ PRECIPITATION Y/N OUTLOOK _____

SPECIFIC COMMENTS _____

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE GM PROTOCOLS

DATE _____ PRINT _____ SIGNATURE _____

FMG MODIFICATIONS MUST BE ACCOMPANIED BY A REVISION REQUEST FORM APPROVED BY THE PROJECT MANAGER

SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME _____ PROJECT NO. _____

SAMPLING CREW MEMBERS _____ SUPERVISOR _____

DATE OF SAMPLE COLLECTION _____

[Note: For 2" dia. well, 1 ft. = 0.14 gal (imp) or 0.16 gal (us)]

Sample I.D. Number	Well No.	Measuring Point Elev. (ft. AMSL)	Bottom Depth (ft. btoc)	Water Depth (ft. btoc)	Water Elevation (ft. AMSL)	Well Volume (gallons)	Bailer Volume No. Bails	Volume Purged (gallons)	Field pH	Field Temp.	Field Cond.	Time	Sample Description & Analysis

Additional Comments: _____

Copies to: _____

APPENDIX G

QUALITY ASSURANCE PROJECT PLAN

QUALITY ASSURANCE PROJECT PLAN

SUPPLEMENTAL GROUNDWATER INVESTIGATION
OU-2 BULK PRODUCT TANK AREAS

Prepared For:

GM ASSEMBLY PLANT
WILMINGTON, DELAWARE

JULY 18, 2006
REF. NO. 17338 (9)
This report is printed on recycled paper.

QUALITY ASSURANCE PROJECT PLAN (QAPP)

FOR THE SUPPLEMENTAL GROUNDWATER INVESTIGATION WORK PLAN
GM ASSEMBLY PLANT
WILMINGTON, DELAWARE
REVISION NUMBER 0
JULY 2006

Prepared By: Conestoga-Rovers & Associates (CRA)

Prepared For: General Motors Corporation (GM)

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STL, Inc. Project Manager

Approved By: _____ Date: _____
Carl Armbruster
STL, Inc. QA Officer

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* - Attachments will be maintained on file at CRA and are available upon request.

1.0 PROJECT DESCRIPTION

The following outlines the scope of the Supplemental Groundwater (Investigation) investigation being performed by General Motors Corporation (GM) to further characterize groundwater impacts at the GM assembly plant located in Wilmington, Delaware (Site). The investigation is being conducted in accordance with the Delaware Department of Natural Resources and Environmental Control (DNREC) Hazardous Substance Cleanup Act (HSCA) Voluntary Cleanup Program. Although the Site is not currently subject to Corrective Action (CA) under the United States Environmental Protection Agency (U.S. EPA) Resource Conservation and Recovery Act (RCRA), investigation and data analysis activities will be performed in accordance with the requirements of RCRA CA to ensure data quality for potential future RCRA CA activities.

This Quality Assurance Project Plan (QAPP) presents the organization, objectives, planned activities, and specific quality assurance / quality control (QA/QC) procedures associated with the OU-2 Area investigation. Protocols for sample collection, sample handling and storage, chain-of-custody procedures, and laboratory and field analyses are described or specifically referenced to related investigation documents.

This QAPP addresses the QA/QC elements in the DNREC Site Investigation and Restoration Branch (SIRB) "Standard Operating Procedures for Chemical Analytical Programs under the Hazardous Substance Cleanup Act" dated October 2004 and other relevant guidance documents. The QA/QC procedures described in this QAPP are consistent with U.S. EPA guidance in general.

1.1 INTRODUCTION

This QAPP has been prepared on behalf of GM. The investigations are being conducted under the DNREC HSCA Voluntary Cleanup Program. The overall QA objective is to develop and implement procedures for sample collection and analyses which will provide data with an acceptable level of accuracy for potential future RCRA CA activities.

1.1.1 PROJECT BACKGROUND AND OBJECTIVES

GM operates an active vehicle assembly plant in Wilmington, Delaware. Operational Units 1 and 2 (OU-1 and OU-2), which are located in the bulk product storage area, were the

subject of a previous environmental assessment conducted by GM beginning in 1998. The results from the investigation were provided to the DNREC, and a review of the data showed minimal exceedances of DNREC Uniform Risk Based Standards (URS). Further investigation activities and subsequent remedial activities were conducted at OU-1 to address exceedances identified. The additional work at OU-1 resulted in no further action, as documented by DNREC's January 15, 2004 letter to GM.

Results of the 1998 groundwater investigation conducted by EnecoTech identified volatile organic compounds (VOCs), semi volatile compounds (SVOCs), and metals at concentrations above the URS.

Subsequent groundwater investigation activities were conducted by GM in June and November 2005. The combined results of the June and November 2005 OU-2 groundwater investigation activities have identified groundwater impacts present within the OU-2 area. The impacts consist primarily of benzene, toluene, ethylbenzene and xylenes (BTEX) and other gasoline related compounds, however, other VOC and SVOC parameters were detected at concentrations exceeding the URS criteria.

Additional investigative activities will be conducted to further delineate and characterize the impacts at the OU-2 area. The overall QA objective is to develop and implement procedures for sample collection and analyses which will provide data with an acceptable level of accuracy and precision.

1.1.2 PROJECT STATUS/PHASE

The project status and investigation approach is presented in the Supplemental Groundwater Investigation Work Plan (Work Plan).

1.1.3 QAPP PREPARATION GUIDELINES

As previously noted, this QAPP has been prepared to present the project specific QA/QC elements in the Delaware Department of Natural Resources and Environmental Control Site Investigation and Restoration Branch "Standard Operating Procedures for Chemical Analytical Programs under the Hazardous Substance Cleanup Act" dated October 2004.

1.2 SITE DESCRIPTION

Three existing tanks (Tanks A, B, and C) are located in the Large AST Area (see Figure 1.2 of the Work Plan) located in the northern portion of OU-2. These tanks were installed prior to September 1955. The size and content of these ASTs are as follows:

- A – 39,000-gallon AST currently empty, formerly containing thinner;
- B – 60,900-gallon AST currently containing (less than 10,000 gallons) diesel fuel oil; and
- C – 40,000-gallon AST currently containing unleaded gasoline.

AST containment areas are located around each of the large ASTs and are constructed of approximately 4-foot earthen berm walls covered with crushed gravel. Product piping from the ASTs runs to a pump house to the east.

In addition, the former large AST, known as AST A2, was identified by GM as a 39,000-gallon AST, which had previously contained thinner. This tank was decommissioned in the early 1980s. The former AST and its associated containment area were located north of the existing 40,000-gallon AST containing unleaded gasoline (Tank C). This area is currently utilized as a paved drive.

There are two AST containment areas and a pump house in the adjacent AST Containment/Truck Unloading Area. The northern AST containment area is constructed with 5-foot concrete walls and a stone-filled base. The southern AST containment area is constructed with 5-foot concrete walls and a concrete base. Each area contains four 12,000-gallon ASTs, which are identified by GM as Tanks H through O. Tanks H through K are located in the northern AST containment area, and Tanks L through O are located in the southern AST containment area. These containment areas were constructed prior to 1955. The contents of the ASTs were identified as:

- H – 12,000 gallon AST currently empty, formerly containing thinner;
- I – 12,000 gallon AST currently empty, formerly containing diesel oil;
- J – 12,000 gallon AST currently empty, formerly containing thinner;
- K – 12,000 gallon AST currently empty, formerly containing glycol;
- L – 12,000 gallon AST currently containing power steering fluid, formerly containing rear axle fluid;

- M – 12,000 gallon AST currently and formerly containing glycol;
- N – 12,000 gallon AST currently empty, formerly containing automatic transmission fluid; and
- O – 12,000 gallon AST currently empty, formerly containing manual transmission fluid.

The truck unloading station is located directly west of the northern and southern AST containment areas and consists of a stone-filled area between two paved driveways, with steel pits housing the unloading piping. Product piping from the truck unloading station runs underground to the pump house, located between the two AST containment areas, and then to the respective ASTs. Additional piping runs from the ASTs to the plant for use.

OU-1, for which no further action is required, is comprised of the soils and perched groundwater of the southern AST containment area (housing Tanks L through O) and the pump house. The remainder of the area described above comprises the OU-2 area, which is the subject of this investigation.

1.3 SITE HISTORY

GM operates an active vehicle assembly plant in Wilmington, Delaware. Operational Units 1 and 2 (OU-1 and OU-2), which are located in the bulk product storage area, were the subject of a previous environmental assessment conducted by GM beginning in 1998. The results from the investigation were provided to the DNREC, and a review of the data showed minimal exceedances of DNREC Uniform Risk Based Standards (URS). Further investigation activities and subsequent remedial activities were conducted at OU-1 to address exceedances identified. The additional work at OU-1 resulted in no further action, as documented by DNREC's January 15, 2004 letter to GM.

Results of the 1998 groundwater investigation conducted by EnecoTech identified VOCs, SVOCs, and metals at concentrations above the URS.

Subsequent groundwater investigation activities were conducted by GM in June and November 2005. The combined results of the June and November 2005 OU-2 groundwater investigation activities have identified groundwater impacts present within the OU-2 area. The impacts consist primarily of BTEX and other gasoline related compounds, however,

other VOC and SVOC parameters were detected at concentrations exceeding the URS criteria.

Additional investigative activities will be conducted to further delineate and characterize the impacts at the OU-2 are. The overall QA objective is to develop and implement procedures for sample collection and analyses which will provide data with an acceptable level of accuracy and precision.

1.4 PROJECT OBJECTIVES AND INTENDED DATA USE

1.4.1 TARGET PARAMETER LIST

The investigative program includes the sampling and analysis of environmental media for the presence of organic and inorganic constituents based on historical operations at the Site. The field and laboratory parameters are summarized below. The laboratory parameters are presented in Table 1.1.

1.4.1.1 FIELD PARAMETERS

Measurement data will be generated during field activities. These activities may include, but are not limited to, the following:

i) pH measurement;
ii) specific conductivity measurement;
iii) temperature measurement;
iv) turbidity measurement;
v) dissolved oxygen measurement;
vi) oxidation-reduction potential (redox)
vii) documenting time and weather conditions; and
viii) observation of sample appearance and other conditions.

The general QA objective for measurement data is to obtain reproducible and comparable measurements to a degree of accuracy consistent with the use of standardized procedures.

1.4.1.2 LABORATORY PARAMETERS

The laboratory parameters include target compound list (TCL) VOCs, TCL SVOCs, TCL pesticides, polychlorinated biphenyls (PCBs), and target analyte list (TAL) metals.

Tables 1.2 and 1.3 present the estimated quantitation limits (EQL) for each compound or analyte. Method detection limit (MDL) studies have been performed by STL, Inc. in accordance with the procedures established in the Federal Register, Volume 49, number 209, October 26, 1984 pp. 198-199, the results of these MDL studies are presented in Appendix D.

1.5 SAMPLING LOCATIONS

The Supplemental Groundwater Investigation Work Plan provides a summary and rationale for the location of soil and groundwater samples within the OU-2 Area. It is possible, however, that depending on the nature of encountered field conditions, sampling locations may change. The person responsible for making such decisions will be the Field Quality Assurance (QA) Officer whose responsibilities are described in Section 2.0 of this QAPP. Any change of the sampling strategy will only be implemented after approval from the GM/ENCORE Project Manager.

1.6 PROJECT SCHEDULE

The schedule of projected milestones is presented in the Supplemental Groundwater Investigation Work Plan.

2.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

The GM/ENCORE Project Manager will have the primary responsibility for the implementation of the Supplemental Groundwater Investigation Work Plan.Severn Trent Laboratories, Inc. (STL), located in Edison, New Jersey will perform the analyses of environmental samples collected at the Site. This section defines the roles and responsibilities of the individuals who will perform the investigation activities.

2.1 MANAGEMENT RESPONSIBILITIES

A description of the project organization and responsibilities of key personnel is presented in detail in the Project Management Plan. Management responsibilities are as follows:

Rick Galloway - Regulatory Agency Project Coordinator

The Regulatory Agency Project Coordinator has the overall responsibility for oversight of all phases of the Investigation.

Kim Tucker-Billingslea – GM Project Manager

The GM Project Manager is responsible for implementing the project, and has the authority to commit the resources necessary to meet project objectives and requirements. The GM Project Manager's primary function is to ensure that technical, financial, and scheduling objectives are achieved successfully. The GM Project Manager will provide the major point of contact and control matters concerning the project and represent the project team at regulatory agency meetings and public hearings. The Project Manager will define project objectives and develop a detailed project schedule. The GM Project Manager will establish project policy and procedures to address the specific needs of the project as a whole, as well as the objectives of each task.

Greg Carli - CRA Project Director

The Project Director will provide final review of significant work products and may participate in technical meetings with the DNREC. The Project Director will ensure that overall technical quality is maintained. He will be actively involved in the direction of the project. The Project Director has overall responsibility for ensuring that the project meets investigation objectives. The Project Director will:

i) Acquire and apply technical and other resources as needed to ensure performance within budget and schedule restraints;
ii) Review work performed on each task to ensure quality, responsiveness, and timeliness;
iii) Be responsible for the preparation and quality of interim and final reports;
iv) Communicate with GM about the progress of the project.

Greg Carli – CRA Project Manager

The Project Manager is responsible for managing the implementation of the Supplemental Groundwater Investigation Work Plan and coordinating the collection of data pertaining to the Investigation. The Project Manager is responsible for technical quality control and project oversight. The Project Manager also provides approval of the QAPP.

Christine Barton - CRA Project Coordinator

The Project Coordinator will assist the Project Director and the Project Manager in day-to-day project management. The Project Coordinator is responsible for coordinating all field activities and the procurement of project subcontractors. Additional responsibilities include:

i) Assisting in monitoring the investigation progress and quality;
ii) Preparing and reviewing reports; and
iii) Providing technical support of project activities.

2.2 QUALITY ASSURANCE RESPONSIBILITIES

The Quality Assurance team will consist of a Quality Assurance Officer and the Project Manager. Quality Assurance responsibilities are described as follows:

Susan Scrocchi – CRA Quality Assurance (QA) Officer

The QA Officer reports directly to the CRA Project Manager and will be responsible for ensuring that all QA/QC procedures are being followed. The QA Officer will be responsible for overseeing the review of all field and laboratory data. Additional responsibilities include :

i) Assuring the application and effectiveness of the QAPP by the analytical laboratory and the project staff;
ii) Conducting internal QA/QC of the investigation activities;
iii) Providing input to the Project Director and the Project Manager as to corrective actions required resulting from the above-mentioned evaluations;
iv) Preparation and review of data validation and audit reports; and
v) Approval of the QAPP.

The QA Officer will be assisted by the data validation staff in the evaluation and validation of field and laboratory generated data. The QA Officer will monitor the performance of the laboratory to ensure that the Data Quality Objectives for the project are met.

Regulatory Agency Quality Assurance Officer

The Regulatory Agency Quality Assurance Officer may review this QAPP. Additional Agency responsibilities for the project may include:

i) Conducting external performance and system audits of the laboratories; and
ii) Reviewing and evaluating field and analytical laboratory procedures.

2.3 LABORATORY RESPONSIBILITIES

STL, Inc will provide laboratory services in support of the Supplemental Groundwater Investigation Work Plan.

Joy Kelly - Laboratory Project Manager

The Laboratory Project Manager will report directly to the CRA QA Officer and will be responsible for ensuring all resources of the laboratory are available on an as-required basis. The Laboratory Project Manager will also be responsible for the approval of the final analytical reports and approval of the laboratory's ability to adhere to the QAPP.

Irene Kohrmann - Laboratory Operations Manager

The Laboratory Operations Manager will report to the Project Manager and will be responsible for coordinating laboratory analysis, supervising in-house chain-of-custody reports, scheduling sample analyses, overseeing data review, and overseeing preparation of analytical reports

Carl Armbruster - Laboratory QA Officer

The Laboratory QA Officer will have sole responsibility for review and validation of the analytical laboratory data generated as part of the investigation. The Laboratory QA Officer will sign all final laboratory data reports provided from the analysis of the project samples and will provide Case Narrative descriptions of any data quality issues encountered during the analyses conducted by the laboratory. The QA Officer will also define appropriate QA procedures, overview QA/QC documentation, and approve this QAPP.

To Be Determined - Laboratory Sample Custodian

The Laboratory Sample Custodian will report to the Laboratory Operations Manager and will be responsible for the following:

i) Receiving and inspecting the incoming sample containers;
ii) Recording the condition of the incoming sample containers;
iii) Signing appropriate documents;
iv) Verifying chain-of-custody and its correctness;
v) Notifying the Project Manager and Operations Manager of sample receipt and inspection;
vi) Assigning a unique identification number and customer number, and entering each into the sample receiving log;
vii) Initiating transfer of samples to lab sections; and
viii) Controlling and monitoring access/storage of samples and extracts.

Laboratory Technical Personnel

The laboratory technical staff will have the primary responsibility in the performance of sample analysis and the execution of the QA procedures developed to determine the data quality. These activities will include the proper preparation and analysis of the project samples in accordance with the contract laboratory's Quality Assurance Manual and associated Standard Operating Procedures.

Data Validation Staff

The data validation staff will be independent of the laboratory and familiar with the analytical procedures performed. The validation will include a review of each validation criterion as prescribed by the guidelines presented in Section 9.2.2 of this document and be presented in a formal written report for submittal to the CRA Project Manager.

2.4 FIELD RESPONSIBILITIES

Christine Barton – CRA Field QA Officer

The Field QA Officer is responsible for the overall operation of the field team and reports directly to the Project Director and Project Manager. The Field QA Officer works with the project Health & Safety Officer to conduct operations in compliance with the project Health & Safety Plan. The Field QA Officer will facilitate communication and coordinate efforts between the Project Director and the field team members. Other responsibilities include:

i) Developing and implementing field-related work plans, ensuring schedule compliance, and adhering to management-developed project requirements;
ii) Coordinating and managing field staff, including sampling and drilling;
iii) Performing field system audits;
iv) Overseeing quality control for technical data provided by the field staff;
v) Preparing, and approving of text and graphics required for field team efforts;
vi) Coordinating and overseeing technical efforts of subcontractors assisting the field team;

vii) Identifying problems in the field, resolving difficulties in consultation with the Project Director, Project QA Officer and CRA Project Manager, implementing and documenting corrective action procedures;

viii) Approving the QAPP; and

ix) Participating in preparation of the final reports.

Field Team Personnel

Field Team Personnel involved in the investigation will be responsible for:

i) Performance of field activities as detailed in the Supplemental Groundwater Investigation Work Plan and in compliance with the DQO outlined in this QAPP; and

ii) Immediately reporting any accidents and/or unsafe conditions to the Site Health & Safety Officer and taking all reasonable precautions to prevent injury.

3.0 QUALITY ASSURANCE OBJECTIVES FOR MEASUREMENT DATA

The Supplemental Groundwater Investigation Work Plan and associated QAPP are designed to produce data of the quality necessary to achieve the project objectives and meet or exceed the minimum standard requirements for field and analytical methods. The overall QA objective for measurement data is to develop and implement procedures for field sampling, chain-of-custody, lab analyses, and reporting that will provide results which are adequate for supporting the Investigation objectives and legally defensible in a court of law. The QAPP program will include:

i) A mechanism for ongoing control of measurements and evaluation of data quality; and

ii) A measure of data quality in terms of precision, accuracy, representativeness, completeness, and comparability.

The following section is a general discussion of the criteria used to measure the field and laboratory analytical data quality. The laboratory reference data and standard operating procedures (SOPs) provided in Attachments 2 and 3, present the performance criteria for laboratory QC objectives.

3.1 PRECISION

3.1.1 DEFINITION

Precision is defined as a quantitative measure of the degree to which two or more measurements are in agreement. Precision will be stated in terms of relative percent difference (RPD). The overall precision of measurement data is a mixture of sampling and analytical factors. Precision will be determined by collecting and analyzing field duplicate samples and by creating and analyzing laboratory duplicates from one or more of the field samples. The analytical results from the field duplicate samples will provide data on sampling precision. The results from the laboratory created duplicate samples will provide data on analytical precision.

3.1.2 FIELD PRECISION SAMPLE OBJECTIVES

Field precision will be assessed through collection and measurement of field duplicates at a rate of 1 duplicate per 20 investigative samples.

3.1.3 LABORATORY PRECISION SAMPLE OBJECTIVES

Laboratory duplicate analyses will be performed through the use of matrix spike/matrix spike duplicates (MS/MSD) for organic parameters and matrix duplicate (MD) analyses for certain inorganic parameters. The analytical data will be presented in summary table format. The precision criteria for laboratory MS/MSD/MD analyses are provided in the laboratory reference data provided in Attachment 3.

3.2 ACCURACY

3.2.1 DEFINITION

Accuracy relates to the bias in a measurement system. Bias is the difference between the observed and the "true" value. Sources of error are the sampling process, field contamination, preservation techniques, sample handling, sample matrix, sample preparation and analytical procedure limitations.

3.2.2 FIELD ACCURACY OBJECTIVES

Sampling bias will be assessed by evaluating the results of field equipment rinsate and trip blanks. Field equipment rinsate and trip blanks will be collected as appropriate for each sampling effort.

Field equipment rinsate blanks will be collected by passing laboratory purified water over and/or through the respective field equipment utilized during each sampling effort. One rinsate blank will be collected every 20 investigative samples. However, at a minimum one equipment rinsate blank sample will be collected per day for each type of field equipment used for the sampling effort. Field rinsate blanks will be analyzed for each target parameter for the respective sampling effort for which environmental media have been collected. (Note: If dedicated or disposable sampling equipment is used, equipment rinsate samples may not be collected as part of that field effort.)

Trip blank samples will be prepared by the laboratory and provided with each cooler that includes VOC analysis containers. Trip blank samples will be analyzed for each VOC for which environmental media have been collected for analysis.

3.2.3 LABORATORY ACCURACY SAMPLE OBJECTIVES

Analytical bias will be assessed through the use of known laboratory control samples and site specific matrix spike sample analyses. Laboratory control samples (LCS) and MS/MSD sample analysis will be performed as prescribed by the analytical method SOPs. LCS analyses will be performed with each analytical batch of project samples to determine the accuracy of the analytical system.

One (1) set of MS/MSD analyses will be performed with each batch of twenty (20) project samples to assess the accuracy of identification and quantification of analytes within the site-specific sample matrices. Additional sample volume will be collected at sample locations selected for MS/MSD analyses so that MDLs and EQLs can be met.

The results of the LCS and MS/MSD analyses will be presented in a summary table reporting format and evaluated versus the acceptance criteria presented in the laboratory analytical reports. Current acceptance criteria are presented in the laboratory reference data provided in Attachment 3.

The accuracy of organic parameter analyses is also monitored through the analysis of system monitoring or surrogate compounds. Surrogate compounds are added to each sample, standard, blank, and QC samples prior to the sample preparation and analysis. Surrogate compound percent recoveries provide information on the effect of the sample matrix on the accuracy of the analyses and are evaluated against the acceptance criteria presented in laboratory analytical reports. Current acceptance criteria are presented in the laboratory reference data provided in Attachment 3.

3.3 REPRESENTATIVENESS

3.3.1 DEFINITION

Representativeness expresses the degree to which sample data accurately and precisely represents a characteristic of a population, a parameter variation at a sampling point, or an environmental condition. Representativeness is a qualitative parameter that is dependent upon the design of the sampling program. The representativeness criterion is satisfied by proper selection of sampling locations and quantity of samples collected.

3.3.2 MEASURES TO ENSURE REPRESENTATIVENESS OF FIELD DATA

Representativeness will be addressed by describing sampling techniques and the rationale used to select sampling locations. Sampling locations may be biased (based on existing data, instrument surveys, observations, etc.) or unbiased (completely random or stratified-random approaches).

For this project, sampling will be biased; that is, sampling associated with the soil and groundwater will be based on the observed presence/absence of site specific contaminants, and/or site knowledge. Specific sampling technique descriptions, which allow consistency, repetitiveness and thus representativeness, are provided as SOPs in the Work Plan.

3.3.3 MEASURES TO ENSURE REPRESENTATIVENESS OF LABORATORY DATA

Representativeness in the laboratory is ensured by using proper analytical procedures, and analyzing field duplicate samples. By definition, field duplicate samples are collected to be representative of a given point in space and time. Thus, sample duplicates provide both precision and representativeness information.

3.4 COMPLETENESS

3.4.1 DEFINITION

Completeness is a measure of the amount of valid (usable) data obtained from a measuring system compared to the amount that was expected to be obtained under normal conditions. The completeness goal for all data uses is that a sufficient amount of valid data be generated so that determinations can be made related to the intended data use with a high degree of confidence.

3.4.2 FIELD COMPLETENESS OBJECTIVES

Completeness is a measure of the amount of valid measurements obtained from all measurements taken in this project. Field completeness objective for this project will be 90 percent.

3.4.3 LABORATORY COMPLETENESS OBJECTIVES

Laboratory data completeness objective is a measure of the amount of valid data obtained from all laboratory measurements. The evaluation of the data completeness will be performed at the conclusion of each sampling and analysis effort. Corrective actions such as revised sample handling procedures will be implemented if problems are noted.

The completeness of the data generated will be determined by comparing the amount of valid data, based on independent validation, with the total data set. The completeness objective will be 90 percent.

3.5 COMPARABILITY

3.5.1 DEFINITION

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another.

3.5.2 MEASURES TO ENSURE COMPARABILITY OF FIELD DATA

Sample data should be comparable with other measurement data for similar samples and sample conditions. This goal is achieved through using standard operating procedures to collect, preserve, store, and analyze representative samples and the reporting of analytical results. The field SOPs for the various activities to be conducted during this investigation provide guidelines to generate reproducible results.

3.5.3 MEASURES TO ENSURE COMPARABILITY OF LABORATORY DATA

Comparability of laboratory data will also be measured with the results from the analysis of Standard Reference Materials (SRM) obtained from either EPA Cooperative Research and Development Agreement (CRADA) suppliers or the National Institute of Standards and Technology (NIST) for instrument initial and continuing calibration verification. The reported analytical data will be presented in standard units of mass of contaminant within a known volume or mass of environmental media.

i) Solid Matrices - micrograms (µg) contaminant per kilogram (kg) for organic analyses, and milligrams (mg) contaminant per kilogram (kg) for inorganic analyses of media (Dry Weight).
ii) Aqueous Matrices – micrograms (µg) contaminant per liter (L) of media for organic analyses, and milligrams (mg) per liter (L) for inorganic analyses .
iii) Non-Aqueous Phase Liquids – (NAPL) – micrograms (µg) contaminant per kilogram (kg) of media.
iv) Gaseous Matrices – micrograms (µg) contaminant per cubic meter (M^3) of media

Additional guidance on analytical data reporting is contained in the laboratory SOPs.

3.6 DECISION RULES

3.6.1 DEFINITION

The decision rule is a statement that prescribes a course of action or non-action to be taken, based on assumptions to test its logical and empirical consequences.

3.6.2 DECISION RULE OBJECTIVE

The rationale for sample locations, sample number, and analytical parameters is provided in the main text of the Investigation Work Plan. The decision rule for the sampling and analysis data collected is also provided in the Supplemental Groundwater Investigation Work Plan, and supplemented as follows:

1. Define statistical parameters characterizing the population (e.g., mean, maximum, and percentile) and incorporate the scale of decision making (e.g. AOI size). Samples will be collected discreetly and biased towards locations with the highest likelihood to encounter maximum contaminant levels to provide an indication of impacted zones.

2. Identify action levels (e.g., Soil Screening Levels; Risk-based Screening Levels; Preliminary Remediation Goals (PRGs)); or a reference-based standard based on a Site Conceptual Model that will be developed as part of the Investigation process.

3. The maximum contaminant concentration or the 95th percent Upper Confidence Limit of the valid data set for each parameter detected within an AOI will be used to conduct a preliminary baseline human health and ecological risk assessment for the determination of appropriate corrective actions.

3.7 LEVEL OF QUALITY CONTROL EFFORT

Equipment rinsate, trip, and method blanks samples, field duplicate samples, laboratory control and MS/MSD samples will be prepared and analyzed to determine the data quality provided by the sampling and analysis activities conducted during the execution of the Investigation program.

Equipment rinsate blanks will be prepared by field personnel and submitted for analysis of target parameters. Equipment rinsate blanks will provide the means to assess the quality of data resulting from the field program. Equipment rinsate blank samples will be analyzed to check for contamination of equipment introduced during sampling at the Site. One equipment rinsate blank will be collected for every 20 investigative samples. However, a minimum of one will be collected each day of sampling activities for each type of non-dedicated or non-disposable equipment.

Trip blanks are used to assess the potential for contamination during sample storage and shipment. The trip blank consists of laboratory purified water that has been purged with an inert gas by the laboratory and provided with the sample containers to be used for the sampling of VOCs. Trip blanks will be preserved and handled in the same manner as the investigation samples. One trip blank will be included along with each shipment cooler containing project samples to be analyzed for VOCs.

Method blank samples will be prepared by the laboratory and analyzed concurrently with all project samples to assess potential contamination introduced during the analytical process.

Field duplicate samples are analyzed to check for sampling and analytical reproducibility. One field duplicate will be collected for every 20 or fewer investigative samples collected per day of sampling activities.

Matrix spikes will provide information to assess the precision and accuracy of the analysis of the target parameters within the environmental media collected at the Site. Matrix spikes will be performed in duplicate for all TCL/TAL parameters. One MS/MSD will be collected for every 20 or fewer investigative samples per sample matrix (i.e. soil, groundwater). Soil MS/MSD samples require a triple sample volume for VOCs only. Aqueous MS/MSD samples require triple the normal sample volume for VOCs analysis and double the volume for the remaining parameters.

4.0 SAMPLING PROCEDURES

Samples of groundwater, and possibly soil, will be obtained during the Investigation program. The sampling procedures for the Investigation will be consistent for the objectives of the project. The Work Plan describes each of the sampling tasks and objectives.

Refer to the Work Plan for the field investigation standard operating procedures.

4.1 SAMPLE CONTAINERS

Sample containers for each sampling task will be provided by the project laboratory. The containers will be cleaned by the manufacturer to meet or exceed the analyte specifications established in the U.S. EPA "Specifications and Guidance for Obtaining Contaminant-Free Sample Containers," April 1992, OSWER Directive #9240.0-0.5A. Certificates of analysis for each lot of sample containers used during Investigation will be maintained by the laboratory and will be available upon request.

The appropriate sample containers, preservation method, maximum holding times, and shipping information for each target parameter and sampling task are provided in Table 4.1.

4.2 SAMPLE LABELING

Each sample will be labeled with a unique sample number that will facilitate tracking and cross-referencing of sample information. Field blank and field duplicate samples also will be numbered with a unique sample number to prevent analytical bias of field QC samples.

Refer to the Work Plan for the sample labeling procedures.

4.3 FIELD QC SAMPLE COLLECTION

4.3.1 EQUIPMENT RINSATE BLANK SAMPLE COLLECTION

Equipment rinsate blank samples will be collected when non-dedicated or non-disposable sampling equipment is used to collect samples. Equipment rinsate blanks consist of

laboratory purified water that has been routed through decontaminated sampling equipment and collected into the appropriate containers. The containers will be filled in order of decreasing analyte volatility (i.e., VOCs first, SVOCs second, which are followed by the containers for the remaining analyses).

4.3.2 FIELD DUPLICATE SAMPLE COLLECTION

4.3.2.1 WATER SAMPLES

Field duplicate samples will be collected concurrently with the investigative sample alternating the filling of each sample container using the procedures identified in the Work Plan.

4.3.2.2 SOIL AND SEDIMENT SAMPLES

Soil and sediment field duplicates will be collected concurrently with the investigative sample using the procedures identified in the Work Plan.

4.3.3 MS/MSD SAMPLE COLLECTION

MS/MSD sample collection for aqueous samples requires triple the sample volume for VOC analysis and double the volume for all remaining parameters. The sampling procedure specified in Section 4.3.2.1 is used to collect aqueous samples. Soil MS/MSD samples require triple volume for VOC analyses. No additional volume is required for remaining soil parameters. Section 4.3.2.2 describes the sampling procedures for soil sample collection.

5.0 CUSTODY PROCEDURES

Custody is one of several factors necessary for the admissibility of environmental data as evidence in a court of law. Custody procedures help to satisfy the two major requirements for admissibility: relevance and authenticity. Sample custody is addressed in three parts: field sample collection, laboratory analysis, and final evidence files. Final evidence files, including all originals of laboratory reports, are maintained under document control in a secure area.

Custody of a sample begins when it is collected by or transferred to an individual and ends when that individual relinquishes or disposes of the sample. A sample or evidence file is under your custody if:

1. The item is in actual possession of a person;

2. The item is in the view of the person after being in actual possession of the person;

3. The item was in actual possession but is stored to prevent tampering; or

4. The item is in a designated and identified secure area.

5.1 FIELD CUSTODY PROCEDURES

Field personnel will be required to keep written records of field activities on applicable preprinted field forms or in a bound field notebook. The logbooks provide the means of recording data collecting activities. These records will be written legibly in ink and will contain pertinent field data and observations. Entry errors or changes will be crossed out with a single line, dated and initialed by the person making the correction. Field forms and notebooks will be periodically reviewed by the Field QA Officer. Each member of the field team will be assigned a logbook. Each logbook title page should include field team member's name, project name, project start date, project end date, and unique logbook number.

The beginning of each entry in the logbook will contain the following information:

i) Date;
ii) Start time;

iii) Weather;
iv) Names of field personnel (including subcontractors);
v) Level of personal protection used at the Site; and
vi) Names of all visitors and the purpose of their visit.

For each measurement and sample collected the following will be recorded:

i) Detailed description of sample point;
ii) Equipment used to collect sample or make measurement and the date equipment was last calibrated;
iii) Time sample was collected;
iv) Sample description;
v) Depth sample was collected;
vi) Volume and number of containers; and
vii) Sampler identification.

5.1.1 FIELD PROCEDURES

The data quality can be affected by sample collection activities. If the integrity of collected samples is questionable, the data, regardless of its analytical quality, will also be questionable.

The following procedure describes the process to maintain the integrity of the samples:

i) Upon collection samples are placed in the proper containers. In general, samples collected for organic analysis will be placed in pre-cleaned glass containers, and samples collected for inorganic analysis will be placed in pre-cleaned plastic (polyethylene) bottles. The sample container, preservation methods, shipping, and packaging requirements are presented in Table 4.1.

ii) Samples will be assigned a unique sample number and will be affixed to a sample label. The information to be placed on the sample label will include the sample ID number, the sample type, the sampler's name, date collected, preservation technique, and analytical parameter and method to be performed. Information on the labels will be completed with a ballpoint pen or indelible marker.

iii) Samples will be properly and appropriately preserved by field personnel in order to minimize loss of the constituent(s) of interest due to physical, chemical or biological mechanisms. Sample aliquots that require preservation (pH adjustment) will be checked with pH paper at the time of preservation. Confirmation of preservation will include capping of the preserved sample, inverting the sample three times, uncapping and confirming the sample pH. If required, additional preservative will be added and the procedure repeated until proper preservation is achieved. Samples for VOC analysis will be collected in pre-preserved containers and will not undergo this procedure.

iv) Appropriate volumes will be collected to ensure that the EQLs can be successfully achieved and that the required QC Sample Analyses can be completed.

5.1.2 TRANSFER OF CUSTODY AND SHIPMENT PROCEDURES

i) A chain-of-custody (COC) record will be completed during sample collection and will accompany each shipment identifying the contents of the shipment. The COC record will accompany the samples to the laboratory. The field personnel collecting the samples will be responsible for the custody of the samples until the samples are relinquished to the laboratory. Sample transfer will require the individuals relinquishing and receiving the samples to sign, date and note the time of sample transfer on the COC record. As few people as possible should handle the samples.

ii) Samples will be shipped or delivered in a timely fashion to the laboratory so that holding-times and/or analysis times as prescribed by the methodology can be met.

iii) Samples will also be transported in containers (coolers) packed with ice to maintain the temperatures prescribed in Table 4.1. Samples will be packaged for shipment and shipped to the appropriate laboratory for analysis with a separate signed chain-of-custody record enclosed in each sample cooler. Water VOC samples will be placed in bubble wrap bags that contain three containers per bag while soil VOC samples will be placed in sealed sample pouches. The remaining samples in glass containers will be wrapped in bubble wrap and placed in the sample cooler. Samples in polyethylene containers will be placed upright directly in the sample cooler. All samples will be placed in an upright position and limited to one layer of samples per each cooler. Additional bubble wrap or packaging material will be

added to fill the cooler. Shipping containers will be secured with strapping tape and custody tape for shipment to the laboratory.

iv) When samples are split with the U.S. EPA and Site representatives, a separate chain-of-custody will be prepared for the samples and marked to indicate to whom the samples are being split. The person relinquishing the samples to the U.S. EPA or the Site will require the representative's signature acknowledging sample receipt.

v) If samples are sent by a commercial carrier, a bill of lading will be used. A copy of the bill of lading will be retained as part of permanent documentation. Commercial carriers are not required to sign the custody record as long as the custody record is sealed inside the sample cooler and the custody tape remains intact.

vi) Samples will be picked up by a laboratory courier or transported overnight by a courier to the laboratory the same day they are collected unless collected on a weekend or holiday. In these cases, the samples will be stored in a secure location until delivery to the lab. Additional ice will be added to the cooler as needed to maintain proper preservation temperatures.

5.2 LABORATORY CHAIN-OF-CUSTODY PROCEDURES

A full-time sample custodian will be assigned the responsibility of sample control. It will be the responsibility of the sample custodian to receive all incoming samples. Once received, the custodian will document that the custody tape on the coolers is unbroken, that each sample is received in good condition (i.e., unbroken, cooled, etc.), that the associated paperwork, such as chain-of-custody forms have been completed and will sign the chain-of-custody forms. In special cases, the custodian will document from appropriate sub-samples that chain-of-custody with proper preservation has been accomplished. The custodian will also document that sufficient sample volume has been received to complete the analytical program. The sample custodian will then place the samples into secure, limited access storage (refrigerated storage, if required). The sample custodian will assign a unique number to each incoming sample for use in the laboratory. The unique number will then be entered into the sample-receiving log. The laboratory date of receipt will also be noted.

Consistent with the analyses requested on the chain-of-custody form, analyses by the laboratory's analysts will begin in accordance with the appropriate methodologies.

Samples will be removed from secure storage only after internal chain-of-custody, sign-out procedures have been followed.

5.3 STORAGE OF SAMPLES

Sample containers with volume remaining will be returned to secure and limited access storage. Upon completion of all laboratory analyses for each sample submittal and generation of the laboratory report, samples will be stored by the sample custodian. The length of time that samples are held will be at least thirty (30) days after reports have been submitted. Disposal of remaining samples will be completed in compliance with all federal, state, and local requirements.

Laboratory custody procedures and document control for those samples analyzed by the project laboratory will be carried out using the laboratory's SOPs.

5.4 FINAL PROJECT FILES CUSTODY PROCEDURES

The final project file will be the central repository for all documents with information relevant to sampling and analysis activities as described in this QAPP. The Project Manager will be the custodian of the project file. The project files for the Investigation, including all relevant records, reports, logs, field notebooks, pictures, subcontractor reports, and data reviews will be maintained in a secured, limited access area and under custody of the CRA Project Director or his designee.

The final project file will include:

i) Project plans and drawings;
ii) Field data records;
iii) Sample identification documents and soil boring/monitoring well logs;
iv) All chain-of-custody documentation;
v) Correspondence;
vi) References, literature;
vii) Laboratory data deliverables;
viii) Data validation and assessment reports;
ix) Progress reports, QA reports; and
x) Final report.

The laboratory will be responsible for maintaining analytical logbooks, laboratory data, and sample chain of custody documents. Raw laboratory data files and copies of hard copy reports will be inventoried and maintained by the laboratory for a period of six (6) years at which time the laboratory will contact CRA regarding the disposition of the project related files.

6.0 CALIBRATION PROCEDURES AND FREQUENCY

This section describes procedures for maintaining the accuracy for all the instruments and measurement equipment, which will be used for conducting field tests and laboratory analyses. These instruments and equipment will be calibrated prior to each use or according to a periodic schedule.

6.1 FIELD INSTRUMENT CALIBRATION PROCEDURES

Instruments and equipment used to gather, generate, or measure environmental data will be calibrated as specified in the field SOPs.

The field instruments are likely to include dissolved oxygen meters, pH meters, turbidity meters, specific conductance meters and PIDs. Field instruments will be used for real-time sample measurement during monitoring well sampling and organics screening for both on-site screening of soil samples and for health and safety air monitoring, as described in the HASP. On-site air monitoring for health and safety purposes and the screening of soil samples may be accomplished using PIDs.

Field instruments will be calibrated prior to use and the calibration will be verified after a maximum of 10 measurements. Specific information concerning calibration frequency, acceptance criteria, and the conditions that require more frequent calibration is contained in the field SOPs in Attachment 1.

Satisfactory completion of the pre-operation inspection will be noted on the Field Sampling Record, along with the results of each field measurement.

6.2 LABORATORY INSTRUMENT CALIBRATION PROCEDURES

Calibration procedures for a specific laboratory instrument will consist of initial calibration, initial calibration verification and continuing calibration verification. The SOPs in Attachment 2 present the specific calibration procedures for each method of analysis. The SOP for each analysis performed in the laboratory describes the calibration procedures, their frequency, acceptance criteria and the conditions that will require calibration. In all cases, the initial calibration will be verified using an independently prepared calibration verification solution.

The use of materials of known purity and quality will be utilized for the analysis of environmental samples. The laboratory will carefully monitor the use of all laboratory materials including solutions, standards and reagents through well-documented procedures.

All solid chemicals and acids/bases used by the laboratory will be reagent grade or better. All gases will be high purity or better. All Standard Reference Materials (SRMs) or Performance Evaluation (PE) Materials will be obtained from approved vendors of the National Institute of Standards and Technology (formerly National Bureau of Standards), the U.S. EPA Environmental Monitoring Support Laboratories (EMSL), or reliable Cooperative Research and Development Agreement (CRADA) certified commercial sources.

All materials including standards or standard solutions will be dated upon receipt, and will be identified by material name, lot number, purity or concentration, supplier, receipt/preparation date, recipient/preparer's name, expiration date and all other pertinent information.

7.0 ANALYTICAL PROCEDURES

Analytical procedures to be utilized for off-Site analysis of environmental samples will be based on referenced U.S. EPA analytical protocols and the laboratory SOPs that implement these methods. These project specific SOPs are provided in Attachment 2 to this QAPP.

7.1 FIELD ANALYTICAL PROCEDURES

Field analytical procedures include the measurement of pH/temperature, specific conductivity, dissolved oxygen, turbidity and ORP during sampling of groundwater, and the qualitative measurement of VOC during the collection of soil samples at the Site. Specific guidance in the measurement of these parameters is presented in the SOPs provided in Attachment 1 of this QAPP.

7.2 LABORATORY ANALYTICAL PROCEDURES

Laboratory preparation and analytical SOPs and the methods upon which they are based are presented in Table 1.1. The referenced SOPs provided in Attachment 2 of this document are based on the U.S. EPA methodology requirements promulgated in the reference document "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846 EPA, U.S. EPA Office of Solid Waste, 3rd Edition and promulgated updates, 1986.

The EQLs for the target analytes and compounds for the environmental media to be analyzed as part of the investigation are presented in Tables 1.2 and 1.3.

7.2.1 LIST OF PROJECT TARGET COMPOUNDS AND LABORATORY DETECTION LIMITS

A complete listing of project target compounds and project EQLs for each analyte group are listed in Tables 1.2 and 1.3. MDLs have been experimentally determined by the project laboratory using the procedure identified in 40 CFR, Part 136 Appendix B. The laboratory's MDLs are provided in Attachment 3.

7.2.2 LIST OF METHOD SPECIFIC QUALITY CONTROL (QC) CRITERIA

The laboratory SOPs include a section that presents the minimum QC requirements for the project analyses. Section 8.0 references the frequency of the associated QC samples for each sampling effort and matrix.

8.0 INTERNAL QUALITY CONTROL CHECKS

This section presents the internal quality control checks that will be employed for field and laboratory measurements.

8.1 FIELD QUALITY CONTROL

QC procedures for pH/temperature, turbidity and conductivity of water samples and PID screening soil samples will include calibrating the instruments as described in Section 6.1 of this QAPP, measuring duplicate samples and checking the reproducibility of the measurements by taking multiple readings on a single sample or the measurement reference standards. The QC information for field equipment is stated in Section 3.0 of this QAPP. Assessment of field sampling precision and bias will be made by collecting field duplicates and equipment rinsate blanks for laboratory analysis. Collection of the samples will be in accordance with the applicable procedures in Section 4.3 of this QAPP.

8.1.1 EQUIPMENT RINSATE BLANKS

Internal quality control checks will include analysis of equipment rinsate blanks to validate successful equipment cleaning activities. Whenever possible, dedicated equipment will be employed to reduce the possibility of cross-contamination of samples.

The frequency of equipment rinsate blank sample preparation will be one for every 20 investigative samples. However, at a minimum, one will be collected each day for each type of sampling equipment on which decontamination procedures have been performed.

8.1.2 TRIP BLANKS

Trip blanks samples will be prepared by the project laboratory using laboratory purified water placed within pre-cleaned 40 milliliter (ml) VOC vials equipped with Teflon septa. Trip blanks will accompany each sample delivery group (SDG) of environmental samples collected for analysis of VOCs.

Trip blank samples will be placed in each cooler which stores and transports project samples to be analyzed for VOCs along with the project samples.

8.1.3 FIELD DUPLICATE SAMPLES

Field duplicate samples are collected in a similar fashion to investigative samples at a minimum frequency of one duplicate per at least one in every 10 or fewer investigative samples by matrix at a minimum, one per sampling event. Field duplicate samples are analyzed by the laboratory to evaluate matrix, sample and analytical reproducibility.

8.2 LABORATORY PROCEDURES

The laboratories identified in Section 7.0 of this QAPP have QC programs to ensure the reliability and validity of the analysis performed at the laboratory. All analytical procedures are documented in writing as SOPs and each SOP includes a QC section, which addresses the minimum QC requirements for the procedure. The internal quality control checks may vary slightly for each individual procedure but in general will include the following QC requirements:

i) Calibration Standards;
ii) Instrument Performance Checks – Organics;
iii) Initial and Continuing Calibration Checks;
iv) Internal Standard Performance;
v) Method Blank Samples;
vi) Laboratory Control Samples and QC Check Samples;
vii) Matrix Spike/Matrix Spike Duplicates;
viii) Surrogates;
ix) ICP Interference Check Samples (ICS);
x) ICP Serial Dilution;
xi) ICP and ICP/MS QC Analyses;
xii) Reagent Checks; and
xiii) Blind Check Samples.

All data will be properly recorded. The data package will include a summary of QC data as presented in Section 9.3.2. Any samples analyzed in nonconformance with QC criteria will be re-analyzed by the laboratory, if sufficient volume is available.

9.0 DATA REDUCTION, VALIDATION AND REPORTING

All data generated through in field activities or by the laboratory operation shall be reduced and validated prior to reporting in accordance with the following procedures:

9.1 DATA REDUCTION

9.1.1 FIELD DATA REDUCTION PROCEDURES

Field data reduction procedures will be minimal in scope compared to those implemented in the laboratory setting. Only direct read instrumentation will be employed in the field. The pH, conductivity, temperature, turbidity and HNU readings collected in the field will be generated from direct read instruments following calibration per manufacturer's recommendations. Such data will be written into field logbooks immediately after measurements are taken. If errors are made, results will be legibly crossed out, initialed and dated by the field member, and corrected in a space adjacent to the original entry. Later, when the results forms required for this study are being filled out, the Project Coordinator will proof the forms to determine whether any transcription errors have been made by the field crew.

9.1.2 LABORATORY DATA REDUCTION PROCEDURES

For this project, the equations that will be employed in reducing data are found in the appropriate chapter of SW-846, Third Edition. Two of these equations, expressing analytical accuracy and precision, are presented in Section 3 of this QAPP. Such formulae make pertinent allowances for matrix type. All calculations are checked at the conclusion of each operating day. Errors are noted; corrections are made, but the original notations are crossed out legibly. Analytical results for soil samples shall be calculated and reported on a dry weight basis.

Quality control data (e.g., laboratory duplicates, surrogates, matrix spikes, and matrix spike duplicates) will be compared to the method acceptance criteria. Data considered to be acceptable will be entered into the laboratory computer system. Data summaries will be sent to the Laboratory QA Officer for review. If approved, data are logged into the project database format. Unacceptable data shall be appropriately qualified in the project report. Case narratives will be prepared which will include information concerning data that fell

outside acceptance limits and any other anomalous conditions encountered during sample analysis.

9.2 DATA VALIDATION

Data validation procedures shall be performed for both field and laboratory operations as described below:

9.2.1 PROCEDURES USED TO EVALUATE FIELD DATA

Procedures to evaluate field data for this project will include review of field logbooks and checking for transcription errors to project specific documents. This task will be the responsibility of the Field QA Officer.

9.2.2 PROCEDURES TO VALIDATE LABORATORY DATA

The CRA QA Officer or designee will perform analytical data validation using the following documents as guidance for the review process.

"U.S. EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," EPA-540/R-99/008, October 1999 and the "U.S. EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review," EPA-540/R-94-013, February 1994.

The specific data qualifiers used will be as presented and defined in the CLP National Functional Guidelines. Data review and validation will consist of two tiers of assessment that incorporates an approach similar to "Innovative Approaches to Data Validation," U.S. EPA Region III, June 1995.

Tier I data validation will be performed on 100% of the laboratory quality control summary data deliverables and will consist of the following components:

Organic Analysis

i) technical holding times;

ii) GC/MS instrument performance check;

iii) initial and continuing calibration;
iv) internal standard performance
v) method, trip and field blanks;
vi) system monitoring compounds (surrogate spikes);
vii) MS/MSD results;
viii) laboratory control samples; and
ix) field duplicate samples.

Inorganic Analysis
i) technical holding times;
ii) initial calibration;
iii) initial and continuing calibration verification;
iv) blanks;
v) ICP interference check samples;
vi) ICP serial dilutions;
vii) laboratory control samples;
viii) MS/MSD and matrix duplicate results; and
ix) field duplicate.

Tier II validation will be completed on 10 percent of the expanded deliverables during the initial investigation activities. The Tier II validation will include the evaluation of all raw data and mass spectra to validate the above components as well as verify sample results.

The Data Validator will evaluate the completeness of each data package. Completeness checks will be administered on all data to determine whether deliverables specified in the QAPP are present. At a minimum, deliverables will include sample chain-of-custody forms, analytical results, QC summaries and supporting raw data from instrument printouts. The review will determine whether all required items are present and request copies of missing deliverables.

9.3 DATA REPORTING

Data reporting procedures shall be carried out for field and laboratory operations as indicated below:

9.3.1 FIELD DATA REPORTING

Field data reporting shall be conducted principally through the transmission of report sheets containing tabulated results of all measurements made in the field and documentation of all field calibration activities.

9.3.2 LABORATORY DATA REPORTING

The laboratory data reporting package will be sufficient to perform a data validation in accordance with protocols described in Section 9.2.2. The task of reporting laboratory data by GM will be initiated after the completion of data validation.

The laboratory Project Manager will perform a final review of the QC data summary packages and case narratives to determine whether the report meets the project requirements. In addition to the record of the chain-of-custody, the final laboratory data report format shall consist of the following.

i) Title Page:
- project name and number;
- laboratory project or lot number;
- signature of the Laboratory QA Officer or his designee; and
- date issued.

ii) Table of Contents - laboratory report contents.

iii) Case Narrative:
- number of samples and respective matrices;
- laboratory analysis performed;
- any deviations from intended analytical strategy;
- definition of data qualifiers used;
- QC procedures utilized and references to the acceptance criteria;
- condition of samples "as received;"
- discussion of whether or not sample holding times were met;
- discussion of technical problems or other observations which may have created analytical difficulties; and
- discussion of laboratory QC checks which failed to meet project criteria.

iv) Analytical Methods Summary - methods of sample preparation and analyses for samples.

v) Analytical Sample Summary - cross-reference table of laboratory sample to project sample identification numbers.

vi) Shipping and Receiving Documents
- sample container documentation; and
- sample reception information and original chain of custody record.

vii) Chemistry Data Package by Analysis:
- Sample Results;
  - sample quantitation (report) limits (RL), reporting MDL and estimated values between the RL and MDL,
  - methods of sample preparation and analyses for samples,
  - raw data for sample results (dated chromatograms, parameter specific quantitation reports, mass spectra and instrument printouts.

- QC Summary Data with Current Control Limits:
  - matrix spike and matrix spike duplicate recoveries, laboratory control samples, method blank results, surrogate recoveries, GC/MS tuning results, and internal standards (organics),
  - matrix spike recoveries and matrix duplicate relative percent differences, laboratory control sample, serial dilutions, method blank results, and reagent blank results and interference check standards (inorganics).

- Standard Data:
  - initial calibration data, initial calibration checks, continuing calibration verification/check standards,
  - initial and continuing calibration blanks,
  - raw data for calibration data (dated chromatograms, parameter specific quantitation reports, mass spectra and instrument printouts.

- Raw QC Data - dated chromatograms, parameter specific quantitation reports, mass spectra and instrument printouts of QC samples.

- Miscellaneous Data:
  - instrument run logs,
  - sample preparation records,

- instrument conditions.

The project laboratory will provide electronic data deliverables (EDDs) in an EQuIS® 4-file format. The laboratory data will be downloaded into the EDDs directly from the laboratory information management system (LIMS). The EDDs are imported into EQuIS and the data are maintained in the database for manipulation and presentation in accordance with the project Data Management Plan (DMP).

The Encore LLC QA Officer will verify the correctness of the analytical database by comparing the data from the database to the hardcopy analytical reports for a minimum of 10 percent of the sample results. If discrepancies between the database and hardcopy analytical reports are detected, a complete verification of the database will be performed.

10.0 PERFORMANCE AND SYSTEM AUDITS

A performance audit is an independently obtained quantitative comparison with data routinely obtained in the field or the laboratory. Performance audits include two separate, independent parts: internal and external audits.

10.1 FIELD PERFORMANCE AND SYSTEM AUDITS

10.1.1 INTERNAL FIELD AUDIT RESPONSIBILITIES

Internal audits of field activities include the review of sampling and field measurements conducted by the Field QA Officer. The audits will verify that all procedures are being followed. Internal field audits will be conducted once during each phase of the sampling and at the conclusion of the project. The audits will include examination of the following:

i) Field sampling records, screening results, instrument operating records;
ii) Sample collection;
iii) Handling and packaging in compliance with procedures;
iv) Maintenance of QA procedures; and
v) Chain-of-custody reports.

Follow up audits will be conducted to correct deficiencies and to verify that procedures are maintained throughout the investigation. The field audit checklist is included in Appendix 4.

10.1.2 EXTERNAL FIELD AUDIT RESPONSIBILITIES

External audits may be conducted by the U.S. EPA Project Coordinator at any time during the field operations. These audits may or may not be announced and are at the discretion of the regulatory agency. The external field audits can include, but are not limited to, the following:

i) Sampling equipment decontamination procedures;
ii) Sample bottle preparation procedures;
iii) Sampling procedures;
iv) Examination of health and safety plans;

v) Procedures for verification of field duplicates; and
vi) Field screening practices.

10.2 LABORATORY PERFORMANCE AND SYSTEM AUDITS

10.2.1 INTERNAL LABORATORY AUDIT RESPONSIBILITIES

The laboratory system audits will be conducted by the Project QA Officer or designee and performed on an annual basis. Laboratory performance audits will be conducted prior to field activities or on an annual basis, depending on the duration of the project.

The system audit will include an examination of laboratory documentation including: sample receiving logs, sample storage, chain-of-custody procedures, sample preparation and analysis, and instrument operating records.

The performance audits will include submittal of blind performance evaluation samples along with project samples. The Project QA Officer will evaluate the analytical results to ensure the lab is maintaining acceptable QC performance. The laboratory audit checklist is provided in Attachment 5.

System audits, as opposed to performance audits, are strictly qualitative and consist of an on-site review of a laboratory's quality assurance system and physical facilities for calibration and measurement.

At the conclusion of internal or external system audits, reports are provided to the laboratory's operating divisions for appropriate comment and remedial/corrective action where necessary. Written response to internal as well as external audits will be required. Records of audits and corrective actions are maintained by the Laboratory QA Officer.

10.2.2 EXTERNAL LABORATORY AUDIT RESPONSIBILITIES

External audits will be conducted, as required, by appropriate QA personnel of the regulatory agency and may be conducted at least once prior to sampling and analysis activities.

External audits may include any of the following:

i) Review of laboratory analytical procedures;
ii) Laboratory on-site visits; and
iii) Submission of performance evaluation samples for analysis.

Failure of any of the above audit procedures can lead to laboratory disqualification, and another suitable laboratory will have to be chosen. An on-site review can consist of:

i) Sample receipt procedures;
ii) Custody, sample security, and log-in procedures;
iii) Review of instrument calibration logs;
iv) Review of QA procedures;
v) Review of log books;
vi) Review of analytical SOPs; and
vii) Personnel interviews.

A review of a data package from samples recently analyzed by the laboratory can include (but not be limited to) the following:

i) Comparison of resulting data to the SOP or method;
ii) Verification of initial and continuing calibrations within control limits;
iii) Verification of surrogate recoveries and instrument timing results;
iv) Review of extended quantitation reports for comparisons of library spectra to instrument spectra, where applicable; and
v) Assurance that samples are run within holding times.

11.0 PREVENTATIVE MAINTENANCE

11.1 FIELD INSTRUMENT PREVENTATIVE MAINTENANCE

The field equipment preventative maintenance program ensures the effective completion of the sampling effort and is designed to minimize equipment down time. Program implementation is concentrated in three areas:

- Maintenance responsibilities.
- Maintenance schedules.
- Inventory of critical spare parts and equipment.

The maintenance responsibilities for field equipment will be assigned to the task leaders in charge of specific field operations. Field personnel will be responsible for daily field checks and calibrations and for reporting any problems with the equipment. The maintenance schedule will follow the manufacturer's recommendations. In addition, the field personnel will be responsible for determining that critical spare parts are included with the field equipment. An adequate inventory of spare parts will be maintained. The inventory will primarily contain parts that are subject to frequent failure, have limited useful lifetimes, and/or cannot be obtained in a timely manner.

11.2 LABORATORY INSTRUMENT PREVENTATIVE MAINTENANCE

Analytical instruments at the laboratory will undergo routine and/or preventative maintenance. The extent of the preventative maintenance will be a function of the complexity of the equipment.

Generally, annual preventative maintenance service will involve cleaning, adjusting, inspecting and testing procedures designed to deduce instrument failure and/or extend useful instrument life. Between visits, routine operator maintenance and cleaning will be performed according to manufacturer's specifications by laboratory personnel.

Maintenance records will be placed on file at the laboratory and can be made available upon request.

12.0 SPECIFIC ROUTINE PROCEDURES USED TO ASSESS DATA PRECISION, ACCURACY, AND COMPLETENESS

The following sections include the procedures and formulae utilized to assess the levels of precision, accuracy and completeness achieved during the associated sample analyses.

12.1 FIELD MEASUREMENTS

Field generated information such as pH and specific conductance data will be reviewed for validity. The review will be performed by the Field QA Officer and typically include bound logbooks/forms, data entry and calculation checks. Field data will be assessed by the Project Field QA Officer who will review the field results for compliance with the established QC criteria that are specified in Section 3.0 of this QAPP. The accuracy of pH and specific conductance will be assessed using daily instrument calibration, calibration check, and blank data. Accuracy will be measured by determining the percent recovery of calibration check standards as defined in Section 12.2.2. Precision of the pH and specific conductance measurements will be assessed on the basis of the reproducibility of duplicate readings of a single sample and will be measured by determining the relative percent difference of the readings as defined in Section 12.2.1. Accuracy and precision of the soil VOC screening will be determined using duplicate readings of calibration checks. Field data completeness will be calculated using the following equation:

$$Completeness = \frac{Valid\ (usable)\ Data\ Obtained}{Total\ Data\ Planned} \quad X \quad 100$$

12.2 LABORATORY DATA

Laboratory results will be assessed for compliance with required precision, accuracy and completeness detailed in the following subsections:

12.2.1 PRECISION

The precision of laboratory analysis will be assessed by comparing the analytical results between MS/MSD analyses. The relative percent difference (RPD) will be calculated for each pair of duplicate analyses (laboratory MS/MSDs and field duplicates).

12.2.2 ACCURACY

The accuracy of laboratory results will be assessed for compliance with the established QC criteria that are described in Sections 3.0 and 8.0 of the QAPP using the analytical results of method blanks, reagent/preparation blank, SRMs or QC check samples and MS/MSD samples. The percent recovery (%R) of matrix spike samples and SRMs will be calculated.

12.2.3 COMPLETENESS

Completeness will be assessed by comparing the number of valid (usable) results (as determined by the QA Officer) to the total possible number of results using the formula presented in Section 12.1.

12.3 STATISTICAL EVALUATIONS

In the examination of data and determination of their precision and accuracy, standard statistical formulae will be used. Further details are provided in the following subsections

12.3.1 PERCENT RECOVERY

The percent recovery of a parameter is calculated by dividing the amount recovered by the true amount added and multiplying by 100. The percent recoveries of spiked samples are evaluated to establish the analytical accuracy of a measurement. Percent recovery is calculated using the following formula:

$$\%R = \frac{SSR - SR}{SA} \times 100$$

where:

SSR = Spiked Sample Result
SR = Sample Result or Background
SA = Spike Added

12.3.2 RELATIVE PERCENT DIFFERENCE

The RPD is calculated by dividing the absolute value of the difference between two numbers by their arithmetic mean and multiplying by 100. The RPD is used to evaluate the analytical precision of two replicate measurements (e.g., matrix spike/matrix spike duplicate). RPD is calculated using the following formula:

$$RPD = \frac{(R_1 - R_2)}{R_1 + R_2} \times 100$$

where:

R_1 = value of first result
R_2 = value of second result

13.0 CORRECTIVE ACTION

13.1 FIELD CORRECTIVE ACTION

Corrective action is intended to address problems that arise by identification, recommendation, approval, and implementation of measures that counter unacceptable procedures or deficient quality control performance. The Field QA Officer and CRA QA Officer will be responsible for ensuring the quality of the sampling procedures and environmental data and as such, will be responsible for initiating corrective action when appropriate.

The corrective action procedures will be as follows:

i) Identify/define the problem;
ii) Assign responsibility for investigating the problem;
iii) Investigate/determine the cause of the problem;
iv) Determine an appropriate corrective action to eliminate the problem;
v) Implement the corrective action;
vi) Evaluate the effectiveness of the corrective action;
vii) Verify that the corrective action has eliminated the problem;
viii) Prepare a written record detailing the problem, corrective action utilized, and solution of the problem; and
ix) Submit the Corrective Action Record (CAR) to the Task Coordinator who initiated the corrective action and the Project QA Officer, and Project Manager.

The above procedures may be implemented through the use of the Systems Audit as described previously. Any Field Team member of the project may initiate corrective action procedures by reporting in writing the nature of the suspected problem to the CRA Project Manager or CRA QA Officer. The CRA Project Manager will begin corrective action by relating the problem to appropriate personnel.

13.2 LABORATORY CORRECTIVE ACTION

The following paragraphs define the corrective action decision process relative to possible non-compliant events encountered during laboratory analysis of the project samples. Corrective actions will be initiated by the laboratory QA personnel and will be implemented by laboratory staff chemists under the oversight of the laboratory QA personnel. As with

field corrective actions, the laboratory QA personnel will document the problem, the corrective action undertaken and the resolution of the problem. The corrective actions will be performed prior to release of the data from the laboratory.

Documentation will be provided to the laboratory QA Officer, CRA QA Officer, CRA Project Manager and GM Project Manager.

13.3 CORRECTIVE ACTION DURING DATA VALIDATION AND DATA ASSESSMENT

The CRA QA Officer may identify the need for corrective action during either the data validation or data assessment processes. Potential types of corrective action may include re-sampling by the field team or re-injection/reanalysis of samples by the laboratory (if possible).

These actions are dependent upon the ability to mobilize the field team, whether the data to be collected is necessary to meet the required quality assurance objectives (e.g., the holding time for samples is not exceeded). When the CRA QA Officer identifies a corrective action situation, GM Project Manager will be responsible for approving the implementation of corrective action, including re-sampling, during data assessment. All corrective actions will be documented by the CRA Project Manager.

14.0 QUALITY ASSURANCE (QA) REPORTS

Critically important to the successful implementation of the QA Plan is a reporting system that provides the means by which the program can be reviewed, problems identified and programmatic changes made to improve the plan.

QA reports to management include:

- Audit reports, internal and external audits with responses;
- Performance evaluation sample results; internal and external sources; and
- Daily QA/QC exception reports/corrective actions.

QA/QC corrective action reports will be prepared by the CRA QA Officer when appropriate and presented to the project and/or laboratory management personnel so that performance criteria can be monitored for all analyses from each analytical department. The updated trend/QA charts prepared by the laboratory QA personnel will be distributed and reviewed by various levels of the laboratory management.

15.0 REFERENCES

1. Delaware Department of Natural Resources and Environmental Control Site Investigation and Restoration Branch "Standard Operating Procedures for Chemical Analytical Programs Under the Hazardous Substance Cleanup Act" dated October 2004.

2. United States Environmental Protection Agency (1991). Preparation Aids for the Development of Category I Quality Assurance Project Plans. U.S. EPA/600/8-91/003, Risk Reduction Engineering Laboratory, Office of Research and Development, Cincinnati, Ohio, February 1991.

3. United States Environmental Protection Agency, (1993). Data Quality Objectives Process for Superfund Interim Final Guidance. U.S. EPA/540/R-93-071, Office of Solid Waste and Emergency Response (OSWER), September 1993.

4. United States Environmental Protection Agency, (1992). Specifications and Guidance for Contaminant-Free Sample Containers. OSWER Directive 9240.0-05A, April 1992.

5. United States Environmental Protection Agency. U.S. EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review. U.S. EPA 540/R-99-012.

6. United States Environmental Protection Agency. U.S. EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review. U.S. EPA 540/R-94-013.

7. United States Environmental Protection Agency. Test Methods for Evaluating Solid Waste, Office of Solid Waste, U.S. EPA, SW-846, November 1986, with updates.

TABLE 1.1

SAMPLING AND ANALYSIS SUMMARY
SUPPLEMENTAL GROUNDWATER INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
JULY 2006

Analytical Parameters	*Analytical Method* [1]	*Estimated Number of Samples*	*Field Duplicates*	*Field Blanks*	*Trip Blanks*	*MS/MSD/Dup*
Soil						
TCL VOCs plus TICS	SW-846 8260B	8	1	1	-	1/1/0
TCL SVOCs plus TICS	SW-846 8270C	TBD	1Per 20	1Per 20	-	1Per 20
TCL Pesticides	SW-846 8081A	TBD	1Per 20	1Per 20	-	1Per 20
Polychlorinated Biphenyls	SW-846 8082	TBD	1Per 20	1Per 20	-	1Per 20
TAL Metals	SW-846 6010B/7471A	TBD	1Per 20	1Per 20	-	1Per 20

Notes:

(1) "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods"

- Not applicable

Dup Duplicate

MS Matrix Spike

MSD Matrix Spike Duplicate

SVOCs Semi-Volatile Organic Compounds

TAL Target Analyte List

TBD To Be Determined

TCL Target Compound List

TABLE 1.2

ANALYTICAL PARAMETERS AND TARGETED QUANTITATION LIMITS - GROUNDWATER
SUPPLEMENTAL GROUNDWATER INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
JULY 2006

Parameter	*CAS Number*	*Targeted Quantitation Limit*
TCL Volatile Organic Compounds (ug/L)		
1,1,2,2-Tetrachloroethane	79-34-5	10
1,1,2-Trichloroethane	79-00-5	10
1,1-Dichloroethane	75-34-3	10
1,1-Dichloroethylene	75-35-4	10
1,2-Dibromo-3-chloropropane	96-12-8	10
1,2-Dibromoethane	106-93-4	10
1,2-Dichloroethane	107-06-2	10
1,2-Dichloropropane	78-87-5	10
Bromodichloromethane	75-27-4	10
Bromoform	75-25-2	10
Carbon tetrachloride	56-23-5	10
Chlorobenzene	108-90-7	10
Chloroethane	75-00-3	10
Chloroform	67-66-3	10
cis-1,3-Dichloropropene	10061-01-5	10
Dibromochloromethane	124-48-1	10
Dichlorodifluoromethane	75-71-8	10
m-Dichlorobenzene	541-73-1	10
Bromomethane	74-83-9	10
Chloromethane	74-87-3	10
Methylene chloride	75-09-2	10
o-Dichlorobenzene	95-50-1	10
p-Dichlorobenzene	106-46-7	10
Tetrachloroethylene	127-18-4	10
trans-1,2-Dichloroethylene	156-60-5	10
trans-1,3-Dichloropropene	10061-02-6	10
Trichloroethylene	79-01-6	10
Trichlorofluoromethane	75-69-4	10
Vinyl chloride	75-01-4	10
4-Methyl-2-pentanone	108-10-1	10
2-Butanone	78-93-3	10
Benzene	71-43-2	10
Ethylbenzene	100-41-4	10
Styrene	100-42-5	10
Toluene	108-88-3	10
Xylene(total)	1330-20-7	10
1,1,1-Trichloroethane	71-55-6	10
2-Hexanone	591-78-6	10
Acetone	67-64-1	10
Carbon disulfide	75-15-0	10
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	10
Methyl Acetate	79-20-9	10
Methyl tert-Butyl Ether	1634-04-4	10
cis-1,2-Dichloroethene	156-59-2	10
Cyclohexane	110-82-7	10
Methylcyclohexane	108-87-2	10
Isopropylbenzene	98-82-8	10
1,2,4-Trichlorobenzene	120-82-1	10
TCL Semi-Volatile Organic Compounds (ug/L)		
2,4,6-Trichlorophenol	88-06-2	10
2,4-Dichlorophenol	120-83-2	10
2,4-Dimethylphenol	105-67-9	10

TABLE 1.2

ANALYTICAL PARAMETERS AND TARGETED QUANTITATION LIMITS - GROUNDWATER
SUPPLEMENTAL GROUNDWATER INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
JULY 2006

Parameter	*CAS Number*	*Targeted Quantitation Limit*
2,4-Dinitrophenol	51-28-5	25
2-Chlorophenol	95-57-8	10
4,6-Dinitro-o-cresol	534-52-1	25
o-Nitrophenol	88-75-5	10
p-Chloro-m-cresol	59-50-7	10
Pentachlorophenol	87-86-5	25
Phenol	108-95-2	10
p-Nitrophenol	100-02-7	25
Bis(2-ethylhexyl) phthalate	117-81-7	10
Butyl benzyl phthalate	85-68-7	10
Diethyl phthalate	84-66-2	10
Dimethyl phthalate	131-11-3	10
Di-n-butyl phthalate	84-74-2	10
Di-n-octyl phthalate	117-84-0	10
2,4-Dinitrotoluene	121-14-2	10
2,6-Dinitrotoluene	606-20-2	10
Isophorone	78-59-1	10
Nitrobenzene	98-95-3	10
Acenaphthene	83-32-9	10
Acenaphthylene	208-96-8	10
Anthracene	120-12-7	10
Benzo[a]anthracene	56-55-3	10
Benzo[a]pyrene	50-32-8	10
Benzo[b]fluoranthene	205-99-2	10
Benzo[ghi]perylene	191-24-2	10
Benzo[k]fluoranthene	207-08-9	10
Chrysene	218-01-9	10
Dibenz[a,h]anthracene	53-70-3	10
Fluoranthene	206-44-0	10
Fluorene	86-73-7	10
Indeno(1,2,3 cd)pyrene	193-39-5	10
Naphthalene	91-20-3	10
Phenanthrene	85-01-8	10
Pyrene	129-00-0	10
2-Chloronaphthalene	91-58-7	10
Hexachlorobenzene	118-74-1	10
Hexachlorobutadiene	87-68-3	10
Hexachlorocyclopentadiene	77-47-4	10
Hexachloroethane	67-72-1	10
2,4,5-Trichlorophenol	95-95-4	25
2-Methylnaphthalene	91-57-6	10
3,3'-Dichlorobenzidine	91-94-1	10
4-Chlorophenyl phenyl ether	7005-72-3	10
Bis(2-chloroethoxy)methane	111-91-1	10
Bis(2-chloroethyl)ether	111-44-4	10
Dibenzofuran	132-64-9	10
m-Nitroaniline	99-09-2	25
N-Nitrosodiphenylamine	86-30-6	10
N-Nitrosodipropylamine	621-64-7 1	10
o-Cresol	95-48-7	10
o-Nitroaniline	88-74-4	25
p-Chloroaniline	106-47-8	10
p-Cresol	106-44-5	10
p-Nitroaniline	100-01-6	25
Benzaldehyde	100-52-7	10
2,2'-oxybis(1-Chloropropane)	108-60-1	10

TABLE 1.2

ANALYTICAL PARAMETERS AND TARGETED QUANTITATION LIMITS - GROUNDWATER
SUPPLEMENTAL GROUNDWATER INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
JULY 2006

Parameter	*CAS Number*	*Targeted Quantitation Limit*
Acetophenone	98-86-2	10
Caprolactam	105-60-2	10
1,1'-Biphenyl	92-52-4	10
4-Bromophenyl-phenylether	101-55-3	10
Atrazine	1912-24-9	10
Carbazole	86-74-8	10
Polychlorinated Biphenyls (ug/L)		
Aroclor-1016	12674-11-2	1.0
Aroclor-1221	11104-28-2	1.0
Aroclor-1232	11141-16-5	1.0
Aroclor-1242	53469-21-9	1.0
Aroclor-1248	12672-29-6	1.0
Aroclor-1254	11097-69-1	1.0
Aroclor-1260	11096-82-5	1.0
TAL Metals (ug/L)		
Aluminum	7429-90-5	200
Antimony	7440-36-0	60
Arsenic	7440-38-2	10
Barium	7440-39-3	200
Beryllium	7440-41-7	5.0
Cadmium	7440-43-9	5.0
Calcium	7440-70-2	5000
Chromium	7440-47-3	10
Cobalt	7440-48-4	50
Copper	7440-50-8	25
Iron	7439-89-6	100
Lead	7439-92-1	5.0
Magnesium	7439-95-4	5000
Manganese	7439-96-5	15
Mercury	7439-97-6	0.2
Nickel	7440-02-0	40
Potassium	7440-09-7	5000
Selenium	7782-49-2	5.0
Silver	7440-22-4	10
Sodium	7440-23-5	5000
Thallium	7440-28-0	10
Vanadium	7440-62-2	50
Zinc	7440-66-6	20
Hexavalent Chromium	18540-29-9	10

TABLE 1.3

ANALYTICAL PARAMETERS AND TARGETED QUANTITATION LIMITS - SOIL
SUPPLEMENTAL GROUNDWATER INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
JULY 2006

Parameter	*CAS Number*	*Targeted [1] [2] Quantitation Limit*
TCL Volatile Organic Compounds (ug/Kg)		
1,1,2,2-Tetrachloroethane	79-34-5	10
1,1,2-Trichloroethane	79-00-5	10
1,1-Dichloroethane	75-34-3	10
1,1-Dichloroethylene	75-35-4	10
1,2-Dibromo-3-chloropropane	96-12-8	10
1,2-Dibromoethane	106-93-4	10
1,2-Dichloroethane	107-06-2	10
1,2-Dichloropropane	78-87-5	10
Bromodichloromethane	75-27-4	10
Bromoform	75-25-2	10
Carbon tetrachloride	56-23-5	10
Chlorobenzene	108-90-7	10
Chloroethane	75-00-3	10
Chloroform	67-66-3	10
cis-1,3-Dichloropropene	10061-01-5	10
Dibromochloromethane	124-48-1	10
Dichlorodifluoromethane	75-71-8	10
m-Dichlorobenzene	541-73-1	10
Bromomethane	74-83-9	10
Chloromethane	74-87-3	10
Methylene chloride	75-09-2	10
o-Dichlorobenzene	95-50-1	10
p-Dichlorobenzene	106-46-7	10
Tetrachloroethylene	127-18-4	10
trans-1,2-Dichloroethylene	156-60-5	10
trans-1,3-Dichloropropene	10061-02-6	10
Trichloroethylene	79-01-6	10
Trichlorofluoromethane	75-69-4	10
Vinyl chloride	75-01-4	10
4-Methyl-2-pentanone	108-10-1	10
2-Butanone	78-93-3	10
Benzene	71-43-2	10
Ethylbenzene	100-41-4	10
Styrene	100-42-5	10
Toluene	108-88-3	10
Xylene(total)	1330-20-7	10
1,1,1-Trichloroethane	71-55-6	10
2-Hexanone	591-78-6	10
Acetone	67-64-1	10
Carbon disulfide	75-15-0	10
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	10
Methyl Acetate	79-20-9	10
Methyl tert-Butyl Ether	1634-04-4	10
cis-1,2-Dichloroethene	156-59-2	10
Cyclohexane	110-82-7	10
Methylcyclohexane	108-87-2	10
Isopropylbenzene	98-82-8	10
1,2,4-Trichlorobenzene	120-82-1	10

TABLE 1.3

ANALYTICAL PARAMETERS AND TARGETED QUANTITATION LIMITS - SOIL
SUPPLEMENTAL GROUNDWATER INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
JULY 2006

Parameter	*CAS Number*	*Targeted [1] [2] Quantitation Limit*
TCL Semi-Volatile Organic Compounds (ug/Kg)		
2,4,6-Trichlorophenol	88-06-2	
2,4-Dichlorophenol	120-83-2	
2,4-Dimethylphenol	105-67-9	330
2,4-Dinitrophenol	51-28-5	330
2-Chlorophenol	95-57-8	330
4,6-Dinitro-o-cresol	534-52-1	830
o-Nitrophenol	88-75-5	330
p-Chloro-m-cresol	59-50-7	830
Pentachlorophenol	87-86-5	330
Phenol	108-95-2	330
p-Nitrophenol	100-02-7	830
Bis(2-ethylhexyl) phthalate	117-81-7	330
Butyl benzyl phthalate	85-68-7	830
Diethyl phthalate	84-66-2	330
Dimethyl phthalate	131-11-3	330
Di-n-butyl phthalate	84-74-2	330
Di-n-octyl phthalate	117-84-0	330
2,4-Dinitrotoluene	121-14-2	330
2,6-Dinitrotoluene	606-20-2	330
Isophorone	78-59-1	330
Nitrobenzene	98-95-3	330
Acenaphthene	83-32-9	330
Acenaphthylene	208-96-8	330
Anthracene	120-12-7	330
Benzo[a]anthracene	56-55-3	330
Benzo[a]pyrene	50-32-8	330
Benzo[b]fluoranthene	205-99-2	330
Benzo[ghi]perylene	191-24-2	330
Benzo[k]fluoranthene	207-08-9	330
Chrysene	218-01-9	330
Dibenz[a,h]anthracene	53-70-3	330
Fluoranthene	206-44-0	330
Fluorene	86-73-7	330
Indeno(1,2,3 cd)pyrene	193-39-5	330
Naphthalene	91-20-3	330
Phenanthrene	85-01-8	330
Pyrene	129-00-0	330
2-Chloronaphthalene	91-58-7	330
Hexachlorobenzene	118-74-1	330
Hexachlorobutadiene	87-68-3	330
Hexachlorocyclopentadiene	77-47-4	330
Hexachloroethane	67-72-1	330
2,4,5-Trichlorophenol	95-95-4	330
2-Methylnaphthalene	91-57-6	330
3,3'-Dichlorobenzidine	91-94-1	830
4-Chlorophenyl phenyl ether	7005-72-3	330
Bis(2-chloroethoxy)methane	111-91-1	330
Bis(2-chloroethyl)ether	111-44-4	330
Dibenzofuran	132-64-9	330
m-Nitroaniline	99-09-2	330
N-Nitrosodiphenylamine	86-30-6	330
N-Nitrosodipropylamine	621-64-7 1	830
o-Cresol	95-48-7	330
o-Nitroaniline	88-74-4	330
p-Chloroaniline	106-47-8	330

TABLE 1.3

ANALYTICAL PARAMETERS AND TARGETED QUANTITATION LIMITS - SOIL
SUPPLEMENTAL GROUNDWATER INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
JULY 2006

Parameter	*CAS Number*	*Targeted [1] [2] Quantitation Limit*
p-Cresol	106-44-5	830
p-Nitroaniline	100-01-6	330
Benzaldehyde	100-52-7	330
2,2'-oxybis(1-Chloropropane)	108-60-1	830
Acetophenone	98-86-2	330
Caprolactam	105-60-2	330
1,1'-Biphenyl	92-52-4	330
4-Bromophenyl-phenylether	101-55-3	330
Atrazine	1912-24-9	330
Carbazole	86-74-8	330
		330
TCL Pesticides/Polychlorinated Biphenyls (ug/Kg)		330
alpha-BHC	319-84-6	1.7
beta-BHC	319-85-7	1.7
delta-BHC	319-86-8	1.7
gamma-BHC (Lindane)	58-89-9	1.7
Heptachlor	76-44-8	1.7
Aldrin	309-00-2	1.7
Heptachlor epoxide	1024-57-3	1.7
Endosulfan I	959-98-8	1.7
Dieldrin	60-57-1	3.3
4,4'-DDE	72-55-9	3.3
Endrin	72-20-8	3.3
Endosulfan II	33213-65-9	3.3
4,4'-DDD	72-54-8	3.3
Endosulfan sulfate	1031-07-8	3.3
4,4'-DDT	50-29-3	3.3
Methoxychlor	72-43-5	17
Endrin ketone	53494-70-5	3.3
Endrin aldehyde	7421-36-3	3.3
alpha-Chlordane	5103-71-9	1.7
gamma-Chlordane	5103-74-2	1.7
Toxaphene	8001-35-2	170
Aroclor-1016	12674-11-2	33
Aroclor-1221	11104-28-2	67
Aroclor-1232	11141-16-5	33
Aroclor-1242	53469-21-9	33
Aroclor-1248	12672-29-6	33
Aroclor-1254	11097-69-1	33
Aroclor-1260	11096-82-5	33
TAL Metals (mg/Kg)		
Aluminum	7429-90-5	20
Antimony	7440-36-0	6.0
Arsenic	7440-38-2	1.0
Barium	7440-39-3	20
Beryllium	7440-41-7	0.5
Cadmium	7440-43-9	0.5
Calcium	7440-70-2	500
Chromium	7440-47-3	1.0
Cobalt	7440-48-4	5.0
Copper	7440-50-8	2.5
Iron	7439-89-6	10
Lead	7439-92-1	0.5
Magnesium	7439-95-4	500
Manganese	7439-96-5	1.5

TABLE 1.3

ANALYTICAL PARAMETERS AND TARGETED QUANTITATION LIMITS - SOIL
SUPPLEMENTAL GROUNDWATER INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
JULY 2006

Parameter	*CAS Number*	*Targeted [1] [2] Quantitation Limit*
Mercury	7439-97-6	0.1
Nickel	7440-02-0	4.0
Potassium	7440-09-7	500
Selenium	7782-49-2	0.5
Silver	7440-22-4	1.0
Sodium	7440-23-5	500
Thallium	7440-28-0	1.0
Vanadium	7440-62-2	5.0
Zinc	7440-66-6	2.0

(1) Targeted Quantitation Limits are based on wet weight or an as-received basis. Sample quantitation limits will be reported on a dry-weight basis, therefore, limits will be reported higher.

(2) Targeted Quantitation Limits are highly matrix dependant and may not always be achieved.

TABLE 4.1

SAMPLE CONTAINER, PRESERVATION, AND HOLDING TIME PERIODS
SUPPLEMENTAL GROUNDWATER INVESTIGATION
GENERAL MOTORS CORPORATION
WILMINGTON, DELAWARE
JULY 2006

Analyses	*Sample Containers*	*Preservation*	*Maximum Holding Time*	*Notes*
Groundwater				
TCL VOCs plus TICS	Two 40 mL glass vials Teflon-lined septum	pH <2, HCl Cool 4°C	14 days from collection to analysis	Fill completely with no head space
TCL SVOCs plus TICS	Two 1L amber glass	Cool 4°C	7 days from collection to extraction, 40 days from extraction to analysis.	Fill completely
Polychlorinated Biphenyls	Two 1L amber glass	Cool 4°C	7 days from collection to extraction, 40 days from extraction to analysis.	Fill completely
TAL Metals	One 500 ml HDPE	pH<2, HNO3 Cool 4°C	180 days from collection to analysis Hg - 28 days from collection to analysis	Fill completely
Hexavalent Chromium	One 500 ml HDPE	Cool 4°C	24 hours from collection to analysis	Fill completely
Soil				
TCL VOCs plus TICS	3 EnCores and one 2-oz jar	Cool 4°C	48 hours from collection to preservation(1) 14 days from collection to analysis	Fill according to directions
TCL SVOCs plus TICS	One 8 oz glass jar	Cool 4°C	14 days from collection to extraction, 40 days from extraction to analysis.	Fill completely
TCL Pesticides / PCBs	One 8 oz glass jar	Cool 4°C	14 days from collection to extraction, 40 days from extraction to analysis.	Fill completely
TAL Metals	One 8 oz glass jar	Cool 4°C	180 days from collection to analysis Hg - 28 days from collection to analysis	Fill completely

Notes:

HDPE	High Density Polyethylene
PCBs	Polychlorinated biphenyls
SVOCs	Semi-volatile organic compounds
TAL	Target Analyte List
TCL	Target Compound List
TICs	Tentatively Identified Compounds
VOCs	Volatile organic compounds
(1)	Preservation includes sodium bisulfate, methanol or freezing to <-7°C per

November 14, 2008 Ref. No. 17338

RESPONSES TO MARCH 10, 2008 DNREC COMMENTS ON THE GROUNDWATER REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT

1. **DNREC Comment**

DNREC is concerned with the occurrence of metals in the groundwater above the maximum contaminant limits especially arsenic, chromium, lead and vanadium. DNREC's concern is that although it appears that petroleum is attenuating as it travels downgradient and based on the distance to receptors (1 mile or greater), metals in groundwater may persist and represent a risk if ingested. DNREC is also concerned that there is no apparent source of these metals because metals in soil in this area does not appear to be elevated. DNREC agrees that the most appropriate course of action is to conduct additional groundwater sampling over a two year period. DNREC will evaluate the results of the monitoring and determine further actions if needed. The next step is to prepare a proposed plan of remedial action.

Response

As noted in the Groundwater Remedial Investigation and Feasibility Study Report (Groundwater RI/FS), arsenic, chromium (total), lead, manganese, and vanadium were detected at concentrations that exceed drinking water criteria. However, drinking water criteria were used as conservative screening numbers as the use of OU-2 groundwater for drinking water purposes is not a current or future exposure pathway. The metals that have been detected in the OU-2 Area groundwater have been observed throughout the OU-2 Area monitoring network and are not believed to be a result of activities within the OU-2 Area.

As proposed by GM in the Groundwater RI/FS, further monitoring will be conducted to assess the trend of metals concentrations in the OU-2 Area groundwater. GM will collect additional groundwater data support at the conclusions of the Groundwater RI/FS with respect to metals concentrations in groundwater. GM does not believe that remediation of groundwater to address metals will be warranted.

2. **DNREC Comment**

Table 1.2 and page 10, section 3.0, 3rd paragraph - This paragraph indicates that MW-3 and MW-3D ' ...shows significant decrease in the concentrations of detected compounds...'. However, in Table 1.2 page 4 of 20, MTBE (.037 mg/L) and Toluene (6.2 mg/L) were detected for the first time in well MW-3D. It is not clear from the data if results in this well are on the increase or decrease. In addition, levels of VOCs in well

MW-3 did not seem to show a significant decrease ie. some levels increased, some decreased and some stayed approximately the same. Please modify the statement.

Response

This paragraph has been modified in the report to clarify GM's intent, which was not to compare trends over time but was to compare the results from MW3 relative to MW3D in any given sampling event to demonstrate that the impacts to groundwater in this area are primarily associated with the upper portion of the aquifer.

For each of the three events where data are available for both MW3 and MW3D, the number of parameters detected above the drinking water criteria in MW3 is higher than the number of parameters detected above the drinking water criteria in MW3D. For example, in December 2005 seven parameters were detected above the drinking water criteria in MW3 compared to two in MW3D. In addition, the concentration of the detected parameters in MW3 are much higher than those in MW3D for any given sampling event. For example, benzene was detected at a concentration of 0.87 mg/L in MW3 during the August 2006 sampling event compared to a benzene concentration 0.0034 mg/L in MW3D. The same pattern applies to the remaining detected VOCs, including MTBE and toluene.

3. **DNREC Comment**

Page 13, section 4.2 - metals are present in the groundwater and may present a risk and they are persistent. Please add a discussion to the text.

Response

As discussed in Section 3.3 of the Groundwater RI/FS, metals are present throughout the OU-2 monitoring network and do not appear to be a result of activities within the OU-2 Area. However, based on the groundwater data available, it was conservatively assumed that metal concentrations in groundwater within OU-2 are site-related and risk estimates for exposures to routine workers and construction workers from metals in groundwater were calculated, as shown in Section 5.1.4.2 of the Groundwater RI/FS. As shown in Tables 5.2 through 5.4 of the Groundwater RI/FS, no estimate of cancer risk and HQ for any metal exceeds approximately 3×10^{-8} and 1×10^{-2}, respectively. These estimates of cancer and noncancer risks demonstrate that the concentrations of metals in groundwater do not pose a significant risk to workers, even assuming all metal concentrations are related to OU-2.

The following statement will be added to the end of the second paragraph in Section 3.3 of the Groundwater RI/FS:

> "Based on available groundwater data risk estimates for exposures to metals in groundwater were calculated under the conservative assumption that these metals are related to the OU-2 Area. The risk estimates are presented in Section 5.1.4.2."

4. **DNREC Comment 4:**

Page 29, last paragraph and Page 30, 4th paragraph, Section 5.1.4.2.2, Section 5.1.5.1 - DNREC action level is 10^{-5} not 10^{-4}.

Response

The last paragraph on page 29 in Section 5.1.4.1.2 will be revised to cite only the U.S. EPA limit, as follows:

> "The significance of the estimates of cumulative cancer risk and HI was evaluated by comparing the estimates to a cumulative cancer risk limit of 10^{-4} and an HI limit of 1, which U.S. EPA uses to determine whether remediation is warranted (61 FR 19432, May 1, 1996; U.S. EPA, 1991b)."

While the U.S. EPA cancer risk limit of 10^{-4} was used in the Groundwater RI/FS, all cumulative cancer risk estimates calculated in the baseline risk assessment (Section 5.1 and Tables 5.2c, 5.2e, 5.3b, and 5.4a) are also below the DNREC action level of 10^{-5}.

5. **DNREC Comment**

Page 31, top - A digging restriction is needed- ie. environmental covenant since construction worker risk assessment showed risk over HI of 2.

Response

As discussed in Section 5.1.4.2.2, the HI estimate of 2 for construction worker exposure to groundwater was an upper-bound estimate that included several assumptions, which were made to streamline the risk calculations that are more conservative than necessary in estimating reasonable maximum exposures. These assumptions were that all chemicals have the same target organ and critical effect and that the workers would be exposed to the highest concentrations of all chemicals at the same time and constantly. As discussed in Appendix E of the Groundwater RI/FS, these upper-bound estimates were refined by segregation of HQs by critical effects (see Section 8.2.2 of Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual, Part A (RAGS A, U.S. EPA 1996), 'segregation of hazard indices') and calculating 95 percent UCLs for naphthalene, xylenes, and toluene (see Section 6.4.1 of RAGS A). Either of these refinements results in an HI estimate below the limit of 1, which demonstrates that the concentrations of constituents in groundwater at OU-2 do not pose a significant risk to construction workers, as discussed in Section 5.1.4.2.2 of the Groundwater RI/FS. As such, GM does not believe a restriction on digging at the OU-2 Area is warranted and did not propose such a restriction in the Groundwater RI/FS.

6. DNREC Comment

Page 39 - Also mentions that groundwater restriction already exist-please explain. What are GMs procedures to prevent groundwater usage? Please specify.

Response

Plant water is supplied to the Site by a private water utility and the plant does not utilize any on-site water for potable or non-potable purposes. GM plans to include this Site in a groundwater management zone (GMZ) to prohibit the use of groundwater for drinking water purposes. All wells installed in the State require a permit from DNREC prior to installation. Therefore, should anyone apply to install an extraction well at or near the Site for the purposes of using the groundwater as drinking water, this permit would be denied by the State.

A description of GM's procedures has been added to the text of the report.

7. DNREC Comment

Page 42 - In accordance with Hazardous Substance Cleanup Act (HSCA) Guidance, DNREC requires four quarters of sampling results below MCLs for wells MWI9, MWI4 and MW8.

Response

GM has modified the sampling network and frequency outlined in the Groundwater RI/FS to include two years of quarterly monitoring for MW19, MW9, and MW8. It should be noted that GM has selected to monitoring MW9 over MW14, as suggested in DNREC's comment, as MW9 is located at the boundary of OU 2 Area where as MW14 is located downgradient of the OU 2 Area boundary. MW9 is also located further north than MW14 which results in a larger portion of the OU 2 Area boundary being monitored on a quarterly basis.

8. DNREC Comment

Page 44, Section 9.2.3, Alternative 2 - looks like it was copied from above. Please correct.

Response

A typographical error was made for Alternative 2. The text has been modified to correct this error.

Worldwide Facilities Group
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November 14, 2008

Mr. Rick Galloway, Project Manager
Site Investigation and Restorastion Branch
State of Delaware DNREC
Division of Air and Waste Management
391 Lukens Drive
New Castle, DE 19720-2774

RE: Groundwater Remedial Investigation/Feasibility Study Report
Operable Unit-2 (OU)
General Motors Wilmington Assembly Plant (DE-1149)
Wilmington, Delaware

Dear Mr. Galloway:

General Motors Corporation (GM) is pleased to provide the Department of Natural Resources and Environmental Control (DNREC), Site Investigation and Restoration Branch (SIRB) two hard copies and one electronic copy of the August 2008 Quarterly Sampling Report for the OU-2 Bulk Product Tank Area at the (GM) Assembly Plant located in Wilmington, Delaware. The GM Plant is located at 801 Boxwood Road, Wilmington, Delaware.

Please contact me at 248-255-2797 if you have any questions.

Sincerely,

for Kim D. Tucker-Billingslea, CHMM
Sr. Environmental Project Manager

c: Jeffrey Holmes, GM
Qazi Salahuddin, DNREC
Greg Carli, CRA

NOV 17 2008

ISO 14001 Certified

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November 14, 2008

Mr. Rick Galloway, Project Manager
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State of Delaware DNREC
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391 Lukens Drive
New Castle, DE 19720-2774

RE: Groundwater Remedial Investigation/Feasibility Study Report
Operable Unit-2 (OU)
General Motors Wilmington Assembly Plant (DE-1149)
Wilmington, Delaware

Dear Mr. Galloway:

General Motors Corporation (GM) is pleased to provide the Department of Natural Resources and Environmental Control (DNREC), Site Investigation and Restoration Branch (SIRB) two hard copies and one electronic copy of the Revised Groundwater Remedial Investigation/Feasibility Study Report (RI/FS), dated November 2008, for the OU-2 Bulk Product Tank Area at the (GM) Assembly Plant located in Wilmington, Delaware. The GM Plant is located at 801 Boxwood Road, Wilmington, Delaware.

The RI/FS has been revised in response to the DNREC comments dated March 10, 2008. GM's detailed response to the DNREC comments has also been enclosed. Please contact me at 248-255-2797 if you have any questions.

Sincerely,

for Kim D. Tucker-Billingslea, CHMM
Sr. Environmental Project Manager

c: Jeffrey Holmes, GM
Qazi Salahuddin, DNREC
Greg Carli, CRA

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January 26, 2009

Mr. Rick Galloway, Project Manager
Site Investigation and Restoration Branch
State of Delaware DNREC
Division of Air and Waste Management
391 Lukens Drive
New Castle, DE 19720-2774

RE: Groundwater Remedial Investigation/Feasibility Study Report - Revised
Operable Unit-2 (OU)
General Motors Wilmington Assembly Plant (DE-1149)
Wilmington, Delaware

Dear Mr. Galloway:

As we discussed during the conference call on January 8, 2009, involving the Delaware Department of Natural Resources and Environmental Control (DNREC), General Motors Corporation (GM), ENVIRON International Corporation (ENVIRON), and Conestoga-Rovers & Associates (CRA) , revisions have been made to the above referenced report. Attached for your use, please find the following:

a) Revised Groundwater Remedial Investigation/Feasibility Study Report (RI/FS), dated January 16, 2009 (Revision 3) with the following changes:
   - Executive summary section (page iii): the reference "61 FR 19432, May 1, 1996; U.S. EPA, 1991b" was added to line 10 regarding the significance of the cumulative cancer risk and noncancer hazard index estimates for incidental ingestion and dermal exposures during potential nonpotable groundwater use. The following sentence was also added regarding the significance of the cumulative cancer risk estimates relative to the DNREC action level:

     "While the U.S. EPA cancer risk limit of 10^{-4} was used in the Groundwater RI/FS, all cumulative cancer risk estimates calculated in the baseline risk assessment are also below the DNREC action level of 10^{-5}"

   - Section 6.0 (page 40): a new second paragraph was added to the sub-section 6.1.3 (i.e., Risk Assessment) that reads:

     "The significance of the estimates of cumulative cancer risk and HI was evaluated by comparing the estimates to a cumulative cancer risk limit of

10^{-4} and an HI limit of 1, which U.S. EPA uses to determine whether remediation is warranted (61 FR 19432, May 1, 1996; U.S. EPA, 1991b). While the U.S. EPA cancer risk limit of 10^{-4} was used in the Groundwater RI/FS, all cumulative cancer risk estimates calculated in the baseline risk assessment (Section 5.1 and Tables 5.2c, 5.2e, 5.3b, and 5.4a) are also below the DNREC action level of 10^{-5}."

b) Revised Attachment E2, table "Building Parameters" in Appendix E to add a note regarding the source of site-specific data; and

c) Reprinted Attachment E1 tables "Toxicity Values" (page 1 of 2 only) and "Physical and chemical Properties" (page 1 of 2 only) in Appendix E on 11-inch by 17-inch papers to make them more legible. Please note that no changes have been made to the contents of these tables.

Please replace the attached pages in any hard copies provided to you of the Groundwater RI/FS Report. One complete compact disk (CD) of the report, with the above noted changes included is attached for your use.

Please contact me at 248-255-2797 if you have any questions.

Sincerely,

Kim D. Tucker-Billingslea, CHMM
Sr. Environmental Project Manager

cc: Jeffrey Holmes, GM
Qazi Salahuddin, DNREC
Greg Carli, CRA
Steve Song, ENVIRON

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A:\naon

Revision 3
January 26, 2009

GROUNDWATER REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT OU-2 BULK PRODUCT TANK AREA

GM Wilmington Assembly Plant

Prepared For:

GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

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JANUARY 2009
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LIST OF ACRONYMS AND SHORT FORMS

ACGIH	American Conference of Governmental Industrial Hygienists
ADD	average daily dose
AT	averaging time
ATSDR	Agency for Toxic Substances and Disease Registry
AST	aboveground storage tank
BCa	bias-corrected and accelerated
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylene
C_{air}	concentration in air
COC	chemical of concern
CRA	Conestoga-Rovers & Associates
CSM	conceptual site model
DNREC	Delaware Department of Natural Resources and Environmental Control
ECSA	Ecologically Sensitive Areas
ED	exposure duration
EF	exposure frequency
EnecoTech	EnecoTech Midwest, Inc.
ENVIRON	ENVIRON International Corporation
^{o}F	degrees Fahrenheit
GM	General Motors Corporation
HI	hazard index
HQ	hazard quotient
IRIS	Integrated Risk Information System
kg	kilogram
Kp	permeability coefficient
LADD	lifetime average daily dose
L/hour	liters per hour
MCL	maximum contaminant level
MEK	methyl ethyl ketone
MRL	minimal risk level
MTBE	methyl tert butyl ether
MY	million years
NIOSH	National Institute for Occupational Safety and Health
NPDES	National Pollutant Discharge Elimination System
PCBs	polychlorinated biphenyls
PEL	permissible exposure limits
PPRTV	Provisional Peer Reviewed Toxicity Values
NFA	no further action

LIST OF ACRONYMS AND SHORT FORMS
(continued)

OSHA	Occupational Safety and Health Administration
OSWER	Office of Solid Waste and Emergency Response
OU	operable unit
PRG	preliminary remediation goal
QAPP	Quality Assurance Project Plan
REL	recommended exposure limits
RfD	reference dose
RfC	reference concentration
RI/FS	Remedial Investigation/Feasibility Study
RME	reasonable maximum exposure
SAP	Sampling and Analysis Plan
SF	slope factor
SIRB	Site Investigation and Restoration Branch
Site	GM Wilmington Assembly Plant in Wilmington, Delaware
SVOC	semi-volatile organic compound
TEPP	Technology Enabled Permitting Process
TLV	threshold limit values
UCL	upper confidence limit
UD	University of Delaware
URF	unit risk factor
URS	Uniform Risk-Based Standard
U.S. EPA	United States Environmental Protection Agency
USTB	Underground Storage Tank Branch
VOC	volatile organic compound
WRPA	Water Resource Protection Area

EXECUTIVE SUMMARY

Conestoga-Rovers & Associates (CRA) in collaboration with ENVIRON International Corporation (ENVIRON) has prepared this Groundwater Remedial Investigation and Feasibility Study (RI/FS) report on behalf of General Motors Corporation (GM) for the Operable Unit 2 Bulk Product Storage Tank Area (OU-2 Area) at the GM Wilmington Assembly Plant located at 801 Boxwood Road in Wilmington, Delaware (Site).

Bulk product storage areas occupy approximately 1.5 acres near the center of the plant and are divided into OU-1 and OU-2 Areas. The OU-1 Area includes the pump house and the Tank L through Tank O aboveground storage tank (AST) containment area. The OU-2 Area includes the Large AST Area/Truck Unloading Rack and surrounding areas.

Investigation activities and remedial alternatives conducted in the OU-1 Area to address soil exceedances was presented in the "Report of Findings OU-1 Soils Bulk Product Tank Areas" (CRA, 2004), which resulted in no further action (NFA) for soil, as documented by Delaware Department of Natural Resources and Environmental Control (DNREC) Site Investigation and Restoration Branch's (SIRB) January 15, 2004 letter to GM. Investigation activities in the OU-2 Area resulted in approval of the document entitled "Report of Findings for OU-2 Bulk Product Area Tanks Soil Investigation", which requested written concurrence from DNREC that NFA is appropriate with regards to the soil in the OU-2 Area (CRA, 2006a). Based on subsequent discussions with DNREC SIRB, a NFA letter for the OU-2 Area soil will be issued once groundwater conditions within the OU-2 Area are addressed. As such, only groundwater conditions in the OU-2 Area are evaluated in this RI/FS report.

Groundwater investigations were conducted within the OU-2 Area in June 2005, November 2005, August 2006, and December 2006. Samples were collected from monitoring wells within the OU-2 Area monitoring network and were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs).

The combined results of the June and November 2005 OU-2 Area groundwater investigation activities identified groundwater impacts within the OU-2 Area based on DNREC's groundwater Uniform Risk-Based Standard (URS) under Delaware's Hazardous Substance Cleanup Act (HSCA). Additional investigation activities were conducted in 2006 to ensure that the downgradient extent of groundwater impact was adequately characterized based on drinking water criteria. These drinking water criteria were based on federal maximum contaminant levels (MCLs), and risk-based tap water

ingestion preliminary remediation goals (PRGs) from U.S. EPA Region 9 (2004) for chemicals that lack MCLs.

Benzene, toluene, ethylbenzene, and xylenes (BTEX) are the primary compounds that have been detected in groundwater at OU-2 at concentrations exceeding the drinking water criteria. The highest concentrations have been located in the northeast section of the OU-2 Area near MW-3. Further comparison between MW-3 and MW-3D, which is located deeper within the aquifer, indicates that the high concentrations are primarily associated with the upper portion of the aquifer.

No concentrations of VOCs or SVOCs exceed the drinking water criteria beyond the OU-2 downgradient boundary. There are minimal exceedances of metals (i.e., manganese and vanadium) at the downgradient boundary of the OU-2 Area. However, these metals have been detected throughout the OU-2 Area monitoring network and are not believed to be a result of the activities within the OU-2 Area. Although drinking water criteria were used to guide the field investigation, groundwater at the Site is not currently used or expected to be used in the future as a source of potable water.

A human health risk assessment was conducted to determine whether the presence of hazardous constituents in groundwater at OU-2 poses a risk to human health that would warrant remedial action. The significance of potential exposures to site-related concentrations of constituents in groundwater was evaluated based on conservative estimates of reasonable maximum exposures under current and reasonable expected future land use in the OU-2 Area. OU-2 is an outdoor area that is located within an active portion of the GM Wilmington Assembly Plant. As such, routine and construction workers constitute the main receptor populations at OU-2, although trespassers could represent another receptor population. Routine workers and trespassers at OU-2 could be exposed to constituents in the underlying groundwater that volatize and migrate into outdoor air. Routine workers also could be exposed to constituents in the underlying groundwater that volatize and migrate into indoor air through possible cracks in the foundations of the buildings at OU-2. Although the plant has no plans to use groundwater for nonpotable purposes, potential exposure to the plant's routine workers via such nonpotable groundwater use was evaluated in the risk assessment. Construction workers could be exposed to constituents in groundwater via incidental ingestion, dermal contact, and inhalation of vapors during excavations that extend into the water table.

Upper-bound cancer and noncancer risk estimates show that the highest concentrations of constituents in groundwater at OU-2 do not pose a significant risk to routine workers

via inhalation of vapor emissions from the water table either under current conditions or potential future exposure scenarios if future operations at OU-2 were to entail a much higher degree of worker presence and were not regulated by Occupational Safety and Health Administration (OSHA). This conclusion means that the potential exposure of trespassers also does not pose a significant risk. The sum of the ratios of the estimated indoor air concentrations resulting from potential nonpotable groundwater use to the occupational exposure limits, which accounts for exposure to the mixture of constituents in the indoor air, is much less than 1. The cumulative cancer risk and noncancer HI estimates for incidental ingestion and dermal exposures during potential nonpotable groundwater use do not exceed the limits of 10^{-4} and 1 (61 FR 19432, May 1, 1996; U.S. EPA, 1991b), respectively. While the U.S. EPA cancer risk limit of 10^{-4} was used in the Groundwater RI/FS, all cumulative cancer risk estimates calculated in the baseline risk assessment are also below the DNREC action level of 10^{-5}. Upper-bound cancer risk estimates and refined noncancer risk estimates show that the concentrations of constituents in groundwater at OU-2 do not pose a significant risk to construction workers. These refinements include segregation of noncancer risk by critical effects and calculating 95 percent upper confidence limits (UCLs) for naphthalene, xylenes, and toluene, instead of using the highest concentrations ever detected at OU-2.

An ecological risk assessment for the OU-2 Area was deemed unnecessary since no Ecologically Sensitive Areas (ECSA) were identified at or adjacent to the Site and no endangered and/or threatened species are expected to be present at the Site.

Since groundwater impacts at the OU-2 downgradient boundary have been delineated to the drinking water criteria, and the risk assessment determined that there is no significant risk to human health or the environment under current land use and continued industrial land use at OU-2, the following remedial alternatives were developed and screened: No Action and Limited Action (i.e., continued groundwater monitoring for two years).

It is proposed that the remedial action of continued quarterly groundwater monitoring for two years be implemented (i.e., Limited Action). The first sampling event would consist of the monitoring wells that currently have concentrations that exceed drinking water criteria and the three monitoring wells along the downgradient boundary of the OU-2 Area while the second and fourth events would include only the three monitoring wells along the downgradient boundary of the OU-2 Area. The third sampling event would include all the wells in the OU-2 Area. The sampling schedule will be repeated in the second year of groundwater monitoring. This proposed remedial action would meet the remedial action objectives in a cost-effective manner.

The Limited Action alternative is preferred over the No Action alternative as it provides additional confirmation of the groundwater conditions observed at the Site to date for a reasonable cost.

Groundwater sampling is proposed to end after the second annual sampling event, unless the results from future events indicate that the area of groundwater impact extends beyond the OU-2 Area downgradient boundary or the groundwater concentrations increase beyond the current maximum concentrations.

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) in collaboration with ENVIRON International Corporation (ENVIRON) has prepared this Groundwater Remedial Investigation and Feasibility Study (RI/FS) report on behalf of General Motors Corporation (GM) for the Operable Unit 2 Bulk Product Storage Tank Area (OU-2 Area) at the GM Wilmington Assembly Plant located at 801 Boxwood Road in Wilmington, Delaware (Site). The Site location map is shown on Figure 1.1. A Site layout is provided on Figure 1.2.

1.1 PURPOSE OF REPORT

This RI/FS has been prepared to describe the groundwater conditions at the OU-2 Area, to characterize the risk associated with potential exposures at the OU-2 Area, and to develop a range of remedial alternatives that meet the OU-2 Area's remedial action objectives from which to select the appropriate remedial action. The objectives of the RI/FS are to:

- Characterize the OU-2 Area groundwater and its actual or potential hazards to public health, welfare, and the environment;
- Identify sources of contamination;
- Evaluate the nature and extent, if any, of air, soil, and groundwater contamination at the OU-2 Area;
- Develop remedial alternatives;
- Screen the remedial alternatives; and
- Prepare a detailed analysis of remedial alternatives.

1.2 FACILITY BACKGROUND

Bulk product storage areas occupy approximately 1.5 acres near the center of the plant and are divided into OU-1 and OU-2 Areas as shown on Figure 1.3. GM conducted environmental assessments of the OU-1 and OU-2 Areas in 1998. The results from the investigations were provided to the Delaware Department of the Natural Resources and Environmental Control (DNREC) Underground Storage Tank Branch (USTB). A review of the soil data showed minimal exceedances of DNREC Uniform Risk-Based Standards (URS). Further investigation activities and subsequent remedial alternatives were conducted in the OU-1 Area to address the soil exceedances as presented in the "Report

of Findings OU-1 Soils Bulk Product Tank Areas" (CRA, 2004). The additional work in the OU-1 Area resulted in no further action (NFA) for soil, as documented by DNREC Site Investigation and Restoration Branch's (SIRB) January 15, 2004 letter to GM. Subsequent work in the OU-2 Area resulted in approval of the document entitled "Report of Findings for OU-2 Bulk Product Area Tanks Soil Investigation", which requested written concurrence from DNREC that NFA is appropriate with regards to the soil in the OU-2 Area (CRA, 2006a). Based on subsequent discussions with DNREC SIRB, a NFA letter for the OU-2 Area soil will be issued once groundwater conditions within the OU-2 Area are addressed. As such, only groundwater conditions in the OU-2 Area are addressed in this RI/FS report.

1.2.1 FACILITY DESCRIPTION

Bulk product storage areas, located near the center of the facility, are divided into OU-1 and OU-2 Areas. The OU-1 Area includes the pump house and the Tank L through Tank O aboveground storage tank (AST) containment area. The OU-2 Area includes the Large AST Area/Truck Unloading Rack and surrounding areas.

Three existing tanks (i.e., Tanks A, B, and C) represent the Large AST Area (see Figure 1.3). These tanks were installed prior to September 1995. The size and content of these ASTs are identified as follows:

- A – 39,000-gallon AST currently empty, formerly containing thinner;
- B – 60,900-gallon AST currently containing (less than 10,000 gallons) diesel fuel oil; and
- C – 40,000-gallon AST currently containing unleaded gasoline.

AST containment areas are located around each of the large ASTs and are constructed of approximately 4-foot earthen berm walls covered with crushed gravel. Product piping from the ASTs runs to a pump house to the east.

In addition, a former large AST known as AST A2, was identified by GM as a 39,000-gallon AST that had previously contained thinner. This tank was decommissioned in the early 1980s. The former AST and its associated containment area were located directly north of the existing 40,000-gallon AST containing unleaded gasoline (i.e., Tank C). This area is currently utilized as a paved drive.

There are two AST containment areas and a pump house in the adjacent AST Containment/Truck Unloading Area. The northern AST containment area was constructed prior to 1955 and consists of 5-foot concrete walls and a stone-filled base. The northern AST containment pad contains four 12,000-gallon ASTs, which are identified by GM as Tanks H through K. The contents of these ASTs are identified as follows:

- H – 12,000-gallon AST currently empty, formerly containing thinner;
- I – 12,000-gallon AST currently empty, formerly containing diesel oil;
- J – 12,000-gallon AST current empty, formerly containing thinner; and
- K – 12,000 gallon AST currently empty, formerly containing glycol (approximately 2.5 percent) and water (approximately 97.5 percent).

The southern AST containment area, located within the OU-1 Area boundary, was constructed prior to 1955 and consists of 5-foot concrete walls and a concrete base. The southern AST containment pad contains four 12,000-gallon ASTs, which are identified by GM as Tanks L through O. The contents of these ASTs are identified as follows:

- L – 12,000-gallon AST currently containing power steering fluid, formerly containing rear axle fluid;
- M – 12,000-gallon AST currently and formerly containing glycol;
- N – 12,000-gallon AST currently empty, formerly containing automatic transmission fluid; and
- O – 12,000-gallon AST currently empty, formerly containing manual transmission fluid.

The Truck Unloading Area is located directly west of the northern and southern AST containment areas and consists of a stone-filled area between two paved driveways, with steel pits housing the unloading piping. Product piping from the truck unloading station runs underground to the pump house, located between the two AST containment areas, and then to the respective ASTs. Additional piping runs from the ASTs to the plant.

1.2.2 FACILITY HISTORY

The Site is currently owned and operated by GM for automotive manufacturing. GM has conducted operations at the Site since the facility was initially constructed between

1945 and 1946. Through the years, many additions have been made to the original facility.

1.2.3 PREVIOUS INVESTIGATIONS

In 1998, GM conducted environmental assessments of the Large AST Area and the AST Containment/Truck Unloading Area. The results of the 1998 environmental assessments were provided to the DNREC USTB in February 1999 in the following reports:

- Environmental Assessment Report – Large AST Area [EnecoTech Midwest, Inc. (EnecoTech), 1998a]; and
- Environmental Assessment Report – AST Containment/Truck Unloading Rack (EnecoTech, 1998b).

A review of the 1998 data showed minimal exceedances of DNREC URS in soils and groundwater in the OU-1 and OU-2 Areas. Prior to 2002, there were no identified or documented releases of petroleum products or other hazardous substances. On January 11, 2002, the Site experienced a release of power steering fluid from Tank L, located in the southern AST containment area. CRA implemented a focused soil sampling plan in the Tank L area, the results of which did not show an impact, as indicated in the "Report of Findings – Soil Sampling Program at Tank L Product Release Area" (CRA, 2002).

In April 2005, GM prepared and submitted a work plan to investigate the soil and groundwater exceedances identified in 1998 and to conduct a general surface soil screening of the OU-2 Area (CRA, 2005). The work plan was reviewed and approved by DNREC SIRB. The purpose of the OU-2 Area soil and groundwater investigation was to further characterize the nature and extent of regulated substances at the OU-2 Area. Investigation activities took place in June and November 2005. The results of the 2005 investigation activities were provided to DNREC in the following reports:

- Report of Findings OU-2 Bulk Product Tank Area Soil Investigation, GM Wilmington Assembly Plant (CRA, 2006a); and
- Report of Findings OU-2 Bulk Product Tank Area Groundwater Investigation, GM Wilmington Assembly Plant (CRA, 2006b).

Analytical results from the 2005 OU-2 Area soil investigation were compared to the URS for Restricted Use and the Modified URS for benzo(a)pyrene. A modified URS for benzo(a)pyrene was determined to be appropriate for the Site based on the Site Specific Standard development provisions provided in the DNREC Remediation Standards Guidance. A review of the data indicates that there are no exceedances of the applicable standards. The Soil Investigation Report identified that deed restrictions will be placed on the property to limit future use to industrial/commercial activities. (CRA, 2006a)

The combined results of the June and November 2005 OU-2 Area groundwater investigation activities identified groundwater impacts within the OU-2 Area based on DNREC's groundwater URS under Delaware's Hazardous Substance Cleanup Act (HSCA). Additional investigation activities were conducted in 2006 to ensure that the downgradient extent of groundwater impact was adequately characterized based on drinking water criteria. These drinking water criteria were based on federal maximum contaminant levels (MCLs), and risk-based tap water ingestion preliminary remediation goals (PRGs) from U.S. EPA Region 9 (2004) for chemicals that lack MCLs. A summary of the Delaware URS and the drinking water criteria is provided in Table 1.1.

The impacts consisted primarily of benzene, toluene, ethylbenzene, and xylene (BTEX) and other gasoline-related compounds, however, a few other volatile organic compound (VOC) and semi-volatile organic compound (SVOC) parameters, as well as some metals, were detected at concentrations exceeding the drinking water criteria. The highest concentrations of BTEX parameters were found in groundwater at the northeastern portion of the OU-2 Area. Elevated levels of acetone were also present in the groundwater in this area. The results of the 2005 groundwater investigations are provided in Tables 1.2, 1.3, 1.4, and 1.5 for VOCs, SVOCs, metals, and polychlorinated biphenyls (PCBs), respectively. The locations of the monitoring wells are shown on Figure 1.4. The soil stratigraphic and monitoring well instrumentation logs are provided in Appendix A. The analytical data reports and validation memoranda are provided in Appendix B.

A comparison of the June and November 2005 analytical results from MW-3, which is screened across the water table from 10 feet to 15 feet below ground surface (bgs), and MW-3D, which is screened deeper within the aquifer from 20 feet to 25 feet bgs, shows a significant decrease in the concentrations of detected compounds as well as the number of compounds detected in the deeper well. These results indicate that impacts to groundwater in this area are primarily associated with the upper portion of the aquifer. Monitoring wells located at the downgradient boundary of the OU-2 Area (i.e., MW-11R, MW-14, MW-15, MW-9, and MW-19) have no groundwater impacts for VOCs

and SVOCs above the drinking water criteria and therefore, the groundwater impacts do not extend beyond the OU-2 Area downgradient boundary.

Based on the results of the 2005 groundwater investigation activities, GM prepared and submitted a work plan for supplemental groundwater investigation to DNREC in July 2006 (CRA, 2006c). The work plan was discussed by DNREC and GM's consultant, CRA, on August 23 and August 24, 2006 and verbally approved by DNREC on August 24, 2006.

Since hexavalent chromium was not detected in any of the samples taken during the August and September 2006 sampling events, GM proposed the removal of hexavalent chromium from the December 2006 sampling event but continued to analyze for chromium total. In a letter to GM dated November 22, 2006, DNREC agreed with the removal of hexavalent chromium from the list of analyzed compounds starting with the December 2006 sampling. During the period of December 12, 2006 to December 15, 2006, groundwater samples were collected from the monitoring wells within the OU-2 Area and analyzed for VOCs, SVOCs, and metals (total and dissolved). The results of the supplemental groundwater investigation were submitted to DNREC in a letter from GM dated June 18, 2007 (CRA, 2007) and are presented in Table 1.2 through Table 1.5.

2.0 SITE PHYSICAL CHARACTERISTICS

2.1 OPERATIONAL HISTORY

GM has been the sole owner and operator at the Site since the GM Wilmington facility was built in 1945. All manufacturing operations conducted at the Site have been associated with automotive assembly.

2.2 GEOLOGY

Cross sections of geology within the OU-2 Area were generated based on the soil stratigraphic log data from the work plan. Figure 2.1 is a plan view showing the locations of the cross sections. Cross sections A-A' and B-B' are depicted on Figure 2.2 and Figure 2.3, respectively.

A review of soil borings advanced during previous investigations show the presence of a fill material from ground surface to depths ranging from approximately 5 feet bgs to 10 feet bgs throughout much of the storage tank areas. The fill generally consists of sands, silts, and clays. In some areas, such as within the diked containment areas, a few inches to more than a foot of crushed stone is present. There is a continuous sand layer ranging from 16 to 30 feet in thickness with starting depths ranging from approximately 7.8 feet bgs to 11.5 feet bgs and extending to depths ranging from approximately 23.8 feet bgs to 40 feet bgs. The sand layer is underlain by reddish-brown clay.

The natural soils present in this area are associated with the Cretaceous Age [65-136 million years (MY)] Potomac Formation. The Potomac Formation is principally variegated silt and/or clay with interbedded quartzitic sands. The Potomac Formation consists of deltaic fluvial deposits that rest unconformably upon Precambrian-Age (> 570 MY) basement rock, which is considered to be the Wilmington Complex gneiss in the vicinity of the Site. The thickness of the Potomac Formation on-Site is unknown, however published literature indicates that the Potomac Formation can be relatively thin (less than 50 feet) in areas near the Fall Line, as is the case with this Site. The Fall Line represents a lineament (fault) separating the igneous and metamorphic rocks of the Piedmont Province from the unconsolidated, flat-lying sediments of the Atlantic Coastal Plain.

2.3 HYDROGEOLOGY

Groundwater was typically observed at approximately 11.4 to 13.4 feet bgs during the 2005 and 2006 groundwater investigations. Groundwater elevations recorded between June 2005 and December 2006 are provided in Table 2.1. Groundwater contours from the most recent and complete groundwater sampling event (i.e., December 2006) are provided on Figure 2.4. Groundwater flow direction beneath the OU-2 Area is to the west/west southwest.

A review of the DNREC Technology Enabled Permitting Process (TEPP), which is an automated program that the Water Supply Section uses to store and retrieve water well data derived from permit applications, well completion reports, and well abandonment reports, indicates that there are potentially 14 water well locations within a 2-mile radius of the Site as shown on Figure 2.5. It should be noted that the locations of two of the water wells could not be identified through the TEPP data. Furthermore, the remaining 12 water well locations correspond to 28 water wells, which are listed in Table 2.2 along with information related to the well use, desired capacity, screen depth, address, casing diameter, daily use, completion date, well location, and approximate distance to the Site. None of these 28 wells were located within a one mile radius of the Site. For two of the wells listed in Table 2.2, the physical location of the wells could not be determined, but based on the information that is available, it is believed that these wells are located at least a one mile from the Site.

2.4 SURFACE WATER HYDROLOGY

Surface water flow across the Site is directed to the Site storm sewer system, which discharges to Little Mill Creek through the Site's National Pollutant Discharge Elimination System (NPDES) Permit Number DE0000523. There are no surface water bodies in the OU-2 Area. According to a University of Delaware (UD) study, there are no waterways (streams, rivers, lakes, or tidal waves), including associated wetlands, floodplains, and riparian zones present on-Site or immediately adjacent to the Site as shown on the Water Resource Protection Areas (WRPAs) map provided in Appendix C (UD, 2001).

The Red Clay Creek runs approximately 1.1 miles west of the Site. There is also a surface water body located approximately 1.3 miles southeast of the Site in Banning Park, which is located immediately northwest of the Christina River.

2.5 METEOROLOGY

The average total precipitation in Wilmington, Delaware is approximately 54.3 inches with a peak of 8.1 inches in July. The average monthly precipitation (in inches) is summarized on Figure 2.6. The average temperature in Wilmington, Delaware is 63.4 degrees Fahrenheit (°F) with an average low of 44.9 °F in January and an average high of 80.1 °F in July. The average monthly temperatures are summarized on Figure 2.7.

A wind rose of Wilmington, New Castle County Airport, which is located approximately 3 miles south of the Site, is shown on Figure 2.8. The average wind speed is 7.5 knots from the west.

2.6 DEMOGRAPHY AND LAND USE

According to the 2000 census, there are 72,664 people, 28,617 households, and 15,882 families residing in Wilmington, Delaware. The population density is 2,585.8 per square kilometer (6,698.1 per square mile). The Site is located in a mixed commercial and residential area of Wilmington with a number of rail lines located to the north of the Site, a multi-lane divided highway to the west of the Site, and residential land use to the south and east of the Site.

2.7 ECOLOGY

Based on observations noted during the 2005 investigation activities, no environmentally sensitive habitats exist at the Site and no endangered and/or threatened species are expected to be present at the Site currently. In addition, the Site is located in a highly developed area bordered by residential properties, railway tracks, and Delaware State Road 41, which further supports that ecologically sensitive areas are not present at the Site. An Ecologically Sensitive Areas (ECSA) Analysis for the Site is provided in Appendix D.1. Furthermore, a letter from the DNREC Heritage Division of Wildlife dated September 25, 2007 confirms that there are currently no records of state-rare or federally listed plants, animals or natural communities at or adjacent to the Site and, as such, Critical Resource Waters are not present at or adjacent to the Site. The DNREC Heritage Division of Wildlife letter is provided in Appendix D.2.

3.0 NATURE AND EXTENT OF CONTAMINATION

As noted in Section 1.2.3, groundwater impact was initially identified based on DNREC's groundwater URS criteria, and then further data evaluation was conducted by comparing the groundwater data to drinking water criteria based on federal MCLs and risk-based tap water ingestion PRGs from U.S. EPA Region 9 (2004) for chemicals that lack MCLs. It should be noted that groundwater at the Site is not currently or expected in the future to be used as a source of potable water either on or off the Site. As such, using drinking water criteria was a conservative approach for assessing the adequacy of the data collected to support the risk assessment.

The drinking water criteria were utilized to prepare a list of data presentation parameters for groundwater as presented in Table 3.1. A groundwater parameter with at least one exceedance of these criteria was included in the list for data presentation purposes. The nature of the groundwater impacts include VOCs [i.e., acetone, BTEX, chlorobenzene, and methyl tert butyl ether (MTBE)], SVOCs [i.e., benzo(a)pyrene, bis(2-ethylhexyl)phthalate, methylphenol (cresol), and naphthalene], and metals [i.e., arsenic (total and dissolved), chromium total, lead, manganese (total and dissolved), and vanadium]. The results of previous groundwater investigations are provided in Table 1.2 through Table 1.5. The results of the data presentation parameters are summarized on Figure 3.1.

For each of the three events where data is available for both MW3 and MW3D, the number of parameters detected above the drinking water criteria in MW3 is significantly higher than the number of parameters detected above the drinking water criteria in MW3D. In addition, the concentration of the detected parameters in MW3 compared to MW3D for any given sampling event is significantly higher. These results indicate that impacts to groundwater in this area are primarily associated with the upper portion of the aquifer. Furthermore, groundwater impacts at the OU-2 downgradient boundary (i.e., MW-9, MW-11R, MW-15, and MW-19) have been delineated to the drinking water criteria, with the exception of some metals [i.e., manganese (total and dissolved) and vanadium], which are present in groundwater throughout the Site and do not appear to be a result of activities within the OU-2 Area.

3.1 SOURCES

The highest concentrations are located in the northeastern portion of the OU-2 Area and the data from the monitoring wells downgradient of the northeastern portion of the

OU-2 Area are either non-detect or have very low concentrations. The source of BTEX and petroleum related compounds appear to be in the vicinity of the MW-3 monitoring well nest. A former gas pump fillbox and several underground pipes that convey products to the pump house are located in this area. These are the suspected sources of the chemicals in groundwater in the OU-2 Area.

3.2 SOIL

A review of the data from the 2005 soil investigation indicates that that there are no exceedances of the applicable standards (i.e., URS for Restricted Use and the Modified URS for benzo(a)pyrene). As such, GM requested written concurrence from DNREC that NFA is appropriate with regard to the soil in the OU-2 Area. In a letter to GM dated February 28, 2006, DNREC SIRB approved the Soil Investigation Report but deferred on issuing a NFA letter until the groundwater investigations were complete.

3.3 GROUNDWATER

A summary of the previous groundwater investigations is provided in Section 1.2.3. The results of the previous groundwater investigations are provided in Table 1.2 through Table 1.5. The list of data presentation parameters is provided in Table 3.1. The results for the data presentation parameters are summarized on Figure 3.1. The soil stratigraphic and monitoring well instrumentation logs are provided in Appendix A.

The extent of OU-2 Area groundwater impacts at the OU-2 downgradient boundary has been delineated to the drinking water criteria. There are no concentrations of VOCs or SVOCs above the drinking water criteria at the downgradient boundary of the OU-2 Area. There are minimal exceedances of metals concentrations above drinking water criteria at the downgradient boundary of the OU-2 Area. However, these metals (i.e., manganese and vanadium) are present throughout the OU-2 Area monitoring network and do not appear to be a result of activities within the OU-2 Area. Based on available groundwater data, risk estimates for exposures to metals in groundwater were calculated under the conservative assumption that these metals are related to the OU-2 Area. The risk estimates are presented in Section 5.1.4.2.

PCBs were detected in a sample of water present in near surface soils (i.e., less than 0.5 feet bgs) during investigations conducted in May 2005 in the northwest corner of the Tank H, I, J, K containment area. Subsequent sampling of the water present in the near surface soils was conducted in January 2006 and it was determined that the PCBs

present in the May 2005 were a result of suspended material in the water and not in the water matrix itself. The near surface water sampling was discussed in detail in the "Report of Findings for OU-2 Bulk Product Area Tanks Soil Investigation" (CRA, 2006a). The report concluded that no further evaluation of PCBs in this area is necessary.

3.4 SURFACE WATER

No surface water body exists at or in the vicinity of OU-2.

3.5 SEDIMENTS

No sediments exist at or in the vicinity of OU-2.

3.6 AIR

The potential for groundwater constituents to affect outdoor and indoor air is addressed in the human health risk assessment.

3.7 BIOTA

No biota exist at or in the vicinity of OU-2.

4.0 CONTAMINANT FATE AND TRANSPORT

The following sections discuss the contaminant fate and transport of chemicals in groundwater at OU-2 Area.

4.1 POTENTIAL ROUTES OF MIGRATION

The routes of migration associated with the chemicals in groundwater include volatilization from water to outdoor and indoor air. There are no surface water bodies in the vicinity of the Site, and therefore, migration of contaminants through venting groundwater is not a concern. Groundwater will migrate through the sandy aquifer present at the Site, however, groundwater monitoring has determined the extent of groundwater impacts.

4.2 CONTAMINANT PERSISTENCE

The primary contaminants present in the OU-2 Area groundwater consist of BTEX compounds. These compounds are known to be biodegradable and none are considered to be persistent.

4.3 CONTAMINANT MIGRATION

The extent of VOC and SVOC groundwater impacts at the OU-2 downgradient boundary have been delineated to the drinking water criteria. The minimal exceedances of metals (i.e., manganese and vanadium) above drinking water criterion at the downgradient boundary of the OU-2 Area do not appear to be a result of activities within the OU-2 Area.

4.3.1 VOC AND SVOC RESULTS

Several VOCs and SVOCs were detected at concentrations that exceed the drinking water criteria. The compounds that were consistently detected at concentrations above drinking water criteria include BTEX, and MTBE, which are typically indicative of gasoline contamination. Other compounds, such as acetone, chlorobenzene, methyl ethyl ketone (MEK), bis(2-ethylhexyl)phthalate, and methylphenol were also detected at concentrations that exceed drinking water criteria.

The highest concentrations of BTEX and other gasoline related compounds occur in the northeastern portion of the OU-2 Area near MW-3. A comparison of the analytical results from MW-3 and MW-3D indicate that impacts to groundwater in this area are primarily associated with the upper portion of the aquifer. Monitoring wells located near the downgradient edge of the OU-2 Area boundary have no or substantially lower concentrations of VOCs and SVOCs indicating that the groundwater impacts do not extend beyond the OU-2 Area boundary downgradient of the higher groundwater concentrations. Groundwater results for VOCs and SVOCs are provided in Table 1.2 and Table 1.3, respectively.

4.3.2 METALS RESULTS

Several metals were detected at concentrations that exceed drinking water criteria, including arsenic, chromium (total), lead, manganese, and vanadium. Concentrations of arsenic, chromium (total), and lead are detected above drinking water criteria in the northwest portion of the OU-2 Area and do not extend beyond the OU-2 Area boundary. Concentrations of manganese and vanadium minimally exceed the drinking water criteria at the downgradient boundary of the OU-2 Area. However, these metals are present across the OU-2 Area monitoring network and do not appear to be a result of activities within the OU-2 Area. Groundwater results for metals are provided in Table 1.4.

4.3.3 PCB RESULTS

Monitoring wells MW-3, MW-6, and MW-7 were analyzed for PCBs based on PCB-detections in soil and near surface water samples collected in the northeast corner of the Tank H, I, J, K containment area. All sample results were non detect for PCBs as shown in Table 1.5.

4.4 FACTORS AFFECTING CONTAMINANT MIGRATION

Due to proximity of the Site buildings to the extent of groundwater contamination, volatilization from groundwater to air is considered a possible contaminant migration pathway within the OU-2 Area.

4.5 MODELING METHODS AND RESULTS

The extent of groundwater impacts at the OU-2 downgradient boundary has been delineated to the drinking water criteria. As such, modeling is not necessary to establish the area of groundwater impact at OU-2.

5.0 BASELINE RISK ASSESSMENT

5.1 HUMAN HEALTH EVALUATION

This section discusses the evaluation of potential human exposures to hazardous constituents in groundwater at OU-2. The methods used in the evaluation are based on U.S. EPA human health risk assessment guidance and are consistent with DNREC guidance. The scope of the human health evaluation is summarized in the conceptual site model (CSM) shown in Table 5.1. The CSM identifies the scenarios for potential human exposure under current and reasonably expected future conditions at and around the OU-2 Area in terms of the potentially exposed populations, the environmental media to which they could be exposed, and the potential routes of exposure. The CSM was developed based on the data from the OU-2 Area investigations and general Site information discussed in Sections 1 and 2, respectively. The scenarios for potential human exposure are further discussed in Section 5.1.2.

Discussion of the human health evaluation is organized as follows:

- Preparation of data used in the evaluation are discussed in Section 5.1.1 – Data Evaluation;
- Scenarios for potential human exposure are discussed in Section 5.1.2 – Exposure Assessment, which also discusses the estimation of exposure concentrations and chemical intakes for each exposure scenario;
- Toxicity information for the constituents included in the evaluation is summarized in Section 5.1.3 – Toxicity Assessment; and
- Estimates of risks associated with the potential exposures discussed in Section 5.1.2.2 and their significance are discussed in Section 5.1.4 – Risk Characterization. Uncertainties associated with the risk estimates are also discussed in this section.

5.1.1 DATA EVALUATION

5.1.1.1 DATA COLLECTION

The risk assessment evaluated groundwater data that were collected during the OU-2 Area groundwater investigation, which was conducted during 2005 and 2006 to assess the extent to which soil conditions at OU-2 have affected groundwater quality (CRA, 2006b and GM, 2007). These data are listed in Tables 1.2 through 1.5. The groundwater

samples collected during this investigation were analyzed for VOCs, SVOCs, and metals, as described in the investigation work plans (CRA, 2005 and 2006c).

5.1.1.2 DATA PREPARATION

All groundwater data were validated consistent with the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines for organic and inorganic data review as discussed in the Quality Assurance Project Plan (QAPP) (see Appendix G). In addition, the following procedures were used to prepare the data for quantitative risk assessment. These procedures, which are based on U.S. EPA guidance on human health risk assessment (U.S. EPA 1989), are as follows:

- Constituent concentrations qualified as not detected (i.e., U or UJ-qualified data) during data validation are evaluated as non-detects;
- Constituent concentrations qualified as not usable (i.e., R-qualified data) during data validation are not included in the risk assessment;
- Concentrations qualified as estimated (i.e., J-qualified data) are included for quantitative assessment;
- Concentrations in duplicate field samples are averaged to obtain a representative concentration for the sample location. When a constituent was detected in only one sample of a duplicate pair, the average of the detected concentration and one-half the quantitation limit is used in further calculations;
- The concentration of methylphenol (total) in a sample is the sum of the concentrations of the detected isomers and half the quantitation limit of isomers not detected in the sample but detected elsewhere in groundwater at OU-2. If no isomer is detected in a sample, methylphenol is considered to be not detected in the sample;
- As a conservative assumption, all concentrations of organic and inorganic constituents detected in groundwater are assumed to be Site-related. However Site data shows that inorganic constituents are detected in upgradient monitoring well locations; and
- Earth metals, including aluminum, calcium, iron, magnesium, potassium, and sodium, were not included in the risk assessment.

5.1.2 EXPOSURE ASSESSMENT

This section discusses the potential exposures that are relevant under current and reasonably expected future land use at and around the OU-2 Area. The exposure setting, potentially exposed populations, and exposure pathways are discussed below in Sections 5.1.2.1 to 5.1.2.3.

Potential exposures of workers via inhalation are quantified as average daily concentrations in indoor and outdoor air. The methods for estimating average daily concentrations in indoor and outdoor air are discussed in Sections 5.1.2.6.1 and 5.1.2.6.2, respectively. Since the plant is currently regulated by the Occupational Safety and Health Administration (OSHA), the indoor and outdoor air concentrations are compared to occupational inhalation limits, as discussed further in Section 5.1.4.1.1. To assess worker inhalation exposures in the event that future industrial operations at OU-2 are not subject to OSHA regulations (e.g., if GM no longer owned the Site), the indoor and outdoor air concentrations are also used to estimate cancer and noncancer risks, as further discussed in Section 5.1.4.1.2.

Potential exposures of workers via ingestion and dermal contact are quantified as doses, which are defined as follows:

> The dose for evaluating cancer risk is averaged over a lifetime and is called a lifetime average daily dose (LADD). For evaluating long-term (chronic) noncancer effects, the dose is averaged over the duration of potential exposure and is called an average daily dose (ADD). The concentration term in the dose equation refers to the concentration in an environmental medium to which a population is exposed over a specified duration. The intake term refers to the intake rate of the contaminated environmental medium, which is a function of the magnitude, frequency, and duration of exposure.

The methods for estimating the concentration term are discussed in Section 5.1.2.5. The exposure factors that are used to quantify the magnitude, frequency, and duration of potential exposures are discussed in Section 5.1.2.7.

5.1.2.1 EXPOSURE SETTING

The environmental setting at and around the OU-2 Area, including climate, geology, hydrogeology, and surface water, is discussed in Section 2.

5.1.2.2 POTENTIALLY EXPOSED POPULATIONS

OU-2 is an outdoor area that is located within an active portion of the GM Wilmington Assembly Plant. As such, workers constitute the main receptor population at OU-2, although trespassers could represent another receptor population. Currently, routine workers are expected to be present in OU-2 only occasionally and only for a portion of their work day, since their main tasks in this area are checking flow meters and cooling systems, performing chemical tests on the cooling systems, pumping chemicals from drums to holding tanks, and performing maintenance work. In the future, industrial use of the OU-2 Area could potentially entail a much higher degree of worker presence either outdoors or indoors. To account for this possibility, a conservative exposure frequency was used in the exposure assessment, as discussed in Section 5.1.2.6.1. Construction workers also could be present in the OU-2 Area, and may conduct construction or maintenance activities that involve subsurface excavation. Trespasser presence in the OU-2 Area, while possible, is considered unlikely, since access to the plant is controlled by security personnel and fencing.

In summary, the potentially exposed populations at and around the OU-2 Area under current and reasonably expected future land use include the following:

- Routine workers;
- Construction workers; and
- Trespassers.

5.1.2.3 EXPOSURE PATHWAYS

The exposure pathways evaluated in the risk assessment are summarized in the conceptual site model shown in Table 5.1. Potential receptors include routine workers, construction workers, and trespassers. The types of potential exposures for each receptor are discussed below.

5.1.2.3.1 ROUTINE WORKERS

While outdoors in the OU-2 Area, routine workers could be exposed to constituents in the underlying groundwater that volatilize and migrate into outdoor air, since OU-2 is mostly covered with crushed stone. Routine workers also occasionally enter the two buildings (i.e., the Weld Water Building and the Pump House) that are located over the

main area of groundwater impact in OU-2. While in the buildings, routine workers could be exposed to constituents in the underlying groundwater that volatilize and migrate into indoor air through possible cracks in the buildings' foundations.

Exposure of routine workers via potable groundwater use is not expected because groundwater is not used as a drinking water supply at the Site, and future potable use of groundwater at the Site is not reasonably expected. Potable water is currently obtained from the Artesian Water Company, Newark, Delaware. Currently, the plant also uses this water for non-potable purposes (e.g., as process water in manufacturing operations). Although the plant has no plans to use groundwater for nonpotable purposes, potential exposure to the plant's routine workers via such nonpotable groundwater use is evaluated in the risk assessment.

5.1.2.3.2 CONSTRUCTION WORKERS

Construction workers could be exposed to constituents in groundwater at OU-2 via contact with groundwater during construction or maintenance activities that involve excavation to the water table, which is 10 feet or more below ground at OU-2 (CRA 2006a). Since underground utilities are typically less than 5 feet below ground in the OU-2 Area, excavations that extend to the water table are expected to be infrequent. However, if such excavations were to occur, workers could be exposed to constituents in groundwater via incidental ingestion, dermal contact, and inhalation of vapors.

5.1.2.3.3 TRESPASSERS

Trespassers are unlikely to be present in OU-2, as discussed in Section 5.1.2.2. However, if trespassers were to be in OU-2, they could be exposed to constituents in the underlying groundwater that volatilize and migrate into outdoor air.

5.1.2.4 ESTIMATION OF EXPOSURE CONCENTRATIONS

The highest constituent concentrations among the groundwater data, including total and dissolved metal concentrations, were initially used as highly conservative estimates of the exposure concentrations for the inhalation, ingestion, and dermal contact routes of exposure for all receptors. The risk assessment took this highly conservative approach because the monitoring data were collected over a relatively short period of approximately two years, and concentrations at a few locations have varied somewhat

over time. The exposures estimated in this approach are considered upper-bound estimates and are expected to grossly overestimate the reasonable maximum exposure (RME). To provide more realistic but still conservative exposure estimates, 95 percent upper confidence limits (UCLs) were also calculated for constituents that were found to have the highest risk estimates based on the upper-bound exposure estimates, as discussed in Section 5.1.4.2. These 95 percent UCLs were still conservatively based on the highest detected groundwater concentrations at each monitoring well. The 95 percent UCLs were calculated using the nonparametric bootstrap method known as the bias-corrected and accelerated (BCa) method with 4,000 bootstrap replications (Efron and Tibshirani, 1998).

The groundwater concentrations used to assess potential exposures from nonpotable groundwater use were also based on the highest constituent concentrations among the groundwater data from each location, except the concentrations from MW-3 and MW-3D were first averaged before any further calculations. The concentrations from this well pair were averaged because these wells represent two depth intervals at the same location. Since the aquifer at OU-2 has an average thickness of approximately 20 feet, which is relatively thin, a water supply well pumping from the OU-2 aquifer would be expected to be constructed with a screen interval that spans the entire thickness of the aquifer to produce sufficient groundwater for typical industrial nonpotable uses. Therefore, the groundwater from location MW-3/3D that enters such a water supply well would have a mix of the concentrations from the intervals represented by MW-3 and MW-3D. These averaged concentrations were used with concentrations from the other monitoring wells in OU-2 to calculate 95 percent UCLs. In this exposure scenario, the 95 percent UCLs are used to estimate the mix of groundwater concentrations that the pumping well would draw from various portions of OU-2 (and perhaps beyond OU-2). To streamline the risk assessment, 95 percent UCLs were calculated for only acetone, benzene, chromium (total), ethylbenzene, 2-methylnaphthalene, naphthalene, toluene, vanadium, and xylenes (total), and the highest concentrations were conservatively used for all other constituents.

5.1.2.5 AIR EMISSION AND DISPERSION MODELS

The following models are used to estimate indoor and outdoor air concentrations for the exposure scenarios discussed in Section 5.1.2.3. These models are used by U.S. EPA and state regulatory agencies for screening-level analysis. The following are brief descriptions of the models. Further details of these models are provided in Appendix E.

5.1.2.5.1 VAPOR INTRUSION INTO BUILDINGS

Indoor air concentrations resulting from migration of vapors from groundwater into a building are estimated using the model described by Johnson and Ettinger (1991), which U.S. EPA recommends for screening-level evaluations (U.S. EPA, 2004a). The vapor intrusion scenario for routine workers is evaluated using the building parameters for the two buildings located over the main area of groundwater impact in OU-2, the Weld Water Building and the Pump House. The soil-related parameters of the model are based on the stratigraphy of the vadose zone soil at OU-2, which consists of several alternating layers of sand and silty-clay as determined from the boring logs for the locations nearest to the buildings (MW-6 for the Weld Water Building and MW-13 for the Pump House). Further discussion of the model and the input parameters used in the assessment is provided in Appendix E.

5.1.2.5.2 VAPOR EMISSION INTO OUTDOOR AIR

The model for estimating groundwater vapor migration through the vadose zone soil to outdoor air is based on steady-state diffusion. Further discussion of the model and the input parameters used is provided in Appendix E.

5.1.2.5.3 VAPOR EMISSION FROM EXPOSED GROUNDWATER

The model for estimating vapor emission from exposed groundwater in excavations is based on mass-transfer coefficients recommended in U.S. EPA guidance (U.S. EPA, 1995). Further discussion of the model and the input parameters used in the assessment is provided in Appendix E.

5.1.2.5.4 AIR DISPERSION OF VAPORS

Outdoor air concentrations are conservatively estimated using U.S. EPA's empirical correlation for annual-average, on-source, ground-level concentrations (U.S. EPA, 2002). The correlation was applied conservatively assuming a square source area the size of OU-2 (approximately 3 acres) even though the area of VOC-affected groundwater is smaller. The correlation was applied using the correlation coefficients for the Philadelphia, PA meteorological area, which is the closest city to the Site within the Site's climate zone (U.S. EPA, 2002).

5.1.2.5.5 VAPOR EMISSIONS FROM NONPOTABLE GROUNDWATER USE

Indoor air concentrations from nonpotable groundwater use are conservatively calculated assuming that groundwater would be pumped into the workspace and a portion of the constituents in the groundwater would volatilize into the indoor air. A groundwater usage rate of 2 gallons per minute was conservatively assumed. This rate is believed to be at or beyond the high-end of sustainable yields that are possible for the saturated zone at OU-2, as evidenced by the very slow recharge of OU-2 monitoring wells after purging. The indoor air concentration was conservatively calculated using the building characteristics for the Pump House and the Weld Water Building, a conservatively low air exchange rate of 2 per hour, and a conservatively high transfer efficiency of 0.7 from water into air during nonpotable groundwater use, which is based on the average transfer efficiency for volatile chemicals in residential showers (U.S. EPA 2000). The Pump House and the Weld Water Building were used for these calculations because they are the smallest buildings in the vicinity of OU-2, and as such, the indoor air concentrations estimated for these buildings are believed to be the most conservative estimates of indoor air concentrations resulting from potential nonpotable groundwater use. As shown in Tables 5.2g and 5.2h, the indoor air concentration estimates for the Weld Water Building are lower than those for the Pump House because the Weld Water Building is larger than the Pump House. The transfer efficiency for showers was chosen to represent potential nonpotable industrial groundwater uses that involve spray applications because such applications are believed to have higher transfer efficiencies than other applications. Indoor air concentrations were calculated for only constituents that easily volatilize according to RAGS B (U.S. EPA 1991c). Further discussion is provided in Appendix E.

5.1.2.6 ESTIMATION OF INTAKES

The exposure factors for evaluating the exposure scenarios summarized in the CSM and in Section 5.1.2.3 are discussed in this section. In this risk assessment, standard default exposure factors recommended by U.S. EPA for estimating RMEs are used where available and appropriate. Where standard default exposure factors are not available or not appropriate for an exposure scenario, the evaluation is conducted using similarly conservative exposure factors that are based on site-specific considerations and professional judgment. The exposure factors used in the risk assessment are summarized in Appendix E and discussed further below.

5.1.2.6.1 ROUTINE WORKERS

Potential exposures of current and future workers via inhalation are quantified as an average daily concentration in indoor and outdoor air. The methods for estimating the average daily concentration due to vapor migration from the water table to indoor and outdoor air are discussed in Sections 5.1.2.6.1 and 5.1.2.6.2, respectively. The methods for estimating the average daily indoor air concentration from nonpotable groundwater use within the plant are discussed in Section 5.1.2.5.5. Since the plant is currently regulated by OSHA, the indoor and outdoor air concentrations are compared to occupational inhalation limits, as discussed further in Section 5.1.4.1.1. To assess worker inhalation exposures via vapor emissions from the water table in the event that future non-GM industrial operations at OU-2 are not subject to OSHA regulation, the indoor and outdoor air concentrations due to vapor emissions from the water table are also used to estimate cancer and noncancer risks. The risk estimates are calculated using the standard default exposure factors discussed below. According to U.S. EPA (1991a), standard default exposure factors are conservative assumptions about the magnitude, frequency, and duration of exposures, which in combination are intended to provide estimates of exposures that are higher than actual exposures to a large portion (90 percent to 99 percent) of a potentially exposed population.

Groundwater Ingestion Rate

A rate of 0.005 liters/hour (L/hour) is used for incidental ingestion of groundwater during nonpotable groundwater use. This rate is 10 percent of the rate that U.S. EPA (1989) recommends for ingestion while swimming, and represents a very conservative estimate of incidental groundwater ingestion that could occur during nonpotable groundwater use.

Groundwater Dermal Contact Rates

The exposed skin surface area of 2,000 square centimeters is based on the surface area of the forearms and hands (U.S. EPA, 2004b). Workers are conservatively assumed to be covered with groundwater over this skin surface area for 2 hours per day. The absorbed dose for organic chemicals is estimated using a nonsteady-state approach (U.S. EPA, 2004b), which is more conservative than the steady-state approach (U.S. EPA, 1989), particularly for hydrophobic chemicals. The permeability coefficients (K_p) for dermal absorption from groundwater are estimated following U.S. EPA guidance (2004b). The calculations of the nonsteady-state dermal absorption are provided in Appendix E.

Exposure Frequency

The frequency of 250 days/year is U.S. EPA's recommended value for evaluating RME in industrial settings (U.S. EPA, 1991a). The value is based on a 5-day work week and 50 weeks per year. Although routine workers are in OU-2 only occasionally and for only a portion of the work day, the risk assessment conservatively evaluates worker exposure to groundwater constituents in outdoor air by assuming exposure during the entire work day and for 250 work days per year. Similarly, the risk assessment conservatively evaluates exposure to groundwater constituents in indoor air by assuming exposure during the entire work day for 250 work days per year, even though workers spend much less time in the buildings in OU-2. These highly conservative assumptions are used so that the risk assessment's conclusions regarding the significance of potential exposures to groundwater constituents in OU-2 would remain valid even if future industrial use of the area were to entail a much higher degree of worker presence either outdoors or indoors.

Exposure Duration

The duration of 25 years is U.S. EPA's recommended value for evaluating RME in industrial settings (U.S. EPA, 1991a). The value is the 95th percentile number of years workers work at one location.

Averaging Time

The averaging time for evaluating exposures to carcinogens is 70 years. The averaging time for evaluating exposures to noncarcinogens is the exposure duration (U.S. EPA, 1989).

5.1.2.6.2 CONSTRUCTION WORKERS

The exposure factors used for evaluating potential exposure of construction workers to groundwater are as follows.

Groundwater Ingestion Rate

A rate of 0.005 L/hour is used for incidental ingestion of groundwater during construction work in excavations that extend into groundwater. This rate is 10 percent of the rate that U.S. EPA (1989) recommends for ingestion while swimming, and

represents a very conservative estimate of incidental groundwater ingestion that could occur while workers are in an excavation pit.

Groundwater Dermal Contact Rates

The exposed skin surface area of 3,300 square centimeters is based on the U.S. EPA-recommended exposed skin surface area for evaluating high-end contact with soil by workers in industrial settings (U.S. EPA, 2004b). Workers are conservatively assumed to be covered with groundwater over this exposed skin surface area for two hours per event. The absorbed dose for organic chemicals is estimated using a nonsteady-state approach (U.S. EPA, 2004b), which is more conservative than the steady-state approach (U.S. EPA, 1989), particularly for hydrophobic chemicals. The permeability coefficients (K_p) for dermal absorption from groundwater are estimated following U.S. EPA guidance (2004b). The calculations of the nonsteady-state dermal absorption are provided in Appendix E.

Exposure Frequency and Duration

The number of days of construction/maintenance activities that involve excavations into groundwater at OU-2 is conservatively assumed to be 50 days, which is assumed to occur at a frequency of 5 days per year for a period of 10 years. This combination of exposure frequency and exposure duration is expected to be conservative for the amount of time that workers are actually in contact with groundwater in OU-2 (as opposed to the total time for maintenance or construction, which typically includes time not associated with excavation). The assumption of 5 days per year can represent the time for a few small repairs per year or one larger repair. The duration of 10 years is more than twice the length of time that workers typically work at one location (U.S. EPA, 1997c).

Body Weight

The body weight of 70 kilograms (kg) is the standard U.S. EPA-recommended body weight for assessing exposure to adults (U.S. EPA, 1989).

Averaging Time

The averaging time for evaluating cancer risk is equal to a lifetime of 70 years, and the averaging time for evaluating noncancer risk is equal to the exposure duration (U.S. EPA, 1989).

5.1.2.6.3 TRESPASSERS

In this risk assessment, the significance of trespasser exposure to groundwater constituents in outdoor air is indirectly evaluated using the results for routine workers, since trespasser exposures would be much lower than those for routine workers.

5.1.3 TOXICITY ASSESSMENT

A toxicity assessment identifies potential adverse health effects that are associated with exposure to chemicals, and determines the dose-response relationship between exposure and the occurrence of adverse effects. The toxicity values used in deriving site-specific estimates of cumulative cancer risks and noncancer hazard indices (HIs), were compiled from the following U.S. EPA hierarchy of sources (U.S. EPA, 2003):

1. Integrated Risk Information System (IRIS);
2. Provisional Peer Reviewed Toxicity Values (PPRTV); and
3. Other (i.e., additional U.S. EPA and non-EPA sources of toxicity information).

The toxicity values are current as of December 2006. When a toxicity value was not available from the first two tiers of sources, other U.S. EPA sources of toxicity values were consulted and the availability of Agency for Toxic Substances and Disease Registry (ATSDR) minimal risk levels (MRLs) was checked. The toxicity values used in the risk assessment and their sources are presented in Appendix E and are discussed below.

5.1.3.1 TOXICITY VALUES FOR CARCINOGENS

U.S. EPA considers chemicals belonging to the following U.S. EPA cancer weight-of-evidence groups as human carcinogens:

Group A — Known Human Carcinogen: Sufficient evidence of carcinogenicity in humans;

Group B1 — Probable or Likely Human Carcinogen: Limited evidence of carcinogenicity in humans;

Group B2 — Probable or Likely Human Carcinogen: Sufficient evidence of carcinogenicity in animals with inadequate or lack of evidence in humans; and

Group C — Possible Human Carcinogen: Suggestive evidence of carcinogenicity in animals and inadequate, insufficient, or lack of evidence in humans.

As shown in Appendix E, U.S. EPA has designated some of the constituents as Group B2 or Group C, which means that U.S. EPA acknowledges that there is either inadequate or a lack of evidence that these constituents actually cause cancer in humans. Therefore, evaluating these constituents as human carcinogens in the risk assessment is highly conservative.

U.S. EPA-derived cancer slope factors (SFs) and inhalation unit risk factors (URFs) for carcinogenic constituents and their sources are shown in Appendix E. The oral SFs and URFs represent 95 percent upper confidence bounds on the probability of getting cancer over a lifetime per unit dose. As recognized by U.S. EPA, there is significant scientific evidence that some of the SFs and URFs may be overly conservative and may ignore the potential existence of threshold doses. Nonetheless, they are used here as conservative assessment tools.

5.1.3.2 TOXICITY VALUES FOR NONCARCINOGENS

U.S. EPA-derived chronic reference doses (RfDs) and chronic inhalation reference concentrations (RfCs) and their sources are shown in Appendix E. The oral RfDs and inhalation RfCs represent conservative estimates of the daily exposure to the human population, including sensitive subpopulations (e.g., children), which are likely to be without an appreciable risk of deleterious effects during a lifetime. These RfDs and RfCs typically incorporate several safety factors to account for uncertainties in their derivation, which in combination often result in overall uncertainty factors of 1,000 or

more. Furthermore, for many constituents, there is significant scientific debate about the validity of these RfDs and RfCs, and the association of these doses and concentrations with potential adverse health consequences. Nonetheless, the RfDs and RfCs are used here as conservative assessment tools.

5.1.3.3 EXTRAPOLATION OF TOXICITY VALUES

The U.S. EPA sources of toxicity values do not provide dermal toxicity values for any of the constituents. Therefore, oral toxicity values (i.e., oral SFs and RfDs) are used as dermal toxicity values in this risk assessment. Adjustments to the oral toxicity values are made in this route-to-route extrapolation based on U.S. EPA guidance (U.S. EPA 2004b).

The U.S. EPA sources of toxicity values do not provide inhalation toxicity values (URFs and RfCs) for all of the constituents. For a constituent that has no inhalation toxicity value, the oral SF and/or RfD, if available, is converted to an URF and/or RfC using default U.S. EPA assumptions (U.S. EPA 1997a).

5.1.4 RISK CHARACTERIZATION

The health significance of the potential exposures identified in Section 5.1.2 is discussed in the following subsections. Section 5.1.4.1.1 describes the methods for quantifying occupational inhalation exposures via comparison of estimated air concentration to occupational inhalation limits. Section 5.1.4.1.2 describes the method for quantifying cancer risks and noncancer hazard indices; it also discusses the risk estimates and their significance. Uncertainties in the risk evaluation are discussed in Section 5.1.5.

5.1.4.1 METHODS AND APPROACHES

5.1.4.1.1 OCCUPATIONAL INHALATION EVALUATION

Since the plant is regulated by OSHA, the risk assessment evaluates current worker inhalation exposures by comparing estimated air concentrations with occupational inhalation limits from the following hierarchy: permissible exposure limits (PELs) established by OSHA (29 CFR 1910), threshold limit values (TLVs) recommended by the American Conference of Government Industrial Hygienists (ACGIH, 2005), and the recommended exposure limits (RELs) established by National Institute for Occupational

Safety and Health (NIOSH). These inhalation limits for constituents detected in groundwater are provided in Appendix E.

The significance of potential exposure of routine workers to constituents in groundwater via assumed vapor intrusion is evaluated by dividing the estimated indoor air concentrations by their corresponding occupational inhalation limits, and then summing the resulting ratios. These ratios should be much less than 1 (e.g., less than 0.01) to ensure that the estimated indoor air concentrations from assumed vapor intrusion do not contribute materially to total indoor air concentrations (which would include contributions from indoor occupational sources).

Similarly, the significance of potential exposure of routine workers to constituents in groundwater via vapor migration through the soil into outdoor air is evaluated by dividing the estimated outdoor air concentrations by their corresponding occupational inhalation limits, and then summing the resulting ratios. These ratios also should be much less than 1 to ensure that estimated outdoor air concentrations from vapor migration through the soil into outdoor air do not contribute materially to total outdoor air concentrations (which would include contributions from outdoor occupational sources).

Additionally, the significance of potential exposure of routine workers to constituents in groundwater via volatilization into indoor air during nonpotable uses is evaluated by dividing the estimated indoor air concentrations by their corresponding occupational inhalation limits, and then summing the resulting ratios. These ratios also should be less than 1 to ensure that estimated indoor air concentrations from nonpotable groundwater uses do not contribute materially to total indoor air concentrations (which would include contributions from other indoor occupational sources).

5.1.4.1.2 CANCER RISK AND NONCANCER HAZARD INDEX

The cancer risk associated with potential exposure to a carcinogenic chemical via ingestion and dermal contact is calculated by multiplying an estimate of the LADD for a particular exposure scenario by the cancer slope factor SF for the chemical, as follows:

$$Risk = LADD \cdot SF \ .$$

For the inhalation route, the inhalation cancer risk is calculated using the chemical concentration in air (C_{air}) during the period of exposure and the URF, as follows:

$$Risk = C_{air} \cdot URF \cdot \frac{EF \cdot ED}{AT}$$

where EF is exposure frequency, ED is exposure duration, and AT is averaging time.

The noncancer HQ associated with potential exposure via ingestion and dermal contact to a chemical being evaluated for potential noncarcinogenic health effects is calculated by dividing an estimate of the ADD for a particular exposure scenario by the RfD for the chemical, as follows:

$$HQ = \frac{ADD}{RfD}$$

For the inhalation route, the inhalation HQ is calculated using C_{air} and the RfC, as follows:

$$HQ = \frac{C_{air}}{RfC} \cdot \frac{EF \cdot ED}{AT}$$

The potential cancer risk and noncancer effects that may result from exposure to the combination of groundwater constituents at the OU-2 Area are estimated following U.S. EPA guidance (1989), as follows:

$$Cumulative\ Risk = \sum_i Risk_i$$

$$Hazard\ Index = \sum_i HQ_i$$

where:

$Risk_i$	=	estimated cancer risk for the *i*th constituent; and
HQ_i	=	hazard quotient for the *i*th constituent.

For constituents that were found to have the highest noncancer risk estimates based on the upper-bound exposure estimates, the noncancer risk estimates are segregated by

critical effect. This method of segregating noncancer risk estimates by critical effect is described in U.S. EPA (1989).

The significance of the estimates of cumulative cancer risk and HI was evaluated by comparing the estimates to a cumulative cancer risk limit of 10^{-4} and an HI limit of 1, which U.S. EPA uses to determine whether remediation is warranted (61 FR 19432, May 1, 1996; U.S. EPA, 1991b). The risk estimates and results of the comparison to these limits are discussed in the following sections.

5.1.4.2 RISK CHARACTERIZATION RESULTS

5.1.4.2.1 ROUTINE WORKERS

Tables 5.2a and 5.2b summarize the estimated indoor air concentrations due to vapor emissions from the water table and their ratios to the occupational inhalation limits in the Weld Water Building and the Pump House, respectively,. Tables 5.2a and 5.2b show that the ratio for each constituent is much less than 1. It also shows that the sum of the ratios, which accounts for exposure to the mixture of constituents in the indoor air, is also much less than 1 (i.e., 0.0002).

Tables 5.2c and 5.2d summarize the estimates of cumulative cancer risk and HI that are associated with worker exposure to the estimated indoor air concentrations in the Weld Water Building due to vapor emissions from the water table. Tables 5.2e and 5.2f summarize the estimates of cumulative cancer risk and HI that are associated with worker exposure to the estimated indoor air concentrations in the Pump House due to vapor emissions from the water table. These tables show that the cumulative cancer risk and HI estimates do not exceed 10^{-4} or 1, respectively.

Tables 5.2g and 5.2h summarize the estimated indoor air concentrations due to vapor emissions from nonpotable groundwater use and their ratios to the occupational inhalation limits, in the Pump House and the Weld Water Building, respectively,. Tables 5.2g and 5.2j show that the ratio for each constituent is much less than 1. It also shows that the sum of the ratios, which accounts for exposure to the mixture of constituents in the indoor air, is also much less than 1 (i.e., 0.1).

Tables 5.2i and 5.2j summarize the upper-bound estimates of cumulative cancer risk and HI for worker exposure to constituents in groundwater via incidental ingestion and dermal contact during nonpotable groundwater use. As shown on these tables, the cumulative cancer risk and noncancer HI estimates do not exceed the limits of 10^{-4} and 1,

respectively. The largest contributions to the dermal HI estimate of 1 are from toluene with a HQ of 0.55, vanadium with an HQ of 0.11, naphthalene with a HQ of 0.085, ethylbenzene with an HQ of 0.085, and xylenes with a HQ of 0.077. Since the HI estimate of 1 assumes all chemicals have the same target organ and critical effect, when they actually do not, refinements were conducted to segregate the HI by target organs and critical effects for these constituents as allowed under U.S. EPA risk assessment guidance (U.S. EPA 1989), which are shown in Table 5.2k. The critical effects for dermal toxicity values of ethylbenzene and toluene are both kidney effects and for xylenes and naphthalene are both decrease in body weight, therefore, the dermal HQ values were summed for these sets of chemicals. As a result, the segregated HI for ethylbenzene and toluene is 0.6, and the segregated HI for xylenes and naphthalene is 0.16.

Table 5.3a summarizes the estimated outdoor air concentrations due to vapor emissions from the water table and their ratios to the occupational inhalation limits. Table 5.3a shows that the ratio for each constituent is much less than 1. It also shows that the sum of the ratios, which accounts for exposure to the mixture of constituents in the outdoor air, is also much less than 1 (i.e., 0.001).

Tables 5.3b and 5.3c summarize the estimates of cumulative cancer risk and HI that are associated with worker exposure to the estimated outdoor air concentrations due to vapor emissions from the water table. These tables show that the cumulative cancer risk and HI estimates do not exceed 10^{-4} or 1, respectively.

The results discussed above show that the concentrations of constituents in groundwater at OU-2 do not pose a significant risk to routine workers either under current conditions or if future operations at OU-2 were to entail a much higher degree of worker presence and were to be not regulated by OSHA.

5.1.4.2.2 CONSTRUCTION WORKERS

To streamline the risk assessment, upper-bound estimates were calculated using several assumptions that are more conservative than necessary for evaluating RMEs. Tables 5.4a and 5.4b summarize these upper-bound estimates of cumulative cancer risk and HI for worker exposure to constituents in groundwater during occasional excavations into the water table. As shown in these tables, the cumulative cancer risk estimate does not exceed the limit of 10^{-4}, but the HI estimate is 2, which exceeds the limit of 1. The largest contributions to the HI estimate of 2 are from naphthalene with a HQ of 0.9, xylenes with a HQ of 0.5, and toluene with a HQ of 0.2. Since the HI estimate of 2 is an upper-bound estimate that assumes all chemicals have the same target organ and critical effect,

and the workers would be exposed to the highest concentrations of all chemicals at the same time and constantly, refinements were conducted to provide more appropriate RME risk estimates. These refinements include segregation of HQs by critical effects and calculating 95 percent UCLs for naphthalene, xylenes, and toluene. Either of these refinements results in an HI estimate below the limit of 1, which demonstrates that the concentrations of constituents in groundwater at OU-2 do not pose a significant risk to construction workers.

Segregation of HQs

The upper-bound HI estimate of 2 was segregated by critical effect. The critical effect and HQ estimates for naphthalene, toluene, and xylenes are shown in Table 5.4c. In addition, the HI estimate for the remaining chemicals, those not segregated by critical effect, is presented on Table 5.4c. None of these HQ or HI estimates exceeds the threshold of 1.

95 percent UCLs

95 percent UCLs were conservatively calculated using the highest detected groundwater concentrations at each well for naphthalene, toluene, and xylenes. Using these 95 percent UCLs and the highest detected concentrations for the remaining chemicals, the HI estimate is 0.6, as shown in Table 5.4d. This HI estimate was further segregated by critical effects for naphthalene, toluene, and xylenes, as shown in Table 5.4e. The HI estimate for the remaining chemicals, those not segregated by critical effect, is also presented in Table 5.4e. These HQ and HI estimates are considerably less than the limit of 1.

The results discussed above show that the concentrations of constituents in groundwater at OU-2 do not pose a significant risk to construction workers.

5.1.4.2.3 TRESPASSERS

As discussed in Section 5.1.4.2.1, the concentrations of constituents in groundwater at OU-2 do not pose a significant risk to routine workers. This conclusion means that the potential exposure of trespassers is also insignificant.

5.1.5 UNCERTAINTY ANALYSIS

5.1.5.1 EXPOSURE CONCENTRATIONS

The groundwater exposure concentrations used to estimate cancer and noncancer risks for routine workers' inhalation exposure via vapor emissions from the water table and cancer risks for construction workers' exposure during groundwater contact are based on the highest concentrations detected groundwater in the OU-2 Area. This approach inflates the cumulative cancer risk and HI estimates that did not exceed 10^{-4} and 1, respectively, relative to those that could have been calculated using realistic exposure concentrations rather than maximum concentrations. The use of maximum concentrations for all constituents introduces more conservatism than necessary for RME risk estimates because it assumes simultaneous worst-case exposure to all constituents constantly, when the RME generally would not have all constituents at worst-case concentrations at all times. The inflation of these risk and HI estimates makes them closer to the cumulative cancer risk limit of 10^{-4} and the HI limit of 1 than they would be if 95 percent UCLs were used for groundwater concentrations. The highest detected groundwater concentration, regardless of sample collection date, was used in this assessment. This approach is conservative since some current groundwater concentrations are less then the highest detected concentrations among all sampling events.

Most exposure concentrations that are based on mathematical modeling of constituent transfer from groundwater to air are conservative for the same reasons discussed above, since the model estimates are based on the use of maximum concentrations in groundwater. In addition, the model estimates are conservative because they generally do not account for the reduction of constituent concentrations in the groundwater as constituents transfer from these media. As a result, risk estimates that are based on the sum of risk estimates for multiple media are more conservative than necessary for RME estimates.

For the chromium (total) groundwater data, it was conservatively assumed that the concentrations represent hexavalent chromium. In reality, these concentrations likely are made up of only trivalent chromium. Chromium speculation data collected during the August and September 2006 sampling event showed that no hexavalent chromium was present in the groundwater samples. Therefore, the assumption that chromium (total) concentrations represent hexavalent chromium concentrations is conservative.

5.1.5.2 EXPOSURE FACTORS

As discussed in Section 5.1.2.7, most of the exposure factors used in the risk assessment are high-end (i.e., 90th to 95th percentile) estimates of the magnitude, frequency, and duration of potential exposures. When several such high-end factors are multiplied, the resulting estimates of dose will be higher than the 90th percentile of the distribution of exposures in the potentially exposed population and could be higher than the exposure to the maximally exposed individual, particularly when such exposure factors are combined with exposure concentrations that are based on maximum concentrations.

5.1.5.3 EXTRAPOLATED TOXICITY VALUES

As discussed in Section 5.1.3.3, the dermal toxicity values used in the risk assessment are oral toxicity values that were extrapolated to the dermal route without chemical-specific judgment regarding whether such extrapolation might be appropriate for a particular chemical. This is a conservative approach to ensure that potential risk via the dermal route is not overlooked. However, some constituents might exhibit different degrees of toxicity for the dermal route relative to the oral route. For such constituents, the extrapolation approach used in the risk evaluation could introduce uncertainty.

The conversion of an oral toxicity value to an inhalation toxicity value generally should be justified by consideration of a number of factors, including point of entry effects, pharmacokinetic data on the chemical's behavior in the different routes of exposure, and differences in the target organs affected. However, as a conservative measure for constituents without any inhalation toxicity values, oral SFs and RfDs were converted to inhalation URFs and RfCs in this risk assessment. Use of these extrapolated inhalation toxicity values reduces the potential for underestimating inhalation risks, but could introduce uncertainty.

5.1.5.4 RISK CHARACTERIZATION

Cancer and noncancer risk estimates for routine workers and cancer risk estimates for construction worker were summed regardless of the critical effect of the constituents. The summation of cancer and noncancer risks for multiple constituents is based on U.S. EPA guidance (1989) to assume dose additivity, which means that constituents in a mixture are assumed to have no synergistic or antagonistic interactions and each constituent has the same mode of action and elicits the same health effects. In general, this approach can introduce significant uncertainty. However, the majority of the

cumulative cancer risk and HI estimates in this risk assessment are dominated by contributions from no more than a few constituents, so that the cumulative risk estimates are nearly the same as those for the few key constituents.

5.2 ECOLOGICAL ASSESSMENT

The Site is located in a highly developed area bordered by residential, properties, railway tracks, and Delaware State Road 41. The Site is an active industrial property with little natural soil or vegetation at ground surface. As previously noted, no ECSA have been identified at or adjacent to the Site and no endangered and/or threatened species are expected to be present at the Site currently. Further, because the Site is expected to remain an active industrial property, the creation of habitats at the Site in the future is unlikely.

5.2.1 ECOLOGICAL CHARACTERIZATION

Since there are no ECSA identified at or adjacent to the Site and no endangered and/or threatened species are expected to be present at the Site, groundwater impacts at the OU-2 Area are not expected to have any negative effects on ecology at or adjacent to the Site.

5.2.2 IDENTIFICATION OF CHEMICALS OF CONCERN

The chemicals of concern (COCs) within the OU-2 are parameters that exceed at least one of the above noted drinking water criterion. The COCs are summarized in Table 3.1. However, due to the highly developed area of the Site, groundwater impacts within the OU-2 Area are not expected to have a negative effect on ecology at or adjacent to the Site.

5.2.3 EXPOSURE ASSESSMENT

Since no ECSA were identified at or adjacent to the Site and no endangered and/or threatened species are expected to be present at the Site, there is no evidence to suggest that any type of ecology will be exposed to the groundwater impacts within the OU-2 Area.

5.2.4 ECOLOGICAL EFFECTS ASSESSMENT

Since there are no known ECSA at the Site and no endangered and/or threatened species are expected to be present at the Site, the groundwater impacts within the OU-2 Area are not expected to have any negative ecological effects at the Site.

5.2.5 ECOLOGICAL RISK CHARACTERIZATION

An ecological risk assessment for the OU-2 Area was deemed unnecessary since no ECSA were identified at or adjacent to the Site and no endangered and/or threatened species are expected to be present at the Site.

5.2.6 UNCERTAINTY EVALUATION

There are no known ECSA currently present at the Site and there are no endangered and/or threatened species expected to be present at the Site. However, should future ECSA analysis of the Site reveal otherwise, an ecological assessment may be deemed necessary.

6.0 SUMMARY AND CONCLUSIONS

This section summarizes the results of the previous groundwater investigations within the OU-2 Area and provides conclusions related to the extent of OU-2 Area groundwater impacts.

6.1 SUMMARY

Groundwater investigations were conducted within the OU-2 Area in June 2005, November 2005, August 2006, and December 2006. Samples were collected from monitoring wells within the OU-2 Area monitoring network and were analyzed for VOCs, SVOCs, metals, and PCBs. The results of the groundwater investigations are summarized in Table 1.2 through Table 1.5.

6.1.1 NATURE AND EXTENT OF CONTAMINATION

BTEX and other gasoline-related compounds have been detected in concentrations exceeding drinking water criteria. The highest concentrations have been located in the northeast section of the OU-2 Area near MW-3. Comparison between MW-3 and MW-3D, located deeper within the aquifer, indicates that the high concentrations are primarily associated with the upper portion of the aquifer.

No concentrations of VOCs or SVOCs exceed drinking water criteria beyond the OU-2 downgradient boundary. There are minimal exceedances of metals (i.e., manganese and vanadium) at the downgradient boundary of the OU-2 Area. However, these metals have been detected throughout the OU-2 Area monitoring network and are not believed to be a result of activities within the OU-2 Area. Although drinking water criteria were used to guide the investigation, groundwater at the Site is not currently used or expected to be used in the future as a source of potable water.

6.1.2 FATE AND TRANSPORT

The fate and transport mechanisms of BTEX compounds are highly influenced by number of factors including the contaminant characteristics, soil and groundwater characteristics, and the presence of natural bacterial flora in the soil. BTEX compounds, in general, are highly degradable in the natural environment and remedial approaches

for BTEX compounds often rely on the natural degradation of the use of nutrients and oxygen to enhance the degradation processes.

6.1.3 RISK ASSESSMENT

The results of the risk assessment indicate that the concentrations of constituents in groundwater within the OU-2 Area do not pose a significant risk either under current conditions or if future operations at OU-2 were to entail a much higher degree of worker presence and were to be not regulated by OSHA.

The significance of the estimates of cumulative cancer risk and HI was evaluated by comparing the estimates to a cumulative cancer risk limit of 10^{-4} and an HI limit of 1, which U.S. EPA uses to determine whether remediation is warranted (61 FR 19432, May 1, 1996; U.S. EPA, 1991b). While the U.S. EPA cancer risk limit of 10^{-4} was used in the Groundwater RI/FS, all cumulative cancer risk estimates calculated in the baseline risk assessment (Section 5.1 and Tables 5.2c, 5.2e, 5.3b, and 5.4a) are also below the DNREC action level of 10^{-5}.

6.2 CONCLUSIONS

Groundwater impacts at the OU-2 downgradient boundary have been delineated to drinking water criteria. Despite the elevated concentrations of BTEX and other gasoline-related compounds in the northeastern portion of the OU-2 Area, the results of the risk assessment indicate that the concentrations of constituents in groundwater within the OU-2 Area do not pose a significant risk to human health.

6.2.1 DATA LIMITATIONS AND RECOMMENDATIONS FOR FUTURE WORK

There are at least two rounds of groundwater data collected for each monitoring well within the OU-2 Area monitoring network. Further groundwater monitoring for the next two years is appropriate to verify that extent of groundwater impact remains consistent with the conditions evaluated in the risk assessment.

7.0 DEVELOPMENT OF REMEDIAL ACTION ALTERNATIVES

7.1 INTRODUCTION

The objectives of the remedial action alternatives are to ensure that:

- Impacted groundwater does not pose an unacceptable risk to human health or the environment;
- The extent of groundwater contamination is within the OU-2 Area; and
- The concentrations of groundwater contaminants do not increase over time.

7.2 IDENTIFICATION OF GENERAL RESPONSE ACTIONS

Typically remedial response actions for groundwater include the following broad categories:

- No Action/Deferral to another program;
- Limited Action;
- Institutional Controls;
- Hydraulic Containment;
- Treatment; and
- Pump and treat.

Since the groundwater impacts resulting from the activities within the OU-2 Area have been delineated to drinking water criteria at the OU-2 Area downgradient boundary and the concentrations do not pose a significant risk to human health or the environment, the containment, treatment, and pump and treat actions are unnecessary for the Site conditions.

7.3 IDENTIFICATION AND SCREENING OF TECHNOLOGY TYPES

The screening process for the remedial actions is summarized below.

Remedial Response Action	*Remedial Technology*	*Screening Status*	*Reason for Screening*
No action	N/A	Retained	Feasible
Limited Action	Additional groundwater monitoring	Retained	Provides sufficient mechanism to evaluate protectiveness of remedy
Institutional Controls	Deed restrictions or other administrative controls	Evaluated in "No action"	Restrictions on groundwater use will be implemented
Hydraulic Containment		Rejected	Plume does not extend beyond OU-2 downgradient boundary
Treatment	1) Physical Treatment	Rejected	Contaminants do not pose a significant risk under current and reasonably expected future land use
	2) Biological Treatment	Rejected	
	3) Vapor Extraction	Rejected	
	4) Chemical Extraction	Rejected	

The No Action and Limited Action response actions have been retained as feasible remedial alternatives. OU-2 is located within an active industrial plant where land use is expected to remain industrial and groundwater is not currently used for potable or non-potable purposes. All plant water is supplied by the Artesian Water Supply Company. GM's ISO 14000 Environmental Management System has an environmental management procedure for water which ensures that water quality is appropriate for the plant's potable and non-potable uses Additionally, GM plans to include the OU-2 Area in a Groundwater Management Zone (GMZ) to prohibit the use of groundwater for drinking water purposes. State regulations provide DNREC with authority to prohibit installation of water supply wells where groundwater is not suitable for use. Therefore, institutional controls on potable groundwater use provided by the GMZ are an inherent

part of the No Action and Limited Action response. Should ownership of the Site change, GM will evaluate the need for additional institutional controls on land use and groundwater use (e.g., deed restriction) at that time. Containment and treatment response actions have been rejected as remedial alternatives since contaminants do not pose a significant risk under current or reasonably expected future use.

7.4 IDENTIFICATION AND SCREENING OF PROCESS OPTIONS

No process options have been evaluated as part of this RI/FS.

7.5 DEVELOPMENT OF ALTERNATIVES

The No Action and Limited Action remedial actions will be evaluated as potential remedial alternatives for the OU-2 Area. Section 8 discussed the screening of alternatives and Section 9 presents a detailed analysis of the remedial alternatives.

8.0 SCREENING OF ALTERNATIVES

Remedial action alternatives include:

- No Action; and
- Limited Action.

Since the groundwater impacts at the OU-2 downgradient boundary have been delineated to drinking water criteria and the risk assessment concluded that there is no significant risk to human health or the environment, no active remedial action is deemed necessary.

8.1 INTRODUCTION

The following sections describe and evaluate the No Action and Limited Action approaches as remedial action alternatives within the OU-2 Area.

8.2 ALTERNATIVE 1: NO ACTION

8.2.1 DESCRIPTION

The No Action alternative would require GM to conduct no further investigation or remediation activities associated with OU-2. Concentrations of gasoline-related compounds would remain in excess of drinking water criteria. However, since there is no significant risk to human health or the environment, the No Action approach is a feasible remedial action for the OU-2 Area. Furthermore, the gasoline-related compounds are expected to degrade in the natural environment. The No Action alternative represents the baseline for comparison to other alternatives.

8.2.2 EVALUATION

No activity would be required for this alternative and, as such, no capital costs would be associated with this alternative.

8.3 ALTERNATIVE 2: LIMITED ACTION

8.3.1 DESCRIPTION

The Limited Action alternative would consist of quarterly groundwater monitoring for two years. The first sampling event would include the monitoring wells that currently have concentrations that exceed drinking water criterion (i.e., MW-2, MW-3, MW-3D, MW-6, MW-7, MW-10, MW-11, MW-11R, MW-12, and MW-13), and the three monitoring wells along the downgradient boundary of the OU-2 Area. The three wells along the downgradient boundary of the OU-2 Area (i.e., MW-8, MW-9, and MW-19) would be monitored during the second and forth sampling events. The third sampling event would include all the monitoring wells within the OU-2 monitoring network. This pattern of sampling events would be repeated in year two.

Groundwater monitoring is proposed to cease after two years. Since there is no additional source of contamination contributing to the impacted groundwater at the OU-2 Area, if the extent of the plume would be similar to, or smaller than, that observed in previous samplings over a time span of two years, it would be a reasonable assumption that this plume is stable or decreasing. Therefore, if during the two years of monitoring the groundwater concentrations exceed the current maximum concentration, or if the groundwater impacts appear to expand downgradient beyond the OU-2 Area, GM will confer with DNREC on appropriate additional activities.

The following table summarizes the groundwater monitoring activities for each year.

Location	1st Event	2nd Event	3rd Event	4th Event
MW-2	X		X	
MW-3	X		X	
MW-3D	X		X	
MW-6	X		X	
MW-7	X		X	
MW-8	X	X	X	X
MW-9	X	X	X	X
MW-10	X		X	
MW-11	X		X	
MW-11R	X		X	
MW-12	X		X	
MW-13	X		X	
MW-15			X	
MW-16			X	

Location	1st Event	2nd Event	3rd Event	4th Event
MW-17			X	
MW-18			X	
MW-19	X	X	X	X

8.3.2 EVALUATION

The Limited Action alternative would consist of eight rounds of groundwater monitoring and associated reporting. The capital cost associated with the sampling and reporting portion of this alternative is approximately $116,000, as shown in Table 8.1.

8.4 SELECTION OF ALTERNATIVES FOR DETAILED ANALYSIS

Since the groundwater impacts at the downgradient boundary of OU-2 have been delineated to drinking water criteria and the risk assessment concluded there is no significant risk to human health or the environment, only the No Action and Limited Action alternative will be evaluated as remedial alternatives for OU-2.

9.0 DETAILED ANALYSIS OF ALTERNATIVES

The following sections present a detailed analysis of the No Action and Limited Action remedial alternatives.

9.1 INTRODUCTION

The objective of the detailed analysis of remedial alternatives is to present the relative advantages and disadvantages of different contaminant management approaches for the Site.

9.2 INDIVIDUAL ANALYSIS OF ALTERNATIVES

The following sections evaluate the No Action (i.e., Alternative 1) and the Limited Action (i.e., Alternative 2) in terms of protection of public health, welfare and the environment; compliance with applicable laws and regulations; community acceptance; compliance monitoring requirements; permanence; technical practicability; restoration time frame; reduction of toxicity, mobility and volume of contamination; long-term effectiveness; and short-term effectiveness.

9.2.1 DESCRIPTION

ALTERNATIVE 1

The No Action remedial alternative requires no further action related to OU-2 except establishing an OU-2 Area GMZ to reflect the existing GMZ for the City of Wilmington.

ALTERNATIVE 2

The Limited Action remedial alternative would include further groundwater monitoring of the established OU-2 Area monitoring well network and establishing an OU-2 Area GMZ to reflect the existing GMZ for the City of Wilmington.

9.2.2 PROTECTION OF PUBLIC HEALTH, WELFARE, AND THE ENVIRONMENT

ALTERNATIVE 1

The No Action remedial alternative would not reduce risks to human health and the environment. Based on the results of the risk assessment discussed in Section 5.0, there is no significant risk to human health or the environment. As such, the No Action approach is a feasible remedial action for the OU-2 Area.

ALTERNATIVE 2

The Limited Action remedial alternative would not reduce the risks to human health and the environment. Based on the results of the risk assessment presented in Section 5.0, there is no significant risk to human health or the environment. As such, the Limited Action alternative is a feasible remedial action for the OU-2 Area. Groundwater monitoring will ensure that the groundwater impacts remain within the boundary of the OU-2 Area and that the COCs continue their degradation process in the natural environment.

9.2.3 COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS

ALTERNATIVE 1

The No Action alternative will not immediately reduce the COCs to the drinking water criteria. The groundwater impacts at the OU-2 downgradient boundary have been delineated to drinking water criteria.

ALTERNATIVE 2

The Limited Action alternative will not immediately reduce the COCs to the drinking water criteria. The groundwater impacts at the OU-2 downgradient boundary have been delineated to drinking water criteria.

9.2.4 COMMUNITY ACCEPTANCE

Community acceptance is not an applicable evaluation criteria since the groundwater impacts and proposed remedial action are limited to on-Site activities.

9.2.5 COMPLIANCE MONITORING REQUIREMENTS

ALTERNATIVE 1

The No Action remedial alternative does not include any continued monitoring within the OU-2 Area.

ALTERNATIVE 2

The Limited Action remedial alternative will ensure continued monitoring for another two years to evaluate the groundwater within the OU-2 Area.

9.2.6 PERMANENCE

ALTERNATIVE 1

The No Action alternative provides no additional short term reduction in the toxicity, mobility, or volume of COCs within the OU-2 Area. It should be noted, however, that due to natural attenuation and degradation, a reduction in toxicity could be expected over the long term.

ALTERNATIVE 2

The Limited Action alternative provides no additional short term reduction in the toxicity, mobility, or volume of COCs within the OU-2 Area. It should be noted, however, that due to natural attenuation and degradation, a reduction in toxicity could be expected over the long term. Continued groundwater monitoring within the OU-2 monitoring well network will confirm the degradation of the COCs.

9.2.7 TECHNICAL PRACTICABILITY

ALTERNATIVE 1

There is no technology or equipment associated with the No Action remedial alternative.

ALTERNATIVE 2

There is no technology or equipment associated with the Limited Action remedial alternative.

9.2.8 RESTORATION TIME FRAME

ALTERNATIVE 1

It is expected that that COCs identified within the OU-2 Area will degrade within the natural environment over time. As such, the COC concentrations may reduce to the drinking water criteria in the future.

ALTERNATIVE 2

It is expected that that identified COCs within the OU-2 Area will degrade within the natural environment over time. As such, the COC concentrations may reduce to the drinking water criteria in the future.

9.2.9 REDUCTION OF TOXICITY, MOBILITY AND VOLUME OF CONTAMINATION

ALTERNATIVE 1

The No Action alternative will not result in a reduction of toxicity, mobility or volume contamination. However, the risk assessment presented in this RI/FS has determined that there is no significant risk to human health or the environment. Furthermore, the COCs identified within the OU-2 Area are expected to degrade within the natural environment.

ALTERNATIVE 2

The Limited Action alternative will not result in a reduction of toxicity, mobility, or volume of contamination. However, the risk assessment presented in this RI/FS has determined that there is no significant risk to human health or the environment. Furthermore, the COCs identified within the OU-2 Area are expected to degrade within the natural environment. The continued monitoring of the OU-2 Area monitoring well network will confirm the COC concentrations do not increase over time.

9.2.10 LONG-TERM EFFECTIVENESS

ALTERNATIVE 1

COCs identified within the OU-Area are expected to degrade within the natural environment. As such, the long-term effectiveness of the No Action alternative is adequate for the Site conditions (i.e., active industrial, and no on-Site source of potable water).

ALTERNATIVE 2

COCs identified within the OU-Area are expected to degrade within the natural environment. As such, the long-term effectiveness of the Limited Action alternative is adequate for the Site conditions (i.e., active industrial property, and no on-Site source of potable water).

9.2.11 SHORT-TERM EFFECTIVENESS

ALTERNATIVE 1

As the No Action approach involves no remedial action, there would be no additional risk, over that presently existing, to the community, workers, or the environment as a result of the implementation of this alternative.

ALTERNATIVE 2

Since the Limited Action approach includes the monitoring of the existing monitoring network within the OU-2 Area, there would be no additional risk, over that presently existing, to the community, workers, or the environment as a result of the implementation of this alternative.

9.3 PREFERRED ALTERNATIVE AND JUSTIFICATION

It is proposed that the remedial action of continued groundwater monitoring for two years, as described in Section 8.2.3, be implemented (i.e., Limited Action). This proposed remedial action would meet the remedial action objectives in a cost-effective manner.

The proposed groundwater monitoring schedule is as follows:

- Year 1, 1st Quarterly Event — August 2008
- Year 1, 2nd Quarterly Event — November 2008
- Year 1, 3rd Quarterly Event — February 2009
- Year 1, 4th Quarterly Event — May 2009
- Year 2, 1st Quarterly Event — August 2009
- Year 2, 2nd Quarterly Event — November 2009
- Year 2, 3rd Quarterly Event — February 2010
- Year 2, 4th Quarterly Event — May 2010

The Limited Action alternative is preferred over the No Action alternative as it provides additional confirmation of the groundwater conditions observed at OU-2 to date for reasonable cost.

Groundwater sampling is proposed to end after the second annual sampling event, unless groundwater impacts extend beyond the OU-2 Area downgradient boundary or the groundwater concentrations exceed the current maximum concentrations.

Groundwater sampling will be conducted in accordance with the Sampling and Analysis Plan (SAP) and the Quality Assurance Project Plan (QAPP) as provided in Appendix F and G, respectively.

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Attachment E2: Building Parameters GM Wilmington Assembly Plant, Wilmington, Delaware				
			Pump House[1]	**Weld Water Bldg[1]**
Basement?			Yes	No
Depth to groundwater	m	**DTW**	3.35	3.35
Building foundation thickness	m	**L_{crack}**	0.20	0.15
Building foundation length	m		12.19	24.38
Building foundation width	m		9.14	15.24
Bldg occupied height	m		2.44	2.44
Occupied depth below ground	m		1.37	0.00
Air exchange rate	$hour^{-1}$	**ac/h**	6	2
Note:				
1. Data represent site-specific parameters provided by plant personnel.				

Attachment E1: Toxicity Values
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	Cancer Classification			SF_{oral} (mg/kg/d)$^{-1}$			SF_{derm} (mg/kg/d)$^{-1}$			URF (mg/m^3)$^{-1}$			RfD_{oral} (mg/kg/d)				RfD_{derm} (mg/kg/d)				RIC (mg/m^3)			
			Value	Ref	Note	Value	Ref	Note	Value	Ref	Note	Value	Ref	Note	Value	UF	Ref	Note	Value	UF	Ref	Note	Value	UF	Ref	Note
VOC	Acetone	67-64-1	ID	1											9.00E-01	1000	1		9.00E-01	1000	125	104	3.08E+01	100	129	111
VOC	Benzene	71-43-2	A	1		5.50E-02	1	88	5.50E-02	125	104	7.80E-03	1	60	4.00E-03	300	1		4.00E-03	300	125	104	3.00E-02	300	1	
VOC	2-Butanone	78-93-3	ID	1											6.00E-01	1000	1		6.00E-01	1000	125	104	5.00E+00	300	1	
VOC	Chlorobenzene	108-90-7	D	1											2.00E-02	1000	1		2.00E-02	1000	125	104	5.00E-02	1000	126	
VOC	Cumene	98-82-8	D	1											1.00E-01	1000	1		1.00E-01	1000	125	104	4.00E-01	1000	1	
VOC	Cyclohexane	110-82-7	ID	1																			6.00E+00	300	1	
VOC	1,2-Dichlorobenzene	95-50-1	D	1											9.00E-02	1000	1		9.00E-02	1000	125	104	2.00E-01	1000	2	3
VOC	1,3-Dichlorobenzene	541-73-1	D	1											9.00E-02	1000	1	10	9.00E-02	1000	125	104	1.40E-01	1000	2	3, 10, 44
VOC	1,4-Dichlorobenzene	106-46-7	C	2		2.40E-02	2	6	2.40E-02	125	104	6.29E-03	3	45	3.00E-02		3		3.00E-02		125	104	8.00E-01	100	1	
VOC	cis-1,2-Dichloroethene	156-59-2	ID	126											1.00E-02	3000	126		1.00E-02	3000	125	104	3.50E-02	3000	126	4, 44
VOC	trans-1,2-Dichloroethene	156-60-5													2.00E-02	1000	1		2.00E-02	1000	125	104	6.00E-02	3000	126	
VOC	Ethyl Benzene	100-41-4	D	1											1.00E-01	1000	1		1.00E-01	1000	125	104	1.00E+00	300	1	
VOC	Methyl Acetate	79-20-9													1.00E+00	1000	2		1.00E+00	1000	125	104	3.50E+00	1000	2	4, 44
VOC	Methyl tert-butyl ether	1634-04-4																					3.00E+00	100	1	
VOC	4-Methyl-2-pentanone	108-10-1	ID	1													1	90			125	104	3.00E+00	300	1	
VOC	Methylcyclohexane	108-87-2																					3.00E+00	100	2	
VOC	Styrene	100-42-5													2.00E-01	1000	1	6	2.00E-01	1000	125	104	1.00E+00	30	1	
VOC	Tetrachloroethene	127-18-4	C-B2	77		5.20E-02	77		5.20E-02	125	104	3.06E-03	77		1.00E-02	1000	1		1.00E-02	1000	125	104	4.00E-01	300	109	94
VOC	Toluene	108-88-3	ID	1											8.00E-02	3000	1		8.00E-02	3000	125	104	5.00E+00	10	1	
VOC	1,2,4-Trichlorobenzene	120-82-1	D	1											1.00E-02	1000	1		1.00E-02	1000	125	104	3.50E-03		4	44
VOC	Trichloroethene	79-01-6	C-B2	49	18	1.10E-02	49		1.10E-02	125	104	1.70E-03	49		6.00E-03	3000	46	6, 97	6.00E-03	3000	125	104				
VOC	Xylenes (total)	1330-20-7	ID	1											2.00E-01	1000	1		2.00E-01	1000	125	104	1.00E-01	300	1	
SVOC	Acenaphthene	83-32-9													6.00E-02	3000	1		6.00E-02	3000	125	104	2.10E-01	3000	1	4, 44
SVOC	Acetophenone	98-86-2	D	1											1.00E-01	3000	1		1.00E-01	3000	125	104	3.50E-01	3000	1	4, 44
SVOC	Anthracene	120-12-7	D	1											3.00E-01	3000	1		3.00E-01	3000	125	104			2	90
SVOC	Benzaldehyde	100-52-7													1.00E-01	1000	1		1.00E-01	1000	125	104	3.50E-01	1000	1	4, 44
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	B2	1		1.40E-02	1		1.40E-02	125	104	4.00E-03	1	4, 45	2.00E-02	1000	1		2.00E-02	1000	125	104	7.00E-02	1000	1	4, 44
SVOC	Caprolactam	105-60-2													5.00E-01	100	1		5.00E-01	100	125	104	1.75E+00	100	1	4, 44
SVOC	Carbazole	86-74-8	B2	2		2.00E-02	2		2.00E-02	125	104	5.71E-03	2	4, 45												
SVOC	4-Chloroaniline	106-47-8													4.00E-03	3000	1		4.00E-03	3000	125	104	1.40E-02	3000	1	4, 44
SVOC	2-Chlorophenol	95-57-8													5.00E-03	1000	1		5.00E-03	1000	125	104	1.75E-02	1000	1	4, 44
SVOC	Dibenzofuran	132-64-9	D	1											2.00E-03		4		2.00E-03		125	104	7.00E-03		4	4, 44
SVOC	2,4-Dimethylphenol	105-67-9													2.00E-02	3000	1		2.00E-02	3000	125	104	7.00E-02	3000	1	4, 44
SVOC	2,6-Dinitrotoluene	606-20-2	B2	1	28	6.80E-01	1	28	6.80E-01	125	104	1.94E-01	1	28, 4, 45	1.00E-03	3000	126		1.00E-03	3000	125	104	3.50E-03	3000	126	4, 44
SVOC	Fluoranthene	206-44-0	D	1											4.00E-02	3000	1		4.00E-02	3000	125	104	1.40E-01	3000	1	4, 44
SVOC	Fluorene	86-73-7	D	1											4.00E-02	3000	1		4.00E-02	3000	125	104	1.40E-01	3000	1	4, 44
SVOC	2-Methylnaphthalene	91-57-6	ID	1											4.00E-03	1000	1		4.00E-03	1000	125	104	3.00E-03	3000	1	61
SVOC	Methylphenol (total)	1319-77-3													5.00E-02	1000	1	99	5.00E-02	1000	125	104			1	90, 99
SVOC	Naphthalene	91-20-3	C	1											2.00E-02	3000	1		2.00E-02	3000	125	104	3.00E-03	3000	1	
SVOC	Pentachlorophenol	87-86-5	B2	1		1.20E-01	1		1.20E-01	125	104	3.43E-02	1	4, 45	3.00E-02	100	1		3.00E-02	100	125	104	1.05E-01	100	1	4, 44
SVOC	Phenanthrene	85-01-8	D	1											3.00E-02	3000	1	20	3.00E-02	3000	125	104	1.05E-01	3000	1	20, 4, 44
SVOC	Phenol	108-95-2	ID	1											3.00E-01	300	1		3.00E-01	300	125	104			1	90, 98
SVOC	Pyrene	129-00-0	D	1											3.00E-02	3000	1		3.00E-02	3000	125	104	1.05E-01	3000	1	4, 44
INORG	Arsenic	7440-38-2	A	1		1.50E+00	1		1.50E+00	125	104	4.30E+00	1		3.00E-04	3	1		3.00E-04	3	125	104				
INORG	Barium	7440-39-3	NC	1											2.00E-01	300	1		1.40E-02	300	125	104			1	90
INORG	Beryllium	7440-41-7	B1	1								2.40E+00	1		2.00E-03	300	1		1.40E-05	300	125	104	2.00E-05	10	1	
INORG	Chromium (total)	7440-47-3										1.20E+01	1	6	3.00E-03	900	1	8	7.50E-05	900	125	104	1.00E-04	300	1	59, 8
INORG	Cobalt	7440-48-4	B1	126								2.80E+00	126		2.00E-02	10	126		2.00E-02	10	125	104	2.00E-05	100	126	
INORG	Copper	7440-50-8	D	1											4.00E-02	2	50	49	4.00E-02	2	125	104	1.40E-01	2	50	49, 4, 44
INORG	Manganese	7439-96-5	D	1											1.40E-01	1	1		8.40E-03	1	125	104	5.00E-05	1000	1	
INORG	Mercury	7439-97-6	D	1											3.00E-04	1000	1	51	2.10E-05	1000	125	104	3.00E-04	30	1	
INORG	Nickel	7440-02-0	A	1								2.40E-01	1		2.00E-02	300	1		8.00E-04	300	125	104	9.00E-05	30	126	111
INORG	Silver	7440-22-4	D	1											5.00E-03	3	1		2.00E-04	3	125	104	1.00E-05	1000	83	
INORG	Vanadium	7440-62-2													1.00E-03		3		2.80E-05		125	104	3.50E-03		3	4, 44
INORG	Zinc	7440-66-6	ID	1											3.00E-01	3	1		3.00E-01	3	125	104	1.05E+00	3	1	4, 44

Attachment E1: Physical and Chemical Properties
GM Wilmington Assembly Plant, Wilmington, Delaware

Chem Group	Chemical	CASRN	MW (g/mol) Value	Ref	Note	K_{ow} (unitless) Value	Ref	Note	K_{oc} (L/kg) Value	Ref	Note	Kd (L/kg) Value	Ref	Note	H (unitless) Value	Ref	Note	Solubility (mg/L) Value	Ref	Note	VP (mm Hg) Value	Ref	Note	D_{air} (m^2/day) Value	Ref	Note	D_{water} (m^2/day) Value	Ref	Note	Kp (cm/hr) Value	Ref	Note	FA (unitless) Value	Ref	Note
VOC	Acetone	67-64-1	5.81E+01	50.1		5.75E-01	44		5.61E-01	44	82							1.59E-03	44		1.00E+06	44		2.30E-02	50.1	92	1.07E+00	44		9.85E-05	44		5.30E-04	44	115	1.00E+00	82	114
VOC	Benzene	71-43-2	7.81E+01	50.1		1.35E+02	44		5.82E+01	44	111							2.28E-01	44		1.75E+03	44		9.50E+01	50.1	92	7.50E-01	44		8.47E-06	44		1.47E-02	44	115	1.00E+00	82	
VOC	2-Butanone	78-93-3	7.21E+01	50.1		1.91E+00	69		2.30E+00	69	111							2.28E-03	50.1	92	2.30E+05	50.2		9.53E+01	50.1	92	8.98E-01	69		8.47E-06	69		9.57E-04	69	115	1.00E+00	82	
VOC	Chlorobenzene	108-90-7	1.13E+02	50.1		7.24E+02	44		2.20E+02	44	111							1.52E-01	44		4.72E+02	44		1.20E+01	50.1	92	6.31E-01	44		7.52E-06	44		2.87E-03	44	115	1.00E+00	82	
VOC	Cumene	98-82-8	1.20E+02	50.1		3.16E+03	69		7.05E+02	69	111							5.32E-01	69		6.13E+01	50.1	92	4.50E+00	50.1	92	5.82E-01	69		6.13E-06	69		6.85E-02	69	115	1.00E+00	82	114
VOC	Cyclohexane	110-82-7	8.42E+01	50.1		2.75E+03	39		6.35E+02	39	111							1.97E+00	50.1	92	5.50E+01	50.1	92	9.89E+01	50.1	92	7.25E-01	69		7.98E-06	69		9.98E-02	39	115	1.00E+00	82	114
VOC	1,2-Dichlorobenzene	95-50-1	1.47E+02	50.1		7.66E+03	44		6.23E+02	44	111							7.79E-02	44		1.56E+02	44		1.38E+00	50.1	97	1.56E-01	44		6.83E-06	44		4.37E-02	44	115	1.00E+00	82	
VOC	1,3-Dichlorobenzene	541-73-1	1.47E+02	50.1		7.40E+03	69		5.69E+02	69	111							1.27E-01	50.1	92	1.53E+02	50.1	92	2.15E+00	50.1	92	5.98E-01	69		6.79E-06	69		4.25E-02	69	115	1.00E+00	82	
VOC	1,4-Dichlorobenzene	106-46-7	1.47E+02	50.1		2.63E+03	44		6.12E+02	44	111							9.98E-02	44		1.38E+01	44		1.00E+00	50.1	92	5.98E-01	44		6.83E-06	44		4.31E-02	44	119	1.00E+00	82	
VOC	cis-1,2-Dichloroethene	156-59-2	9.69E+01	50.1		7.24E+01	44		3.36E+01	44	111							1.67E-01	44		3.50E+03	44		2.03E+02	50.1	92	9.38E-01	44		9.75E-06	44		7.67E-03	44	115	1.00E+00	82	114
VOC	trans-1,2-Dichloroethene	156-60-5	9.69E+01	50.1		1.17E+02	44		5.22E+01	44	111							3.89E-01	44		6.30E+03	44		3.32E+02	50.1	92	9.11E-01	44		1.03E-04	44		1.20E-02	44	115	1.00E+00	82	114
VOC	Ethyl Benzene	100-41-4	1.06E+02	50.1		1.38E+03	44		3.67E+02	44	111							3.23E-01	44		7.69E+02	44		9.60E+00	50.1	92	6.48E-01	44		8.74E-06	44		4.76E-02	44	115	1.00E+00	82	
VOC	Methyl Acetate	79-20-9	7.41E+01	55		1.51E+00	39		1.90E+00	39	117							3.71E-03	69		2.44E+05	39		2.15E+02	39		8.27E-01	69		9.50E-06	69		8.02E-04	39	115	1.00E+00	82	114
VOC	Methyl tert-butyl ether	1634-04-4	8.82E+01	1		1.74E+01	39		1.15E+01	39	111							2.40E-02	69		5.10E+04	69		2.80E+02	69		7.42E-01	69		8.73E-06	69		3.35E-03	39	115	1.00E+00	82	114
VOC	4-Methyl-2-pentanone	108-10-1	1.00E+02	50.1		1.55E+01	62		1.05E+01	62	111							5.84E-03	50.1	92	1.90E+04	39		1.09E+01	50.1	92	6.48E-01	40		8.74E-06	40		2.66E-03	62	115	1.00E+00	82	
VOC	Methylcyclohexane	108-87-2	9.82E+01	55		9.21E+02	69		2.88E+02	69	111							1.76E+01	69		1.40E+01	62		4.30E+01	69		6.35E-01	69		7.36E-06	69		4.04E-02	69	115	1.00E+00	82	114
VOC	Styrene	100-42-5	1.04E+02	50.1		8.71E+02	44		7.77E+02	44	82							1.13E-01	44		3.19E+02	44		6.12E+00	50.1	92	6.13E-01	44		8.91E-06	44		3.91E-02	44	115	1.00E+00	82	
VOC	Tetrachloroethene	127-18-4	1.66E+02	50.1		4.68E+02	44		1.35E+02	44	111							7.54E-01	44		2.06E+02	44		1.86E+01	50.1	92	8.22E-01	44		7.06E-06	44		7.06E-02	44	115	1.00E+00	82	
VOC	Toluene	108-88-3	9.21E+01	50.1		5.52E+02	44		1.80E+02	44	111							2.77E-01	44		5.26E+02	44		2.84E+01	50.1	92	7.52E-01	44		7.43E-06	44		3.18E-02	44	115	1.00E+00	82	
VOC	1,2,4-Trichlorobenzene	120-82-1	1.81E+02	50.1		1.02E+04	44		1.79E+03	44	111							5.82E-02	44		3.00E+02	44		4.31E-01	50.1	92	2.99E-01	44		7.11E-06	44		6.77E-02	44	115	1.00E+00	82	
VOC	Trichloroethene	79-01-6	1.31E+02	50.1		5.13E+02	44		1.66E+02	44	111							4.22E-01	44		1.10E+03	44		7.35E+01	50.1	92	6.83E-01	44		7.86E-06	44		1.77E-02	44	115	1.00E+00	82	
VOC	Xylenes (total)	1330-20-7	1.06E+02	50.1		1.47E+03	44		3.86E+02	44	111							2.76E-01	44		1.75E+03	44		7.99E+00	50.1	92	6.74E-01	44		7.56E-06	44		4.96E-02	44	115	1.00E+00	82	114
SVOC	Acenaphthene	83-32-9	1.54E+02	1		8.32E+03	44		7.14E+03	44	82							6.36E-03	44		4.24E+00	44		2.50E-03	50.1	92	3.84E-01	44		6.94E-06	44		8.39E-02	44	115	1.00E+00	82	114
SVOC	Acetophenone	98-86-2	1.20E+02	50.1		3.80E+01	1		3.58E+01	1	82							4.37E-04	50.1	92	6.13E+03	50.1	92	3.97E-01	50.1	92	6.81E-01	40		6.91E-06	40		3.72E-03	1	115	1.00E+00	82	114
SVOC	Anthracene	120-12-7	1.78E+02	50.1		3.55E+04	44		2.97E+04	44	82							2.87E-03	44		4.34E-02	44		2.57E-06	50.1	92	2.80E-01	44		6.88E-06	44		1.80E-01	44	115	1.00E+00	82	114
SVOC	Benzaldehyde	100-52-7	1.06E+02	39		3.72E+01	39		2.85E+01	39	82							9.73E-04	69		1.30E+04	39		9.90E-01	69		8.23E-01	69		7.94E-06	69		3.82E-03	39	115	1.00E+00	82	114
SVOC	bis(2-Ethylhexyl)phthalate	117-81-7	3.91E+02	50.1		3.00E+07	44		1.50E+07	44	82							4.15E-08	44		1.40E-01	44		6.45E-06	50.1	94	3.03E-01	44		3.19E-06	44		6.77E-01	44	115	4.30E-01	82	117
SVOC	Caprolactam	105-60-2	1.13E+02	39		6.46E-01	39		6.51E-01	39	82							2.06E-07	69		7.72E+05	69		1.90E-03	39		5.98E-01	69		7.77E-06	69		2.75E-04	39	115	1.00E+00	82	114
SVOC	Carbazole	86-74-8	1.67E+02	50.1		3.89E+03	44		3.38E+03	44	82							9.26E-07	44		4.45E+00	44		5.19E-07	50.1	90	3.37E-01	44		5.07E-06	44		4.30E-02	44	115	1.00E+00	82	114
SVOC	4-Chloroaniline	106-47-8	1.28E+02	50.1		7.08E+01	44		6.61E+01	44								1.36E-05	44		5.93E+03	44		1.23E-02	50.1	92	4.17E-01	44		6.73E-06	44		5.09E-03	44	115	1.00E+00	82	114
SVOC	2-Chlorophenol	95-57-8	1.29E+02	50.1		1.41E+02	44		3.98E+02	44	43							1.60E-02	44		2.20E+04	44		2.34E+00	50.1	92	4.33E-01	44		8.17E-06	44		7.83E-03	44	119	1.00E+00	82	
SVOC	Dibenzofuran	132-64-9	1.68E+02	50.1		2.45E+04	69		2.07E+04	69	82							5.15E-04	50.1	92	1.00E+01	50.1	93	1.80E-04	50.1	92	2.98E-01	69		5.18E-06	69		1.45E-01	69	115	1.00E+00	82	114
SVOC	2,4-Dimethylphenol	105-67-9	1.22E+02	50.1		2.29E+02	44		2.09E+02	44								8.20E-05	44		7.87E+03	44		5.90E-02	50.1	92	5.09E-01	44		7.51E-06	44		1.18E-02	44	115	1.00E+00	82	
SVOC	2,6-Dinitrotoluene	606-20-2	1.82E+02	50.1		7.41E+01	44		6.89E+01	44	82							3.06E-05	44		1.82E+02	44		5.87E-04	50.1	92	2.83E-01	44		6.27E-06	44		2.80E-03	44	115	1.00E+00	82	
SVOC	Fluoranthene	206-44-0	2.02E+02	50.1		1.32E+05	44		1.08E+05	44	82							6.60E-04	44		2.06E-01	44		7.80E-06	50.1	94	2.81E-01	44		5.49E-06	44		7.80E-01	44	115	1.00E+00	82	
SVOC	Fluorene	86-73-7	1.66E+02	50.1		9.82E+04	44		1.38E+04	44	87							2.81E-03	44		1.98E+00	44		6.33E-04	50.1	92	3.14E-01	44		6.81E-06	44		1.12E-01	44	115	1.00E+00	82	114
SVOC	2-Methylnaphthalene	91-57-6	1.42E+02	50.1		7.24E+02	39		6.23E+02	39	82							2.12E-02	50.1	92	3.46E+01	50.1	92	5.50E-02	50.1	92	4.51E-01	69		6.70E-06	69		9.94E-02	39	115	1.00E+00	82	114
SVOC	Methylphenol (total)	1319-77-3	1.08E+02	50.1	99	9.12E+01	1	98	8.45E+01	1	99, 82							3.54E-05	50.1	92, 96	2.27E+04	50.1	92, 99	1.39E-01	50.1	92, 99	6.39E-01	40	99	7.73E-03	1	99, 115	1.00E+00	82	114
SVOC	Naphthalene	91-20-3	1.28E+02	50.1		7.29E+03	44		2.01E+03	44	82							1.94E-02	44		3.10E+01	44		8.90E-02	50.1	92	5.10E-01	40		6.48E-03	44		5.31E-03	44	115	1.00E+00	82	
SVOC	Pentachlorophenol	87-86-5	2.66E+02	50.1		1.23E+05	44		5.92E+02	44	43							1.00E-06	44		1.99E+03	44		3.17E-05	50.1	92	4.84E-01	44		5.27E-06	44		1.17E-01	44	115	9.20E-01	82	
SVOC	Phenanthrene	85-01-8	1.78E+02	50.1		2.88E+04	69		2.42E+04	69	82							9.52E-04	50.1	92	1.15E+00	50.1	93	1.12E-04	50.1	92	3.24E-01	69		6.45E-06	69		1.40E-01	69	115	1.00E+00	82	
SVOC	Phenol	108-95-2	9.41E+01	50.1		3.02E+01	44		2.88E+01	44								1.63E-05	44		9.39E+04	44		3.76E-01	50.1	92	7.06E-01	44		7.98E-06	44		3.49E-03	44	113	1.00E+00	82	
SVOC	Pyrene	129-00-0	2.02E+02	50.1		1.29E+05	44		1.08E+05	44	82							4.51E-04	44		1.35E-01	44		4.59E-06	50.1	92	2.83E-01	44		6.26E-06	44		2.75E-01	44	119	1.00E+00	82	114
INORG	Arsenic	7440-38-2	7.49E+01	50.1								2.90E+01	44	43													40	48		40	48	1.00E-03	62				
INORG	Barium	7440-39-3	1.37E+02	50.1								4.12E+01	44	43								1	61				40	48		40	48	1.00E-03	62				
INORG	Beryllium	7440-41-7	9.01E+00	50.1								7.90E+02	44	43								1	60				40	48		40	48	1.00E-03	62				
INORG	Chromium (total)	7440-47-3	5.20E+01	50.1								1.90E+01	44	43, 45								1	61				40	48		40	48	1.00E-03	62				
INORG	Cobalt	7440-48-4	5.89E+01	50.1								4.50E+01	35									1	61									2.00E-03	62	45			
INORG	Copper	7440-50-8	6.35E+01	50.1								3.50E+01	35									1	61				40	48				4.00E-04	62				
INORG	Manganese	7439-96-5	5.49E+01	50.1								8.50E+01	35																			1.00E-03	62				
INORG	Mercury	7439-97-6	2.01E+02	57				1	48			1.00E+03	57					2.90E-01	67		5.60E-02	1		1.86E-03	50.1	92	7.65E-01	44		5.44E-06	44		1.00E-03	62				
INORG	Nickel	7440-02-0	5.87E+01	50.1								9.50E+01	44	43								1	61				40	48		40	48	2.00E-04	62				
INORG	Silver	7440-22-4	1.08E+02	50.1								8.30E+00	44	43								1	51				40	48		40	48	6.00E-04	62				
INORG	Vanadium	7440-62-2	5.09E+01	50.1								1.00E+03	44	43								1	61				40	48		40	48	1.00E-03	62				
INORG	Zinc	7440-66-6	6.54E+01	50.1								9.20E+01	44	43								1	61				40	48		40	48	5.00E-04	62				

FILE COPY

DRAFT REPORT
RCRA FACILITY ASSESSMENT
GENERAL MOTORS CORPORATION

T E S III

TECHNICAL ENFORCEMENT SUPPORT AT HAZARDOUS WASTE SITES

U.S. EPA CONTRACT NO. 68-01-7331

CDM Federal Programs Corporation

DRAFT REPORT
RCRA FACILITY ASSESSMENT
GENERAL MOTORS CORPORATION

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
of Waste Programs Enforcement
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1.0 INTRODUCTION

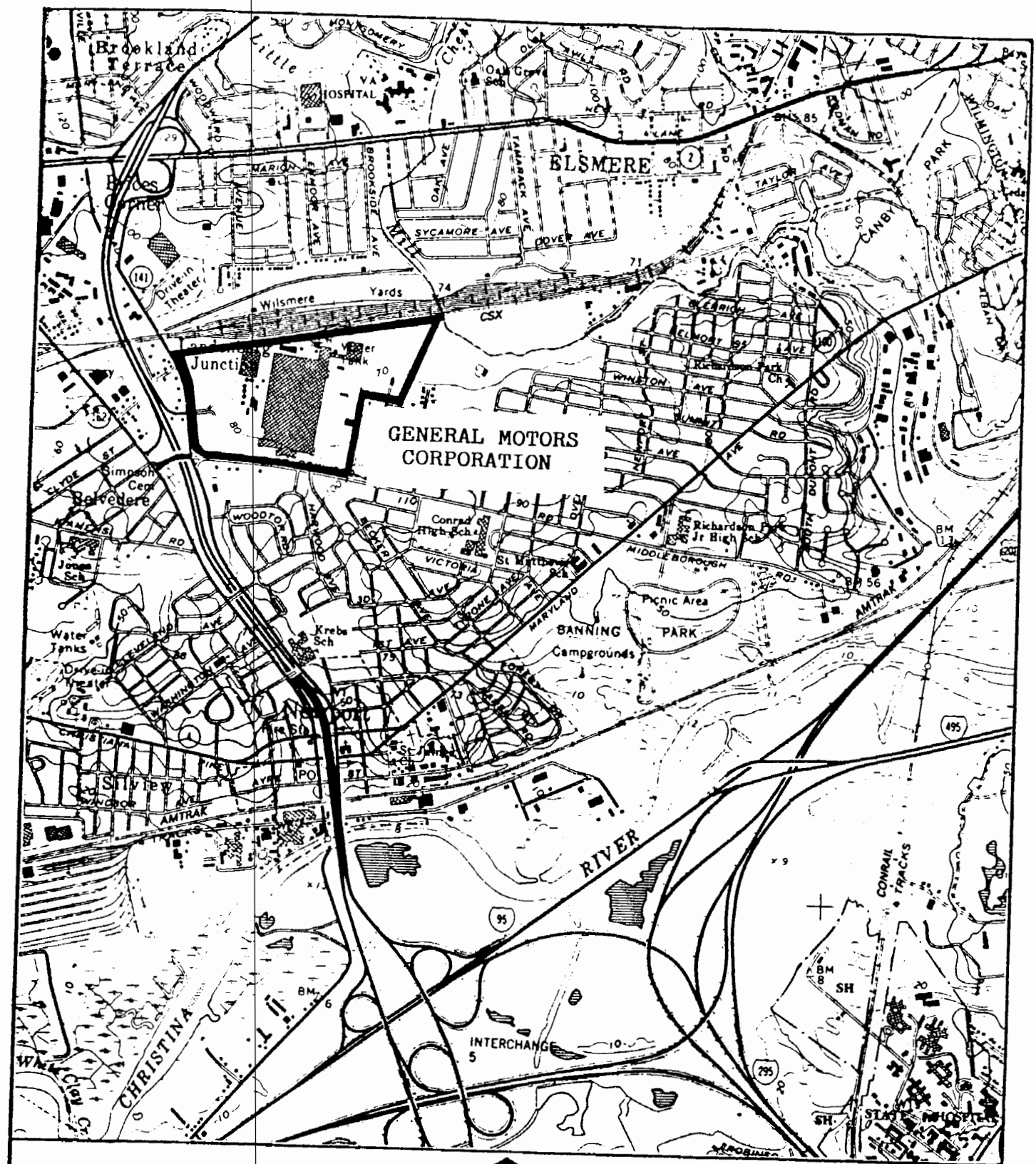
1.1 Statement of Work

CDM Federal Programs Corporation (CDM FPC) has conducted a RCRA Facility Assessment (RFA) of the General Motors Corporation (GMC) Assembly Division for the U.S. Environmental Protection Agency (EPA) under EPA Contract No. 68-01-7331, TES III, Work Assignment 819. This report documents the findings of the RFA which was performed to identify and evaluate past and potential releases to the environment from solid waste management units (SWMUs) and other identified areas of concern at the Wilmington, Delaware facility. The information presented herein is based upon documents obtained from GMC, EPA Region III, the Delaware Department of Natural Resources and Environmental Control (DE DNREC) and the findings of the visual site inspection (VSI) of the facility conducted on September 27, 1988. Present during the VSI were Bruce Pluta and Kathryn Garris of CDM FPC, and Ernest Bosetti of GMC. Seven SWMUs and two additional areas of concern were identified and evaluated during the course of the RFA.

1.2 Site Location

The General Motors Corporation Assembly Division is located in Wilmington, Delaware (Figure 1). It is bounded by Route 141 on the west and Boxwood Road on the south. East of the facility is a residential area. To the north are the Wilsmere Yards of the Baltimore and Ohio Railroad. The facility occupies approximately 141 acres (GMC, October 1982).

FIGURE 1



SITE LOCATION MAP

0 1000 2000 3000

SCALE IN FEET

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WILMINGTON SOUTH QUADRANGLE
DELAWARE–NEW JERSEY
7.5 MINUTE SERIES (TOPOGRAPHIC)

CDM Federal Programs Corporation

2.0 FACILITY DESCRIPTION

2.1 Hazardous Waste Generation

General Motors Corporation (GMC) operates an automobile assembly division in Wilmington, Delaware (CDM, September 1988). The facility assembles automobiles from component parts which are manufactured by subdivisions of General Motors and shipped to the Wilmington plant (DE DNREC, June 1982).

Painting of the assembled cars and the associated processes with the painting provide the source of the hazardous waste generation at the facility. These processes include phosphating, application of primer, application of primer-surfacer, and the application of the base coat/clear coat.

When the assembled car leaves the body shop, it is subject to a phosphating process to remove oil and dirt. Facility representatives indicated that the chemicals used in this process are "Alchem" chemicals, however, the exact composition is unknown (GMC, December 1988). The resulting wastewater is filtered and then treated in the onsite pretreatment unit before entering the city sewer system. The filtered material, known as bonderite sludge, is disposed in one of two 25 cubic yard hoppers inside the pretreatment unit. It is ultimately disposed offsite (GMC, September 1988).

After phosphating, the car is then sent to the paint department (old modular shop) via a conveyer belt where a primer (trade name - ELPO; exact composition is unknown) is applied. Waste primer is blended with other process waste and sent to the wastewater pretreatment unit (GMC, November 1988).

The car then goes to the new modular shop where there are seven painting booths. In the first booth, the car is checked for breaks in the ELPO. If breaks are detected, a small quantity of primer-surfacer is applied. Any waste primer-surfacer goes directly to the wastewater pretreatment unit. Overall, annual quantities of the primer-surfacer utilized by the facility are minimal (GMC, November 1988).

The car goes through one of the remaining booths where the base coat (the actual color of the car) and the clear coat (a high gloss finish) is applied (GMC, November 1988). The paint used in these booths is mixed in 150-gallon tanks which are connected to the painting booths by a system of pipes (DE DNREC, February 1984).

Paint remaining in the booth after the painting process, referred to as "overspray" is washed from the booth. The water used in this process is chemically treated with a polymer. The water is then recycled for approximately one month while gradually accumulating paint sludge (GMC, November 1988). After one month, the water and sludge mixture is poured into 800-gallon containers where the water eventually separates and rises to the surface. The water is decanted and sent to the pretreatment unit. The remaining sludge, still in the container, is stored in an outdoor paint sludge storage area until it is disposed at an offsite municipal landfill (GMC, October 6, 1988).

Unused paint is removed, drummed, and stored at an outdoor hazardous waste storage area until it is ultimately disposed offsite. "Line" solvent (the facility representative indicated that the composition is unknown) is pumped through the system to remove any remaining paint (GMC, October 1988). The solvent and paint residue first enter one of two 300-gallon "gun boxes" which empty directly into one of two 6000-gallon tanks. During the year (except in the summer when fuel demand for the facility is at a minimum), solvent is siphoned from the top of the tank, filtered, and piped to the powerhouse. In the powerhouse, the solvent is filtered again and burned as fuel in a modified boiler. The filters, filtered material, and remaining solids in the tank are drummed and stored at the hazardous waste storage area until disposal (GMC, September 1988).

During the summer, the contents of the tank are drained directly to a tanker truck which transports the waste to an offsite disposal facility (GMC, October 6, 1988).

2.2 Regulatory Status

Since November 19, 1980 GMC has operated a hazardous waste management facility subject to regulations promulgated under the Resource Conservation and Recovery Act. This facility qualified for interim status for the hazardous waste container storage area and two hazardous waste storage tanks. In 1986, the facility was found in non-compliance with Part 265 Interim Status Closure Requirements when it replaced its existing hazardous storage pad and tanks with new ones without submitting a closure plan for these units (GMC, September 1986). GMC submitted a Part B application to EPA in December 1982. The facility has indicated that it is withdrawing its Part B application.

The facility maintained an NPDES permit (No. 0000523) to discharge stormwater to the Little Mill Creek. This permit expired in May 1988. The facility has requested a permit renewal (GMC, October 10, 1988). The facility currently maintains a permit with New Castle County (No. WDP-76-018) to discharge treated water from the wastewater pretreatment unit to the Wilmington sewer system (GMC, November 1988).

The facility currently hold seven air permits:

- o APC-85-183 Automotive Coating System
- o APC-82/1228 Vapor Balance System
- o APC-82/1224 Third Color Booth and Oven
- o APC-82-034 Blu-Surf Oven
- o APC-81/849 Primer Surfacer Booth and Oven
- o APC-81/656 Cathodic Electrode Position Primer
- o APC-80/145 Final Paint Booth and Oven

(GMC, October 1988).

3.0 DESCRIPTION OF SOLID WASTE MANAGEMENT UNITS AND OTHER AREAS OF CONCERN

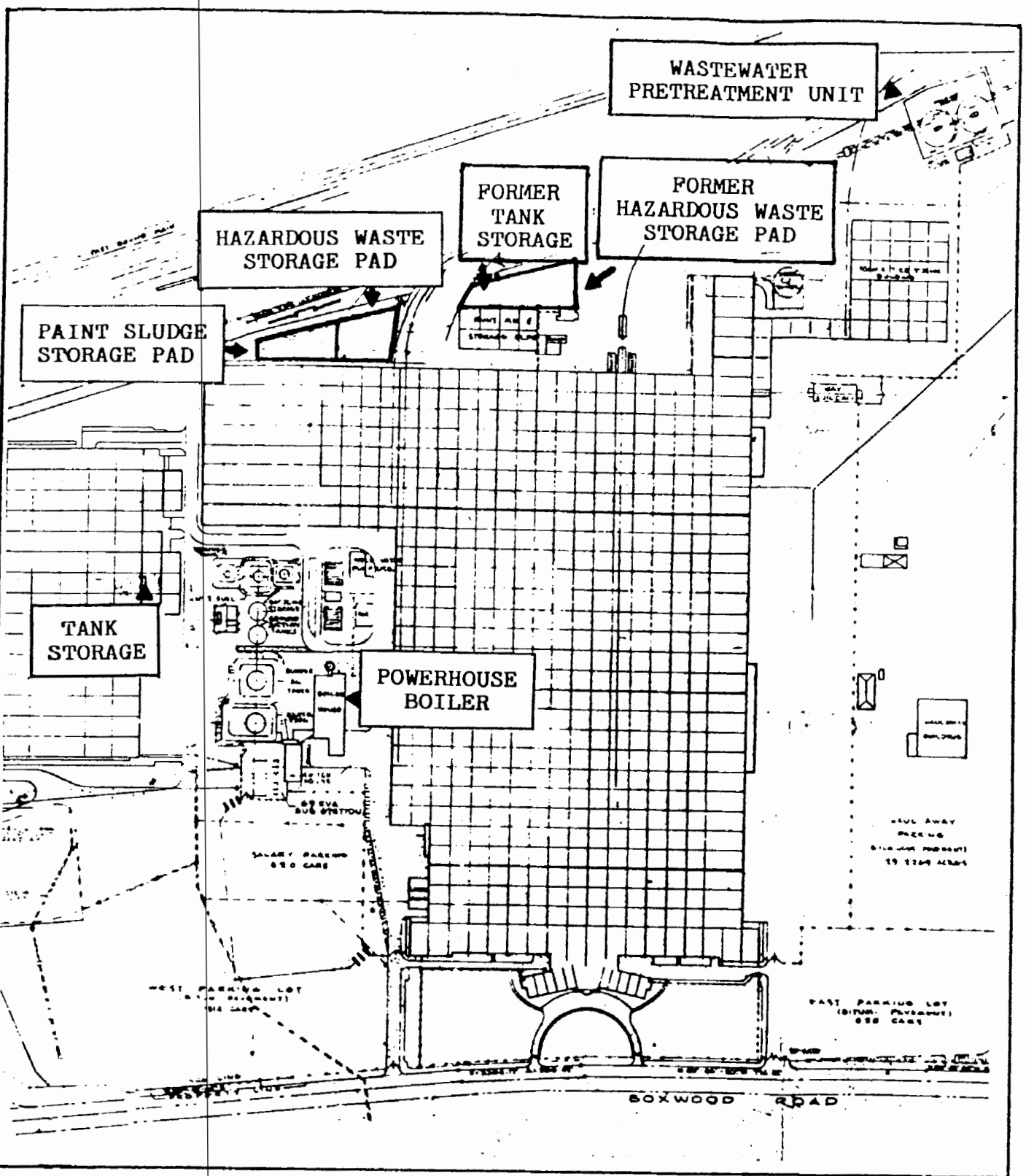
Seven solid waste management units (SWMUs) and two additional areas of concern have been identified at the facility. The location of each SWMU is shown in Figure 2.

3.1 Paint Sludge Storage Area

Description: The Paint Sludge Storage Pad is an outdoor, concrete area approximately 5000 square feet in size. The storage pad is contained by a concrete curb approximately 6 inches high. No cracks were observed in either the pad or the curb. The area drains via an underground culvert directly to the wastewater pretreatment unit. The valve on the drain is usually closed (GMC. November 1988). The maximum capacity for the paint sludge storage area is ten 800-gallon containers. GMC representatives report that the contents of the containers are disposed at the Pigeon Point Landfill in Delaware twice a week (GMC, October 6, 1988). It should be noted that the Pigeon Point Landfill has been closed for approximately six years; it is presumed by CDM FPC that GMC utilizes Cherry Island which is a municipal landfill for New Castle County, Delaware. This has been confirmed by CDM FPC in conversations with DE DNREC (DE DNREC, October 1988). The four containers present in this area at the time of the VSI (September 27, 1988) appeared scratched and slightly rusty. No stains were visible in the area. This area has been in use since 1980 (GMC, October 6, 1988).

Waste Characteristics: According to the analytical data from Environmental Industrial Research Associates, this sludge has been determined to be non-hazardous based on proposed TCLP regulatory levels (Appendix 1).

FIGURE 2



Solid Waste Management Unit
Location Map

1" = 120'

Source:
PLOT PLAN
G M ASSEMBLY DIVISION
WILMINGTON PLANT
WILMINGTON, DELAWARE

CDM Federal Programs Corporation

Evidence of Releases:

No releases have been known to have occurred from this unit. No evidence of release was noted during the VSI.

3.2 Hazardous Waste Storage Pad

Description:

The Hazardous Waste Storage Pad is an outdoor, concrete area approximately 3750 square feet in size which is surrounded by a chainlink fence 8 feet high. The storage pad is contained by an approximate 6 inch curb. No cracks were observed in either the pad or the curb. The area drains via an underground culvert directly to the wastewater pretreatment unit. The valve on the drain is usually closed (GMC, November 1988). This SWMU is used to store 55-gallon drums containing waste paint and solvents. According to the facility representative, the area has a capacity of 100 drums; storage time does not exceed four weeks (GMC, October 6, 1988).

Drums are disposed according to the waste type. Petroleum Naphtha (D001 and D003) is disposed at Safety Kleen in Pennsylvania. Sulfuric Acid (D002) is disposed at Waste Conversion in Pennsylvania. Flammable liquid (D001, F003, and F005), corrosive liquid (D002), and 1,1,1-trichloroethane (F002) is disposed at Frontier Chemical in New York. Flammable liquid has also been disposed at Michigan Recovery System in Michigan and Marine Shale Processors in Louisiana (GMC, February 1988). Three of the drums observed had deformed lids. The labels on several drums were faded. This area has been in use since 1986.

Waste Characteristics:	According to the facility, waste materials such as sealers, solvents, waste paint, and corrosive liquid are stored at this unit. This would include listed wastes D001, D002, D003, F002, F003, and F005.
Evidence of Releases:	No releases have been known to occur from this unit. No evidence of release was noted during the VSI.

3.3 Former Hazardous Waste Storage Pad

Description:	The Former Hazardous Waste Storage Pad is an outdoor concrete area measuring approximately 20,000 square feet. The storage pad is contained by a curb approximately 6 inches high. It had been used to store raw materials as well as hazardous waste until 1986 when the new hazardous waste storage pad was constructed. Presently, the pad is occasionally used to store 55-gallon drums of waste when the new storage pad reaches its maximum capacity of 100 drums. No drums were present in this area at the time of the VSI. The area drains via an underground culvert directly to the wastewater pretreatment unit. The valve on the drain is usually closed (GMC, November 1988). This pad was installed in 1967.
Waste Characteristics:	According to the facility, this unit stored the same waste as the new hazardous waste storage pad. This would include listed wastes D001, D002, D003, F002, F003, and F005.
Evidence of Release:	No releases have been known to occur from this unit. No evidence of release was noted during the VSI.

3.4 Tank Storage Area

Description: This unit consists of two 6,000-gallon tanks that are used for the storage of accumulated paint residue and spent solvents from the purging of paint lines during the operation of the automobile assembly lines. These tanks are located inside the new paint building and are contained by a concrete dike (GMC, November 1988). During most of the year, the solvent is siphoned from the top of the tank, filtered, and piped to the powerhouse. The filters, filtered material, and remaining solids in the new tanks are drummed and stored at the hazardous waste storage pad. During the summer when the fuel need of the facility is minimal, the tanks' content are drained twice a week directly to a tanker truck which transports the waste to Marine Shale in Louisiana (GMC, October 6, 1988). The outside area where the trucks load is not contained. This unit has been in use since 1986.

Waste Characteristics: According to the facility, spent solvents and paint residue are stored at this unit. This would include listed wastes D001, F003, and F005.

Evidence of Releases: No releases have been known to occur from this unit. No evidence of release was noted during the VSI.

3.5 Former Tank Storage Area

Description: This unit consisted of two 6,000-gallon tanks that are used for the storage of accumulated paint residue and spent solvents. This unit was located on the former hazardous waste storage pad. It was dismantled in 1986 without a closure plan. This unit had been in use from 1975 until 1986.

Waste Characteristics:	According to the facility, this unit stored the same waste as the present tank storage unit. This would include listed wastes D001, F003, and F005.
Evidence of Releases:	No releases are known to have occurred from this unit. No evidence of release was noted during the VSI.

3.6 Powerhouse Boiler No. 1

Description:	Boiler No. 1 is a 60,000 pounds per hour steam boiler that has been modified to burn waste solvents. The boiler is fired with low sulfur fuel oil or natural gas. Solvent is burned when the boiler reaches 50 percent of the firing rate and a furnace temperature of 2500° Fahrenheit. This is done to ensure complete combustion of the solvents. When fully operating, approximately 60 gallons per hour of solvent are consumed (GMC, September 1988). Solvents have been burned as boiler fuel since 1982 (DE DNREC, February 1984).
Waste Characteristics:	According to the facility, waste solvent is burned at this unit. This would include listed wastes D001, F003, and F005.
Evidence of Releases:	No releases are known to have occurred from this unit. No evidence of release was noted during the VSI.

3.7 Wastewater Pretreatment Unit

Description:

The Wastewater Pretreatment Unit treats the industrial waste water before it is discharged to the Wilmington Sewage System. The industrial waste water includes water from the phosphating process, application of primer paint, and paint sludge. The pretreatment operation is designed to remove inorganics via a polymer and caustic process. Wastewater had previously been treated with lime. This process was changed in 1986 to reduce the amount of sludge produced. The sludge, referred to as bonderite sludge, is collected in two 25-cubic yard containers and disposed of at Waste Conversion in Pennsylvania (GMC, November 1988). This unit has been in operation since 1972. Prior to 1972, wastewater was released directly to the Wilmington Sewer System (GMC, October 6, 1988).

Waste Characteristics:

According to the facility, the sludge disposed from this unit is listed as D008. It had been previously listed as F006 since the bonderite sludge was considered part of an electroplating operation (GMC, November 1988). The facility is in the process of attempting to delist the sludge from this unit. Current analytical data (shown in Appendix 2) indicate it is non-hazardous based on proposed TCLP Regulatory Levels.

Evidence of Releases:

No releases are known to have occurred from this unit. No evidence of release was noted during the VSI.

3.8 Other Areas of Concern

3.8.1 Storm Water Treatment

Description: The facility's storm water treatment unit consists of three 100,000-gallon retention tanks which treat storm water collected from parking lots and roof conductors before it is discharged to the Little Mill Creek. These tanks are fitted with sediment removal and oil skimming equipment. According to the NPDES permit, this system may be bypassed if flow is greater that 2.8 MGD (DE DNREC, June 1982). There is no documentation available which indicates that a bypass has occurred. However, should bypass occur, there is the potential of oil being released to the Little Mill Creek. This unit has been operation since 1972 (GMC, October 6, 1988).

Waste Characteristics: Oil from the parking lots.

Evidence of Releases: No uncontrolled releases are known to have occurred from this area.

3.8.2 Facility Sewer System

Description: The sewer system transports wastewater from plant processes to the wastewater pretreatment unit. This is an underground system that could pose a threat to the groundwater and soil underlying the facility should a leak develop in the system as it transports wastewater from the processing areas and the hazardous waste storage area. According to the facility, this unit was constructed at the same time as the wastewater pretreatment unit in 1972.

Waste Characteristics:	Exact composition of wastewater is unknown, however, the potential exists for the transport of trace amounts of oil and solvents from the processing areas. There is also a possibility of transporting listed wastes D001, D002, D003, F002, F003, and F005 as drainage from the Hazardous Waste Storage Area should a spill occur.
Evidence of Releases:	No uncontrolled releases are known to have occurred from this system.

4.0 ENVIRONMENTAL SETTING

4.1 Geology and Hydrogeology

General Motors Corporation (GMC) lies within the Fall Zone which is the sharp junction of the Appalachian Piedmont Province and the Atlantic Coastal Plain Province (Delaware Geological Survey, 1972). GMC is situated chiefly within the Atlantic Coastal Plain Province which in this area, consists of the Potomac Formation. The northernmost portion of the property lies within the Appalachian Piedmont Province which, in the area, includes the Wilmington Complex (Delaware Geological Survey, 1975, 1981).

The early Cretaceous Potomac Formation is fluvial in origin and is composed predominantly of clays and silts with some interbedded sands. Generally, in the northern part of the Coastal Plain where the GMC facility is located, these sands are thin and irregular in extent and thickness. The deposition of the Potomac sediments by a complex stream system appears to have been continuous throughout the time of their formation. The geometry of the sand bodies resembles the shoestring channel deposits formed by unidirectional currents. The individual beds are usually restricted laterally in northern Delaware. The Potomac consists of variegated red, gray, purple, yellow, and white, frequently lignitic silts and clays containing interbedded white, gray and rust-brown quartz sands and some gravel (Delaware Geological Survey, 1972, 1975, 1981). According to soil borings at GMC (see Appendix 3), the area beneath the new paint building consists of a stiff light brown and gray stratified fine sandy silty clay combined with a clayey silt and medium dense silty fine sand down to a depth of approximately 30 feet. Between a depth of approximately 30 and 50 feet, soil composition changes to a dense to very dense gray and brown stratified silty gravelly coarse to fine sand with seams of clayey silt and finer sand. Between a depth of 50 and 75 feet, the soil composition changes to a hard, predominately dark green micaceous fine sandy silty clay and clayey silt. Bedrock is encountered at a depth of approximately 75 feet.

The Lower Paleozoic-Precambrian Wilmington Complex is subdivided into amphilbolites, gabbros, banded gneisses, and some granites. Specifically, it is composed of interlayered hornblende-plagioclase gneiss containing small amounts of orth-and clinopyroxene, and pyroxene-plagioclase gneiss, amphibolite, and quartz-plagioclase gneiss. The Wilmington Complex is essentially a dense gray rock (Delaware Geological Survey, 1975, University of Delaware, 1971).

Soils in the site area consist primarily of Made Land and Urban Land and partially of the Othello Series, the Elsinboro series, and the Kinkora Series. Made Land and Urban Land are areas that have been filled with soil material, trash, or both; it also consists of land that has been so altered or disturbed by urban works and structures that classifying the soils is no longer feasible. In many areas, the original soil has been covered by 18 inches to several feet of fill material that has been hauled in or graded from higher areas. In small areas, the soil profile has been entirely cut away (U.S. Dept. of Agriculture, 1970). The soil at the site can be classified as top soil for the first few inches. Then bituminous pavement and crushed stone base occur down to 2 feet. In some areas, fill material extends down to approximately 5 feet.

The northern part of the GMC site lies within the Othello-Fallsington-Urban land complex which consists of poorly drained, nearly level Othello and Fallsington soils that have been used for residential, commercial, and industrial development. Originally, about two-thirds of the complex was Othello soils and one-third was Fallsington soils which are poorly drained and occur on upland flats in the southern, or Coastal Plain, part of the county. The Othello Series consists of poorly drained soils that occur on upland flats of the Coastal Plain. These soils developed in highly silty material underlain by sand. A typical profile has a dark grayish-brown silt loam surface layer about 7 inches thick and a pale-brown silt loam very fine sandy loam subsurface layer about 3 inches thick. The subsoil, about 20 inches thick, is a gray or light-gray silt loam that is mottled with yellowish-brown very fine sandy loam mottled with gray or light-gray (U.S. Dept. of Agriculture, 1970). The Fallsington soils developed on old sandy deposits containing moderate amounts of silt and clay. In a typical

profile the uppermost layer is a dark grayish-brown loam about 11 inches thick. The subsoil is about 19 inches thick. The upper part of the subsoil is slightly sticky when wet and consists of a light brownish-gray sandy clay loam mottled with yellowish-brown. The lower part is gray or light-gray sandy loam also mottled with yellowish-brown. The underlying material is much the same color as the lower part of the subsoil but it is sandier. Most of the remaining 75 percent has been covered with as much as 18 inches of fill material. Some small areas have been covered with more than 18 inches of fill, but in few, if any, areas has the original soil profile been entirely removed (U.S. Dept. of Agriculture, 1970).

The western part of the site is situated within the Elsinboro-Delanco-Urban land complex which consists of level to gently sloping Elsinboro and Delanco soils that have been used for residential or other community purposes. Elsinboro soils originally made up two-thirds of the complex, and Delanco soils the remaining one-third. The Elsinboro Series soils are deep and well drained. They occur on terraces, benches, and low bluffs above the flood plains along some of the major streams on the northern part of the county, particularly along the boundary between the Piedmont Plateau and the Coastal Plain. These soils developed in old alluvium that washed mainly from areas of crystalline micaceous rocks. A typical profile has a brown or dark-brown surface layer about 7 inches thick and a yellowish-brown subsurface layer about 5 inches thick. Both layers are a silt loam that is slightly sticky when wet. The subsoil, about 24 inches thick, is a strong-brown silty clay loam in the upper part and is a strong-brown silt loam in the lower part. It is slightly sticky or sticky and contains mica flakes. The underlying material is a strong-brown fine sandy loam that generally is highly micaceous (U.S. Dept. of Agriculture, 1970). The Delanco soils are moderately well drained and occur on terraces along some of the major streams in the northern part of the county. These soils developed from material that washed from soils on uplands of the Piedmont Plateau. In a typical profile, the surface layer is a dark grayish-brown silt loam about 7 inches thick. The subsoil (about 30 inches thick) is a yellowish-brown silt loam in the upper-most 5 inches, a yellowish-brown and strong-brown silty clay loam is present between the depths of 11 to 23 inches, and a yellowish-red silt loam at depths between

23 to 32 inches. This layer is mottled with grayish-brown between the depths of 23 and 36 inches. The underlying material is a yellowish-red very fine sandy loam mottled with light brownish-gray. This layer contains some waterworn pebbles and is micaceous. About 40 percent of the total complex acreage has been relatively undisturbed. About 40 percent consists of places where as much as two-thirds of the original soil profile has been removed or has been covered with as much as 18 inches of fill material. The remaining 20 percent of the complex has been covered with more than 18 inches of fill, or the soil profile as been almost entirely cut away. Most of the fill material is silty (U.S. Dept. of Agriculture, 1970).

The site borders the Kinkora Series to the east. This series consists of level to gently sloping (0 to 3 percent slopes), poorly drained soils that occur on benchlike terraces just above the flood plains along some of the major streams in the northern part of the county. These soils developed in the old alluvial sediments that were washed primarily from areas of crystalline rocks on the Piedmont Plateau. In a typical profile, the surface layer is a dark-gray silt loam about 8 inches thick. Below this is a subsurface layer, about 4 inches thick, that is a gray silt loam and is mottled with strong brown. The subsoil, about 18 inches thick, is a heavy silt clay loam that is gray in the upper part and gray or light-gray in the lower part. The underlying material is a gray or light-gray silt loam and fine sandy loam. Mottles of strong brown occur in the subsoil, and mottles of yellowish-brown are in the upper part of the underlying material. Mica flakes are common in lower layers (U.S. Dept. of Agriculture, 1970).

The hydrology of the Piedmont Province aquifers is complex. The very old rocks that constitute most of the Piedmont are relatively impermeable, although groundwater may be present in considerable quantities along faults and fractures in the crystalline rocks. However, the quantities of water in such rocks are unpredictable and the mere presence of faults and fractures does not necessarily mean that a sufficient amount of groundwater is available. Formation and yields within the Wilmington Complex are usually low. The yield of an average house well is about 1 gallons per minute (gpm) and dry holes are fairly common. The main source of groundwater in this area is the sands of the Potomac Formation. Generally,

these sands have sufficient permeability, porosity, and saturated thickness, and other characteristics necessary to be considered an economically suitable aquifer. Yields from the Potomac are highly variable ranging from as low as a few gallons per minute to as high as 500 gpm. Since grain size varies widely among the sands of the Potomac, development of wells can be difficult and time consuming in the finer grained sands (Delaware Geological Survey, 1972, 1981), (University of Delaware, 1971). Based on the water levels noted on the soil boring records from the facility, groundwater generally flows in an eastern direction across the site (Appendix 3).

4.2 Surface Water

GMC discharges storm water to the Little Mill Creek which borders the facility on the west (Figure 1). This creek is confluent with the Christina River approximately 4 miles downstream from the facility. According to the regional water resources agency servicing New Castle County, the Christina River is the main waterway that drains the area (WRA, September 1988).

Drainage from the Hazardous Waste Storage Pad, the Old Hazardous Waste Storage Pad, and the Paint Sludge Storage Pad is directed to the facility's Wastewater Pretreatment Unit. After treatment, the water is combined with sanitary sewerage from the facility and discharged to the Wilmington Sewer System (GMC, October 6, 1988).

4.3 Meteorology

In general, the Wilmington area climate consists of warm and humid summers and usually mild winters. The average mean temperature is 54.1° Fahrenheit (F). Extreme temperatures during the winter range from a maximum of 64°F to a minimum of -7°F. Minimal temperatures usually occur in January with an average temperature of 32°F (NOAA, 1983).

The average annual precipitation is 43.55 inches, and the average annual lake evaporation is 33 inches. The net precipitation is therefore 10.55 inches. The 1-year, 24-hour rainfall maximum is 2.7 inches (NOAA, 1983, EPA 1982).

Rainfall distribution throughout the year is fairly uniform; however, the greatest amounts are normally received during the summer months. Mostly, summer rainfall comes in the form of thunderstorms. Hurricanes occasionally cause heavy rainfall. The maximum monthly precipitation was 12.09 inches in August 1955, while the minimum was 0.16 inches in July of the same year. Generally, the maximum precipitation occurs in August with an average of 3.04 inches. An average annual snowfall is 21 inches. Seasonal amounts range from 1 to 50 inches (NOAA, 1983).

In the Wilmington area, west to northwest winds predominate. Southern winds have secondary maximum frequency. The average wind speed is 9.2 mph (NOAA, 1983).

5.0 POLLUTION MIGRATION PATHWAYS

5.1 Groundwater

There have been no known releases to the groundwater pathway. However, the nature and the integrity of the facility sewer system is unknown. No monitoring wells have been installed at the facility. If leaks have developed or should develop in the future, the potential exists for the migration of hazardous waste constituents to the groundwater.

5.2 Surface Water

Storm water is discharged into the Little Mill Creek (Figure 1). The influent storm line begins from an open culvert across Boxwood Road south of the facility. Storm water runoff enters this line through seven drains on the west side of the plant. The storm line runs north on the west side of the plant and east along the north side. According to the facility, storm water in this line drains from parking lots and roof conductors. Prior to the discharge at Little Mill Creek, the storm water is collected in three 100,000-gallon retention tanks which are fitted with sediment removal and oil skimming equipment (DE DNREC, June 1982).

Drainage from plant processes and storage pads is directed to the facility wastewater pretreatment unit (GMC, October, 1988). It is ultimately released to the Wilmington Sewer System.

The most probable release to the surface water pathway would be through flooding.

According to a flood hazard boundary map, most of the facility lies in Zone C (Minimal flood hazard). However, the hazard increases to the east toward the Little Mill Creek (Figure 3). Should flooding occur, there is a possibility of hazardous constituents being released to the creek from the facility operations such as painting processes.

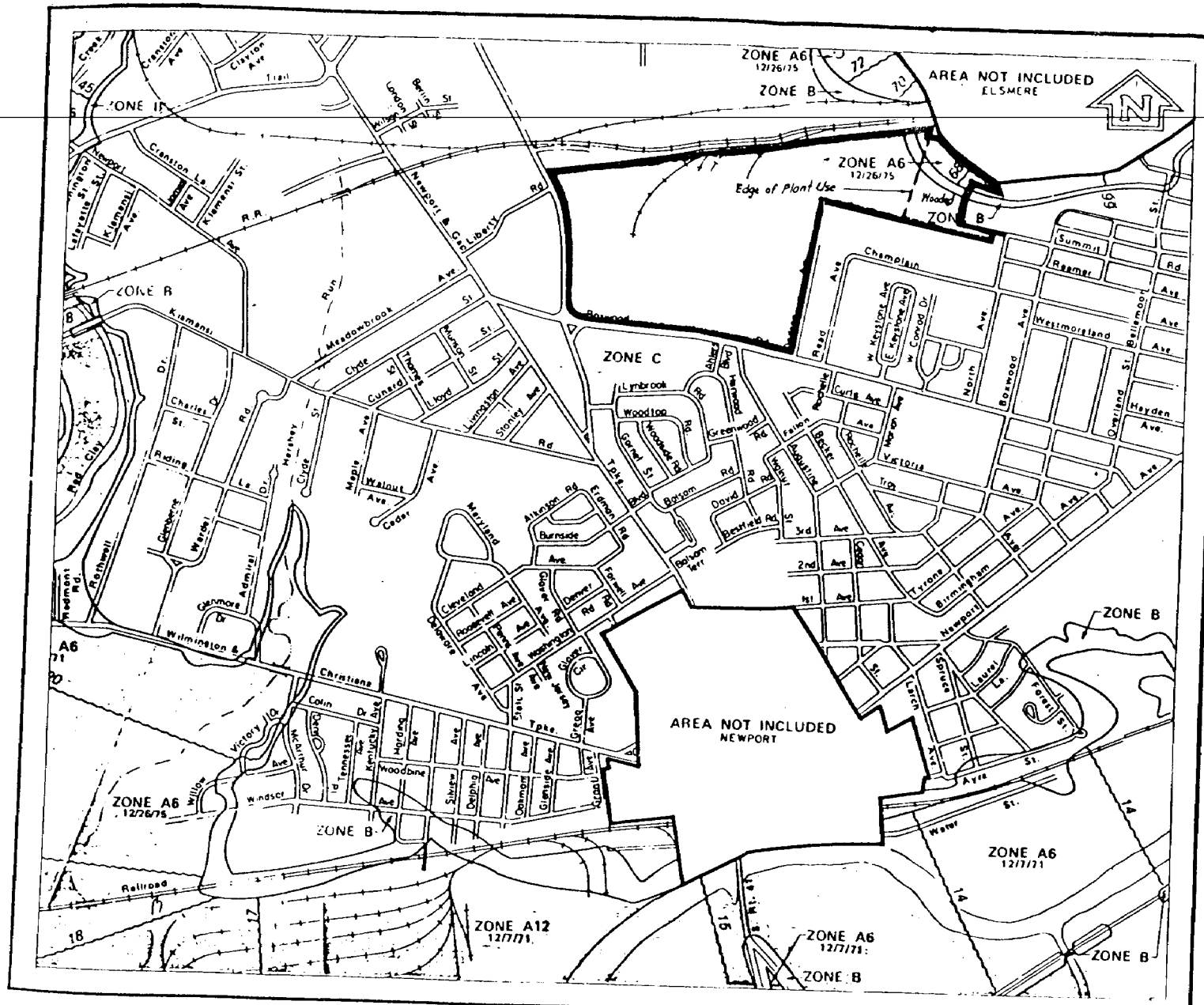


FIGURE 3

Base Flood Elevation Line — 513

Base Flood Elevation (513' M.S.L.)

Elevation Reference Mark RM7 x

River Mile · M 1.5

*EXPLANATION OF ZONE DESIGNATIONS

A flood insurance map displays the zone designations for a community according to areas of designated flood hazards. The zone designations used by FIA are

Zone Symbol	Category
A	Areas of special flood hazards (SFHA) and without base flood elevations determined
A1 through A30	Areas of special flood hazards (SFHA) with base flood elevations. Zones are assigned according to flood hazard factors and dates of SFHA identification
AO	Areas of special flood hazards that have shallow flood depths (less than two feet) and or undefined velocities. Base flood elevations are not determined
V	Areas of special flood hazards with velocity that are inundated by tidal floods. Zones are assigned according to flood hazard factors and dates of SFHA identification
B	Areas of moderate flood hazards
C	Areas of minimal flood hazards
D	Areas of undetermined, but possible flood hazards

APPROXIMATE SCALE

0 1000 2000 3000

SCALE IN FEET

NEW CASTLE CO., DE

FLOOD HAZARD BOUNDARY MAP

SOURCE:
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
Federal Insurance Administration

CDM Federal Programs Corporation

5.3 Soil

There are no known releases to the soil pathway (GMC, August 1988). However, the nature and integrity of the facility sewer system is unknown. If leaks have developed or should develop in the future, the potential exists for the migration of hazardous waste constituents to the soil.

5.4 Air

There are no known releases to the air pathway. There is no indication of airborne contamination from the facility.

5.5 Subsurface Gas

There are no known releases to the subsurface gas pathway. No landfills are known to exist at this site.

6.0 EXPOSURE POTENTIAL

6.1 Groundwater

The potential for exposure from groundwater contamination is expected to be low. Residents within a one mile radius of the facility are supplied with drinking water from the Artesian Water Company which utilizes wells located in the area between DuPont Boulevard and the Delaware River for its water supply. This area is located more than four miles from GMC. A spokesman for Artesian Water Company indicated that there may be a few older homes in the area utilizing private wells (Sam Baker, September 1988). The residents in these homes would be at risk to possible groundwater contamination.

6.2 Surface Water

The Little Mill Creek is not used as a drinking water source by any of the area's water companies. According to the Delaware Nature Educational Society the creek is also not used for recreational purposes (Ann Loring, December 1988). There is no evidence to suggest that the creek is used for private drinking water supplies.

6.3 Soil

There is no known potential for exposure from contaminated soil. If contamination existed, exposure should be limited to plant personnel as the facility is contained by a fence and entry is limited.

6.4 Air

There is no known potential for exposure to air contaminants from the GMC facility. The population within a one mile radius of the facility has not been determined at this time.

6.5 Subsurface Gas

There is no known potential for exposure to subsurface gas as a result of the activities at the GMC facility.

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APPENDIX 1
PAINT SLUDGE ANALYTICAL DATA

ENVIRONMENTAL INDUSTRIAL RESEARCH ASSOCIATES, INC
161 James Drive West, Suite 100
St. Rose, Louisiana 70087
(504) 469-0333

METHODS

Soils, Sediments and Hazardous Waste Evaluation Procedures:

1. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, U.S.E.P.A. Second Edition Revised April, 1984

GC/MS Method For Volatile Organics	Method 8240
Sample Introduction: VOA	Method 5030
GC/MS Method for Semivolatile Organics	Method 8270
Continuous Liquid/Liquid Extraction	Method 3520
Organochlorine Pesticides and PCB's	Method 8080
Chlorinated Herbicides	Method 8150
Arsenic	Method 7060
Barium	Method 7080
Cadmium	Method 7130
Chromium	Method 7190
Lead	Method 7420
Mercury	Method 7470
Selenium	Method 7740
Silver	Method 7760
Acid Digestion Procedure for Flame AAS	Method 3010
Acid Digestion Procedures for Furnace AAS	Method 3020

2. Standard Methods for the Examination of Water and Wastewater APHA, AWWA, WPCF, Sixteenth Edition, 1985

Mercury	Method 303F

3. FEDERAL REGISTER: Friday June 13, 1986. 40 CFR Parts 261, 271, and 302

TCLP Extraction Procedure	Page 21685

John R. Troost,
Manager of Analytical Services

1/26/87
Date

Marietta Lambert TEO

Thomas E. Orr,
Quality Assurance Coordinator

Date

EIRA ENVIRONMENTAL INDUSTRIAL RESEARCH ASSOCIATES, INC.

0030 TCLP EXTRACT

STANDARD ADDITIONS

Metals	Concentration in Extract (mg/l)	RDL (mg/l)	Correlation Coefficient (mg/l)
Arsenic	BDL	0.002	0.9945
Barium	1.8	0.1	0.9993
Cadmium	0.030	0.005	1.0000
Chromium	BDL	0.05	0.9970
Lead	0.30	0.1	0.9973
Mercury	0.0012	0.0002	0.9911
Selenium	BDL	0.002	0.9982
Silver	0.08	0.01	0.9999

BDL: Below Detection Limit
RDL: Required Detection Limit

Client: Weston
Sample: 0030

Date Extracted: 01/05/87
Date Analyzed : 01/09/87

TCLP VOLATILE ORGANICS

Compound	Retention Time (min)	Concentration in Extract (ug/l)	RDL (ug/l)
Vinyl Chloride		BDL	5.0
Methylene Chloride	5.44	9 B	5.0
1.1-Dichloroethene		BDL	5.0
Chloroform		BDL	5.0
1.2-Dichloroethane		BDL	5.0
1.1.1-Trichloroethane		BDL	5.0
Carbon tetrachloride		BDL	5.0
Trichloroethene		BDL	5.0
1.1.2-Trichloroethane		BDL	5.0
Benzene		BDL	5.0
Tetrachloroethene		BDL	5.0
1.1.2.2-Tetrachloroethane		BDL	5.0
Toluene	22.90	3 **	5.0
Chlorobenzene		BDL	5.0
Carbon Disulfide		BDL	5.0
2-Butanone		BDL	5.0
Acrylonitrile		BDL	5.0
Isobutenol		BDL	5.0
1.1.1.2-tetrachloroethane		BDL	5.0

SURROGATE RECOVERY	%
1,2-Dichloroethane-d4	85
Toluene-d8	103
4-Bromofluorobenzene	94

(Results are not corrected for Recovery)

Associated Blank: Blank #2

RDL: Required Detection Limit
BDL: Below Detection Limit
** : Below Report Limit, but Detected
B : Detected in Blank
MS : Matrix Spike Compound added to Sample at a Level of _____

Client: Weston
Sample: 0030

Date Extracted: 01/14/87
Date Analyzed : 01/25/87

TCLP BASE/NEUTRAL EXTRACTABLES

Compound	Retention Time (min)	Concentration in Extract (ug/l)	RDL (ug/l)
Bis(2chloroethyl)ether		BDL	20.0
1,3-Dichlorobenzene		BDL	20.0
1,4-Dichlorobenzene		BDL	20.0
1,2-Dichlorobenzene		BDL	20.0
Hexachloroethane		BDL	20.0
Nitrobenzene		BDL	20.0
Hexachlorobutadiene		BDL	20.0
2,4-Dinitrotoluene		BDL	20.0
Hexachlorobenzene		BDL	20.0

SURROGATE RECOVERY	%
d-5 nitrobenzene	76
2-Fluorobiphenyl	74
d-14 Terphenyl	100

(Results are not corrected for Recovery)

Associated Blank: Blank #4

TCLP ACID EXTRACTABLES

Compound	Retention Time (min)	Concentration in Extract (ug/l)	RDL (ug/l)
Phenol		BDL	20.0
2,4,6-Trichlorophenol		BDL	20.0
Pentachlorophenol		BDL	20.0
2-Methylphenol		BDL	20.0
4-Methylphenol		BDL	20.0
2,4,5-Trichlorophenol		BDL	20.0
3-Methylphenol		BDL	20.0
2,3,4,6-Tetrachlorophenol		BDL	20.0

SURROGATE RECOVERY	%
d-5 phenol	64
2-Fluorophenol	74
2,4,6-Tribromophenol	91

(Results are not corrected for Recovery)

Associated Blank: Blank #4

RDL: Required Detection Limit
BDL: Below Detection Limit
** : Below Report Limit, but Detected
B : Detected in Blank
MS : Matrix Spike Compound added to Sample at a Level of _____

Client: Weston
Sample: 0030

Date Extracted: 01/23/87
Date Analyzed: 01/26/87

TCLP EXTRACT: PESTICIDES/HERBICIDES

PESTICIDE FRACTION

Compounds	Retention Time (min.)	Concentration (ug/l)	RDL (ug/l)
Gamma-BHC (Lindane)		BDL	5.00
Heptachlor		BDL	5.00
Heptachlor Hydroxide		BDL	5.00
Endrin		BDL	10.00
Methoxychlor		BDL	50.00
Chlordane		BDL	50.00
Toxaphene		BDL	100.00

Surrogate: Dibutyl Chlorendate Recovery: 105%

HERBICIDE FRACTION

Compounds	Retention Time (min.)	Concentration (ug/l)	RDL (ug/l)
2,4-D		BDL	65.00
2,4,5-TP (Silvex)		BDL	20.00

Surrogate: 4-(2,4-Dichlorophenoxy)butyric Acid Recovery: 48%

NOTES:
- RDL: Detection Limit Required by Method
- BDL: Below Required Detection Limit
- **: Below Required Detection Limit but Detected
- DL: Diluted Out
- B: Compound Detected in Blank
- MS: Matrix Spike Compound: Level:

ug/l for Aldrin/G-BHC/Heptachlor
ug/l for Dieldrin/Endrin/4,4'-DDT
ug/l for 2,4-D (Herbicide)

Toxicity Characteristic Contaminant Levels

PESTICIDES

Compound	Proposed TCLP Regulatory Levels (mg/l)	Final CCWE F001-F005 Treatment (mg/l)
Chlordane	0.03	---
Endrin	0.003	---
Heptachlor(and its hydroxide)	0.001	---
2,4D	1.4	---
Lindane	0.06	---
Methoxychlor	1.4	---
Toxaphene	0.07	---
2,4,5-TP (silvex)	0.14	---

INORGANICS

Compound	Proposed TCLP Regulatory Levels (mg/l)	Final CCWE F001-F005 Treatment (mg/l)
Arsenic	5.0	---
Barium	100.	---
Cadmium	1.0	---
Chromium	5.0	---
Lead	5.0	---
Mercury	0.2	---
Selenium	1.0	---
Silver	5.0	---

1) Sources - Proposed TCLP Regulatory Levels - 6-13-86 Federal Register - p. 21685.
Final Constituents in Waste Extract (CCWE) Treatment Levels - 11-7-86 Federal Register - p. 40642.

2) "---" - indicates no applicable limit.

3) CCWE levels apply only to F001-F005 wastes, but may reflect levels which will apply to other individual wastes when additional regulations are promulgated.

4) TCLP Levels are proposed and subject to change.

5) When limits are given in both columns, use the more restrictive of the two when evaluating a waste as potentially hazardous. None of the above limits currently apply to wastes other than F001-F005, but should be considered indicative of limits which may become effective over the next several years.

Toxicity Characteristic Contaminant Levels

ORGANICS

Compound	Proposed TCLP Regulatory Levels (mg/l)	Final CCWE F001-F005 Treatment (mg/l)
Acetone	---	0.59
Acrylonitrile	5.0	---
Benzene	0.07	---
Bis(2-chloroethyl)ether	0.05	---
n-Butyl Alcohol	---	5.0
Carbon Disulfide	14.4	4.81
Carbon Tetrachloride	0.07	0.96
Chlorobenzene	1.4	0.05
Chloroform	0.07	---
Cresol(all isomers)	10.0	0.75
Cyclohexanone	---	0.75
1,2-Dichlorobenzene	4.3	0.125
1,4-Dichlorobenzene	10.8	---
1,2-Dichloroethane	0.40	---
1,1-Dichloroethylene	0.1	---
2,4-Dinitrotoluene	0.13	---
Ethyl Acetate	---	0.75
Ethyl Benzene	---	0.053
Ethyl Ether	---	0.75
Hexachlorobenzene	0.13	---
Hexachlorobutadiene	0.72	---
Hexachloroethane	4.3	---
Isobutanol	36.	5.0
Methanol	---	0.75
Methylene Chloride	8.6	0.96
Methyl Ethyl Ketone	7.2	0.75
Methyl Isobutyl Ketone	---	0.33
Nitrobenzene	0.13	0.125
Pentachlorophenol	3.6	---
Phenol	14.4	---
Pyridine	5.0	0.33
1,1,1,2-Tetrachloroethane	10.0	---
1,1,2,2-Tetrachloroethane	1.3	---
Tetrachlorethylene	0.1	0.05
2,3,4,6-Tetrachlorophenol	1.5	---
Toluene	14.4	0.33
1,1,1-Trichloroethane	30.	0.41
122-Trichloro-122-trifluoro-ethane	---	0.96
1,1,2-Trichloroethane	1.2	---
Trichloroethylene	0.07	0.091
2,4,5-Trichlorophenol	5.8	---
2,4,6-Trichlorophenol	0.30	---
Trichlorofluoromethane	---	0.96
Vinyl Chloride	0.05	---
Xylene	---	0.15

APPENDIX 2
WASTEWATER TREATMENT SLUDGE

ENVIRONMENTAL INDUSTRIAL RESEARCH ASSOCIATES, INC
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METHODS

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Mercury	Method 7470
Selenium	Method 7740
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Acid Digestion Procedures for Furnace AAS	Method 3020

2. Standard Methods for the Examination of Water and Wastewater APHA, AWWA, WPCF, Sixteenth Edition, 1985

Mercury	Method 303F

3. FEDERAL REGISTER: Friday June 13, 1986. 40 CFR Parts 261, 271, and 302

TCLP Extraction Procedure	Page 21685

John R. Troost,
Manager of Analytical Services

1/26/87
Date

Thomas E. Orr,
Quality Assurance Coordinator

Date

EIRA ENVIRONMENTAL INDUSTRIAL RESEARCH ASSOCIATES, INC.

WASTE TREATMENT 8612-342-0090

STANDARD ADDITIONS

Metals	Concentration in Extract (mg/l)	RDL (mg/l)	Correlation Coefficient (mg/l)
Arsenic	0.004	0.002	0.9995
Barium	0.16	0.1	0.9993
Cadmium	0.020	0.005	0.9999
Chromium	0.006	0.05	0.9966
Lead	0.083	0.05	1.0000
Mercury	0.0027	0.0002	0.9942
Selenium	0.0002	0.002	0.9958
Silver	0.059	0.01	0.9930

Client: Weston
Sample: Waste Treatment Building

Date Extracted: 12/15/86
Date Analyzed : 12/17/87

TCLP VOLATILE ORGANICS

Compound	Retention Time (min)	Concentration in Extract (ug/l)	RDL (ug/l)
Vinyl Chloride		BDL	5.0
Methylene Chloride	5.71	16 B	5.0
1.1-Dichloroethene		BDL	5.0
Chloroform		BDL	5.0
1.2-Dichloroethane		BDL	5.0
1.1.1-Trichloroethane		BDL	5.0
Carbon tetrachloride		BDL	5.0
Trichloroethene		BDL	5.0
1.1.2-Trichloroethane		BDL	5.0
Benzene		BDL	5.0
Tetrachloroethene		BDL	5.0
1.1.2.2-Tetrachloroethane		BDL	5.0
Toluene	22.97	7 B	5.0
Chlorobenzene		BDL	5.0
Carbon Disulfide		BDL	5.0
2-Butanone	11.56	250 B	5.0
Acrylonitrile		BDL	5.0
Isobutenol		BDL	5.0
1.1.1.2-tetrachloroethane		BDL	5.0

SURROGATE RECOVERY	%
1,2-Dichloroethane-d4	100
Toluene-d8	98
4-Bromofluorobenzene	98

(Results are not corrected for Recovery)

Associated Blank: Blank #5

RDL: Required Detection Limit
BDL: Below Detection Limit
** : Below Report Limit, but Detected
B : Detected in Blank
MS : Matrix Spike Compound added to Sample at a Level of _____

EIRA ENVIRONMENTAL INDUSTRIAL RESEARCH ASSOCIATES, INC.

Client: Weston
Sample: Waste Treatment Building

Date Extracted: 12/15/86
Date Analyzed : 12/30/87

TCLP BASE/NEUTRAL EXTRACTABLES

Compound	Retention Time (min)	Concentration in Extract (ug/l)	RDL (ug/l)
Bis(2chloroethyl)ether		BDL	20.0
1,3-Dichlorobenzene		BDL	20.0
1,4-Dichlorobenzene		BDL	20.0
1,2-Dichlorobenzene		BDL	20.0
Hexachloroethane		BDL	20.0
Nitrobenzene		BDL	20.0
Hexachlorobutadiene		BDL	20.0
2,4-Dinitrotoluene		BDL	20.0
Hexachlorobenzene		BDL	20.0

SURROGATE RECOVERY	%
d-5 nitrobenzene	76
2-Fluorobiphenyl	99
d-14 Terphenyl	68

(Results are not corrected for Recovery)

Associated Blank: Blank #1

TCLP ACID EXTRACTABLES

Compound	Retention Time (min)	Concentration in Extract (ug/l)	RDL (ug/l)
Phenol		BDL	20.0
2,4,6-Trichlorophenol		BDL	20.0
Pentachlorophenol		BDL	20.0
2-Methylphenol		BDL	20.0
4-Methylphenol		BDL	20.0
2,4,5-Trichlorophenol		BDL	20.0
3-Methylphenol		BDL	20.0
2,3,4,6-Tetrachlorophenol		BDL	20.0

SURROGATE RECOVERY	%
d-5 phenol	79
2-Fluorophenol	84
2,4,6-Tribromophenol	91

(Results are not corrected for Recovery)

Associated Blank: Blank #1

RDL: Required Detection Limit
BDL: Below Detection Limit
** : Below Report Limit, but Detected
B : Detected in Blank
MS : Matrix Spike Compound added to Sample at a Level of _____

Client: Weston
Sample: Waste Treatment 8612342-0090

Date Extracted:
Date Analyzed: 1/6/87

TCLP EXTRACT: PESTICIDES/HERBICIDES

PESTICIDE FRACTION

Compounds	Retention Time (min.)	Concentration (ug/l)	RDL (ug/l)
Gamma-BHC (Lindane)		BDL	5.00
Heptachlor		BDL	5.00
Heptachlor Hydroxide		BDL	5.00
Endrin		BDL	10.00
Methoxychlor		BDL	50.00
Chlorodane		BDL	50.00
Toxaphene		BDL	100.00

Surrogate: Dibutyl Chlorendate Recovery: 110%

HERBICIDE FRACTION

Compounds	Retention Time (min.)	Concentration (ug/l)	RDL (ug/l)
2,4-D		BDL	65.00
2,4,5-TP (Silvex)		BDL	20.00

Surrogate: 4-(2,4-Dichlorophenoxy)butyric Acid Recovery: 43%

NOTES:
- RDL: Detection Limit Required by Method
- BDL: Below Required Detection Limit
- **: Below Required Detection Limit but Detected
- DL: Diluted Out
- B: Compound Detected in Blank
- MS: Matrix Spike Compound: Level:

ug/l for Aldrin/G-BHC/Heptachlor
ug/l for Dieldrin/Endrin/4,4'-DDT
ug/l for 2,4-D (Herbicide)

Toxicity Characteristic Contaminant Levels

PESTICIDES

Compound	Proposed TCLP Regulatory Levels (mg/l)	Final CCWE F001-F005 Treatment (mg/l)
Chlordane	0.03	---
Endrin	0.003	---
Heptachlor(and its hydroxide)	0.001	---
2,4D	1.4	---
Lindane	0.06	---
Methoxychlor	1.4	---
Toxaphene	0.07	---
2,4,5-TP (silvex)	0.14	---

INORGANICS

Compound	Proposed TCLP Regulatory Levels (mg/l)	Final CCWE F001-F005 Treatment (mg/l)
Arsenic	5.0	---
Barium	100.	---
Cadmium	1.0	---
Chromium	5.0	---
Lead	5.0	---
Mercury	0.2	---
Selenium	1.0	---
Silver	5.0	---

1) Sources - Proposed TCLP Regulatory Levels - 6-13-86 Federal Register - p. 21685.
Final Constituents in Waste Extract (CCWE) Treatment Levels - 11-7-86 Federal Register - p. 40642.

2) "---" - indicates no applicable limit.

3) CCWE levels apply only to F001-F005 wastes, but may reflect levels which will apply to other individual wastes when additional regulations are promulgated.

4) TCLP Levels are proposed and subject to change.

5) When limits are given in both columns, use the more restrictive of the two when evaluating a waste as potentially hazardous. None of the above limits currently apply to wastes other than F001-F005, but should be considered indicative of limits which may become effective over the next several years.

Toxicity Characteristic Contaminant Levels

ORGANICS

Compound	Proposed TCLP Regulatory Levels (mg/l)	Final CCWE F001-F005 Treatment (mg/l)
Acetone	---	0.59
Acrylonitrile	5.0	---
Benzene	0.07	---
Bis(2-chloroethyl)ether	0.05	---
n-Butyl Alcohol	---	5.0
Carbon Disulfide	14.4	4.81
Carbon Tetrachloride	0.07	0.96
Chlorobenzene	1.4	0.05
Chloroform	0.07	---
Cresol(all isomers)	10.0	0.75
Cyclohexanone	---	0.75
1,2-Dichlorobenzene	4.3	0.125
1,4-Dichlorobenzene	10.8	---
1,2-Dichloroethane	0.40	---
1,1-Dichloroethylene	0.1	---
2,4-Dinitrotoluene	0.13	---
Ethyl Acetate	---	0.75
Ethyl Benzene	---	0.053
Ethyl Ether	---	0.75
Hexachlorobenzene	0.13	---
Hexachlorobutadiene	0.72	---
Hexachloroethane	4.3	---
Isobutanol	36.	5.0
Methanol	---	0.75
Methylene Chloride	8.6	0.96
Methyl Ethyl Ketone	7.2	0.75
Methyl Isobutyl Ketone	---	0.33
Nitrobenzene	0.13	0.125
Pentachlorophenol	3.6	---
Phenol	14.4	---
Pyridine	5.0	0.33
1,1,1,2-Tetrachloroethane	10.0	---
1,1,2,2-Tetrachloroethane	1.3	---
Tetrachlorethylene	0.1	0.05
2,3,4,6-Tetrachlorophenol	1.5	---
Toluene	14.4	0.33
1,1,1-Trichloroethane	30.	0.41
122-Trichloro-122-trifluoro-ethane	---	0.96
1,1,2-Trichloroethane	1.2	---
Trichloroethylene	0.07	0.091
2,4,5-Trichlorophenol	5.8	---
2,4,6-Trichlorophenol	0.30	---
Trichlorofluoromethane	---	0.96
Vinyl Chloride	0.05	---
Xylene	---	0.15

APPENDIX 3
SOIL BORING LOG

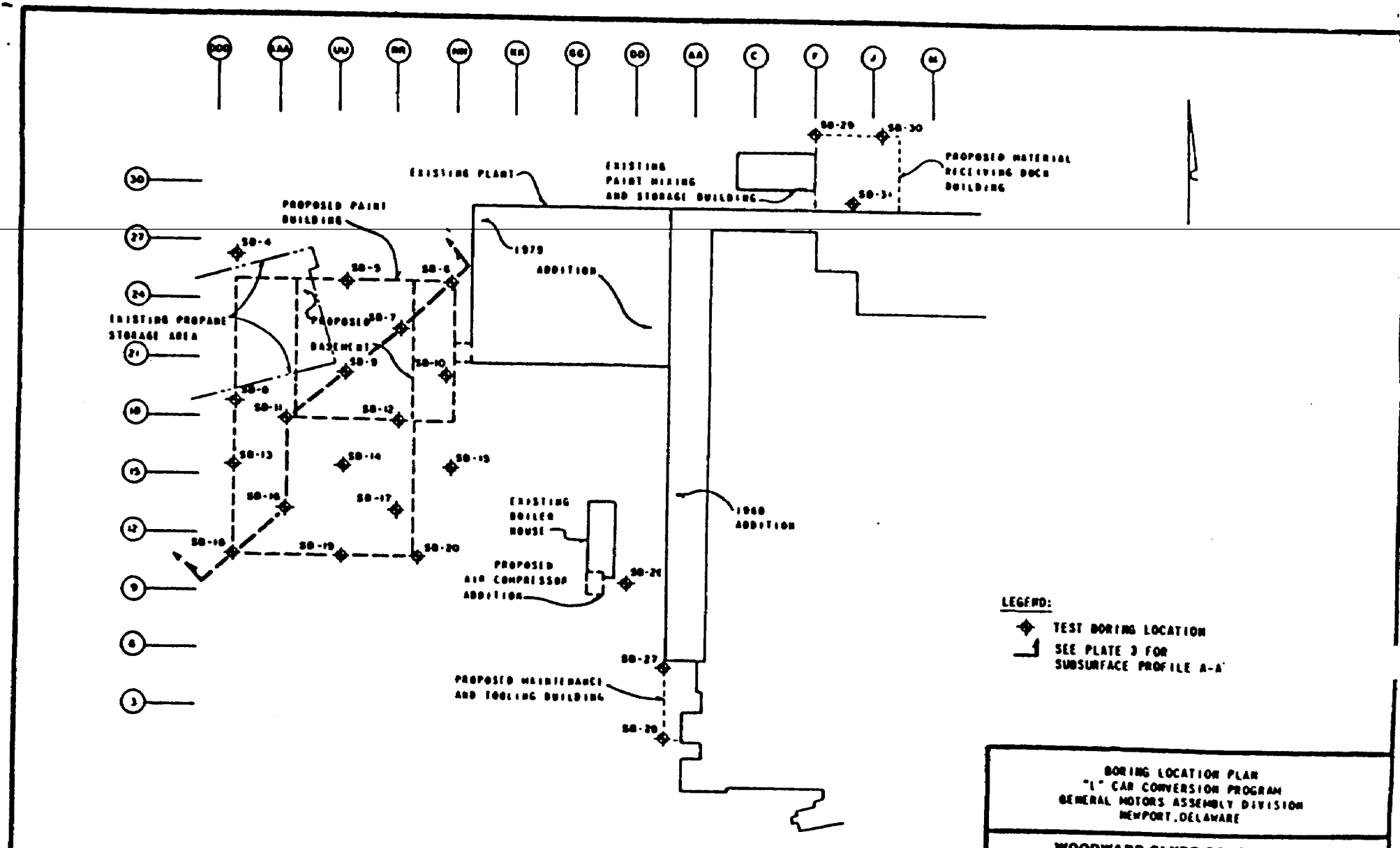
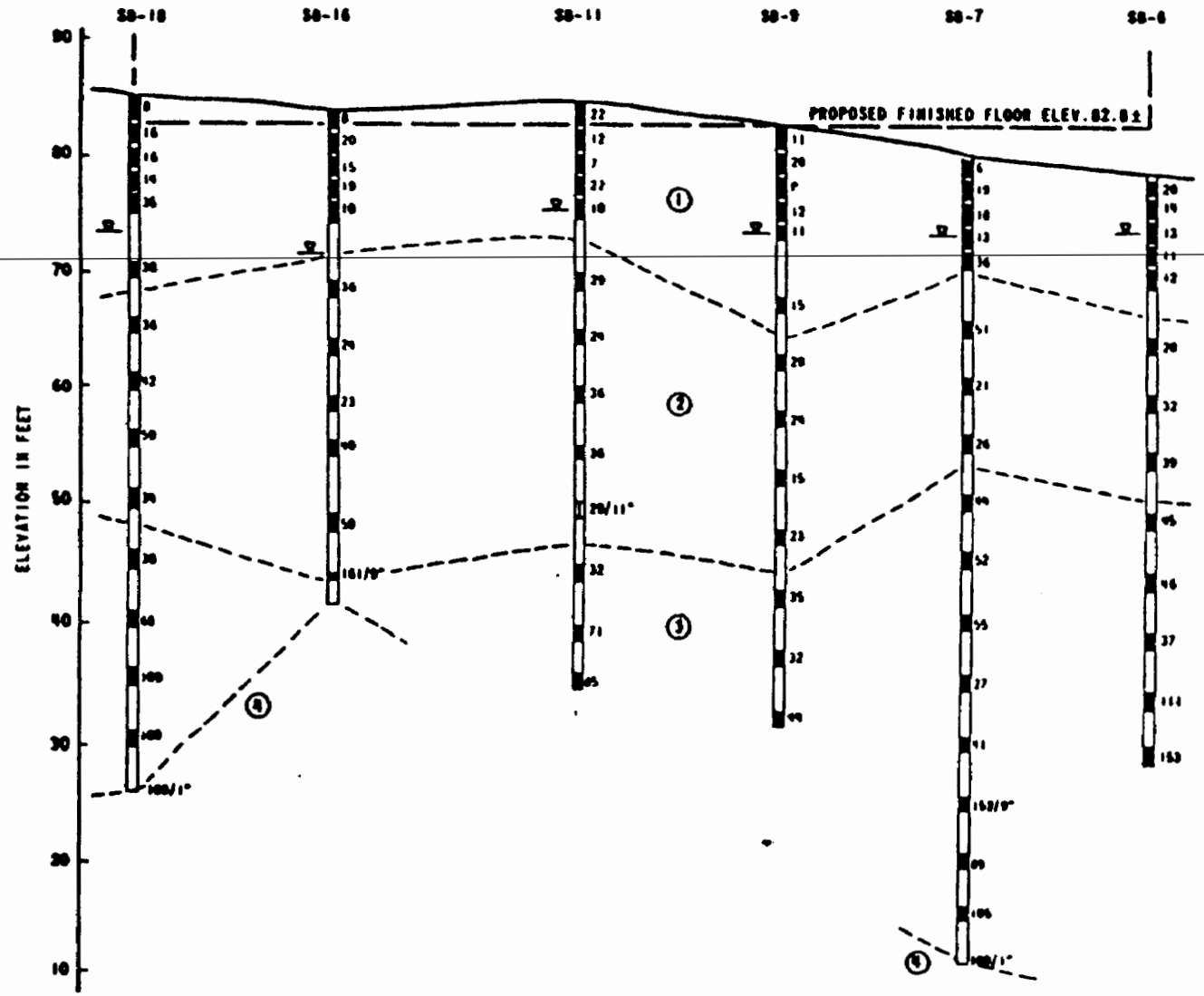

EXISTING PLANT
EXISTING PAINT MIXING AND STORAGE BUILDING
PROPOSED MATERIAL RECEIVING DOCK BUILDING
PROPOSED PAINT BUILDING
1979 ADDITION
EXISTING PROPANE STORAGE AREA
PROPOSED BASEMENT
1968 ADDITION
EXISTING BOILER HOUSE
PROPOSED AIR COMPRESSOR ADDITION
PROPOSED MAINTENANCE AND TOOLING BUILDING
SB-1
SB-2
SB-3
SB-4
SB-5
SB-6
SB-7
SB-8
SB-9
SB-10
SB-11
SB-12
SB-13
SB-14
SB-15
SB-16
SB-17
SB-18
SB-19
SB-20
SB-21
SB-22
SB-23
SB-24
SB-25
SB-26
SB-27
SB-28
SB-29
SB-30
LEGEND:
TEST BORING LOCATION
SEE PLATE 3 FOR SUBSURFACE PROFILE A-A'
BORING LOCATION PLAN
"L" CAR CONVERSION PROGRAM
GENERAL MOTORS ASSEMBLY DIVISION
NEWPORT, DELAWARE
WOODWARD-CLYDE CONSULTANTS
I.P.
A.E.D.
7/30/80
0
700

PLATE 2



LEGEND:

① GENERALLY STIFF LIGHT BROWN AND GRAY STRATIFIED FINE SANDY SILTY CLAY / CLAYEY SILT AND MEDIUM DENSE SILTY FINE SAND

② GENERALLY DENSE TO VERY DENSE GRAY AND BROWN STRATIFIED SILTY GRAVELLY COARSE TO FINE SAND WITH SEAMS OF CLAYEY SILT AND FINER SAND AND POSSIBLY WITH OCCASIONAL BOULDERS

③ GENERALLY HARD, PREDOMINATELY DARK GREEN MICACEOUS FINE SANDY SILTY CLAY / CLAYEY SILT (DECOMPOSED ROCK)

④ PROBABLE INTACT GNEISS BEDROCK

▽ GROUNDWATER LEVEL (OVERNIGHT READINGS)

SUBSURFACE PROFILE A-A'
"L" CAR CONVERSION PROGRAM
GENERAL MOTORS ASSEMBLY DIVISION
NEWPORT, DELAWARE

WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS GEOLOGISTS AND ENVIRONMENTAL SCIENTISTS

Drawn By	T.P.	SCALE IN FEET	Date	7/30/81
Checked	A.H.D.	0 50	Job	81C2196

PLATE 3

LOG of BORING No. SB-4

DATE 7/6/84 SURFACE ELEVATION 83.9 LOCATION See Plate 2

DEPTH, ft.	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		9	Topsoil (4")	83.6				
		7	Stiff brown fine sandy clayey silt and silty clay		25.7	34	22	
		18		76.1	23.0	37	25	
		20						
		15	Dense orange-brown and gray stratified silty medium to fine sand and medium to fine sandy silty clay	70.9	22.3			M
		21	Medium dense to very dense orange-brown and gray silty gravelly coarse to fine sand		20.7			M
20		35						
		56			12.3			M
		9		50.9				
		81	Hard brown, becoming predominantly green, micaceous fine sandy clayey silt/silty clay (Decomposed Rock)		30.9	61	35	M
40		32						
		147						
50		56			22.6	37	20	M
		65						
60		48						
		43						
70		129						
		100/1"		9.2				ROD
		NX/86	Hard green and gray moderately fractured gneiss, with soft and friable zone from approximately 76.7 to 78.1 ft.	-0.8				29%
90								

Completion Depth 84.7 Feet Water Depth 12.9 Feet Date 7/6/84

Project Name General Motors Project Number 84C2155

LOG of BORING No. SB-5

DATE 7/9/84 SURFACE ELEVATION 79.4 LOCATION See Plate 2

DEPTH, ft.	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		9	Bituminous Pavement (2")	78.9				
		21	Crushed Stone Base (4")					
		13	Stiff to very stiff brown and gray fine sandy silty clay and clayey silt	70.9				
		12						
10		13	Medium dense brown micaceous silty fine sand	67.4				
		29						
20		35	Very dense light gray and brown stratified coarse to fine sand and medium to fine sand, with occasional thin silt seams					
		53						
30		52		46.9				
		32						
40		48	Very stiff to hard brown and gray, becoming green, micaceous stratified fine sandy silty clay/clayey silt (Decomposed Rock)					
		78						
50		28		29.4				

Completion Depth 50.0 Feet Water Depth 6.2 Feet Date 7/10/84

Project Name General Motors Project Number 84C2155

LOG of BORING No. SB-6

DATE 7/13/84 SURFACE ELEVATION 78.5 LOCATION See Plate 2

DEPTH, ft.	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		20	Bituminous Pavement (2"); Crushed Stone Base (4"); Sand/silt/glass/wire fill (18")	76.5				
		14						
		13						
		11	Medium dense to dense gray and brown stratified fine sandy silt, silty fine sand and silty medium to fine sand					
10		12		66.5				
		20	Dense to very dense gray and brown coarse to fine sand, trace gravel, with thin silt seams					
20		32						
		39		50.5				
30		45	Hard dense green and light brown micaceous fine sandy silty clay and clayey silt (Decomposed Rock)					
		46						
40		37						
		111						
50		153		28.5				

Completion Depth 50.0 Feet Water Depth 5.7 Feet Date 7/16/84

Project Name General Motors Project Number 84C2155

LOG of BORING No. SB-7

DATE 7/10/84 SURFACE ELEVATION 80.0 LOCATION See Plate 2

DEPTH, ft.	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		6 19	Bituminous Pavement (2") Crushed Stone Base (3")	79.6				
		18 13	Stiff brown, gray, red-brown and green fine sandy clayey silt, trace coarse to medium sand	70.5				
10		36 51	Dense to very dense gray, red-brown and orange-brown silty coarse to fine sand	58.0				
20		21 26	Stiff green and red clayey silt, becoming orange-brown silty fine sand	53.0				
30		44 52	Hard gray and orange-brown, becoming predominantly green below 45 feet, stratified micaceous fine sandy clayey silt/silty clay (Decomposed Rock)					
40		55 27						
50		41 152/9"						
60		89 105						
70		100/1"		10.9				
			Note: Auger refusal at 69.0 feet					

Completion Depth 69.1 Feet Water Depth 7.0 Feet Date 7/11/84

Project Name General Motors Project Number 84C2155

LOG of BORING No. SB-8

DATE 7/11/84 SURFACE ELEVATION 84.4 LOCATION See Plate 2

DEPTH, ft.	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		17	Topsoil (5")	84.0				
		10	Stiff brown fine silty clay/clayey silt, trace fine sand		20.7	30	16	
		P		78.4	18.9	30	23	M,C,W
		11	Medium dense brown silty medium to fine sand		21.4	NP	NP	
10		11		72.4				
		13	Stiff dark gray silty clay	66.4	35.3	56	29	
20		14	Medium dense to dense light brown, orange-brown and gray stratified silty gravelly coarse to fine sand, with occasional thin silt seams; possible boulder at 32.8 feet					
		23			15.2			M
30		19						
		19			10.5			M
				46.4				
40		25	Very stiff to hard predominantly dark gray and green micaceous medium to fine sandy silty clay/clayey silt, becoming silty coarse to fine sand with rock fragments (Decomposed Rock)		38.2	66	31	M
		48						
50		39		34.4	17.2	NP	NP	M

Completion Depth 50.0 Feet Water Depth 7.7 Feet Date 7/12/84

Project Name General Motors Project Number 84C2155

LOG of BORING No. SB-9

DATE 7/9/84 SURFACE ELEVATION 82.4 LOCATION See Plate 2

DEPTH, ft.	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		11	Bituminous Pavement (2") Crushed Stone Base (4")	81.9				
		20						
		P	Stiff light brown micaceous fine sandy silty clay, trace gravel		21.4	35	19	M,C
		12		72.6				
10		11	Medium dense red-brown and light brown silty medium to fine sand					
		15		64.4				
20		28	Dense light brown gravelly silty coarse to fine sand					
		24		54.4				
30		15	Medium dense red-brown fine sand with thin seams of silty clay/clayey silt	49.4				
		23	Dense light brown silty gravelly coarse to fine sand with seams of clayey silt	43.9				
40		35	Hard stratified light gray and brown, becoming green, micaceous medium to fine sandy silty clay/clayey silt (Decomposed Rock)					
		32						
50		44		31.4				

Completion Depth 51.0 Feet Water Depth 9.3 Feet Date 7/9/84

Project Name General Motors Project Number 84C2155

LOG of BORING No. SB-10

DATE 7/12/84 SURFACE ELEVATION 80.0 LOCATION See Plate 2

DEPTH, ft.	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		15	Bituminous pavement (2") underlain by stiff dark gray gravelly clayey silt (Fill)	78.0				
		6						
		12	Firm to stiff brown stratified fine sandy silty clay/clayey silt and medium dense brown micaceous silty fine sand					
		7						
10		10						
		19		62.0				
20		26	Dense orange-brown gravelly silty coarse to fine sand	57.0				
		39	Very dense orange-brown fine sand, trace silt, with thin silt seams	52.0				
30		11	Stiff light brown and gray micaceous clayey silt, trace fine sand					
		17		41.5				
40		26						
		29	Hard light brown, gray and dark green micaceous fine sandy clayey silt/silty clay (Decomposed Rock)					
50		76		30.0				

Note: Undisturbed samples at depth of 2.0-4.0 feet in offset borings SB-10A and SB-10B. Sampling resistance from 4.0-6.0 feet was 5 and 10 blows per foot in each offset boring, respectively

Completion Depth 50.0 Feet Water Depth 7.8 Feet Date 7/13/84

Project Name General Motors Project Number 84C2155

LOG of BORING No. SB-11

DATE 7/8/84 SURFACE ELEVATION 84.4 LOCATION See Plate 2

DEPTH, ft.	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		22 12 7	Topsoil (8") underlain by stiff to very stiff tan and gray fine sandy clayey silt with root fibers	80.4				
		22 10	Medium dense to dense brown silty fine sand with seams of clayey silt	72.4				
10								
		29	Dense to very dense light brown and gray stratified silty coarse to fine sand and silty medium to fine sand					
20		24						
		36						
30		36						
		29 11"		46.4				
40		32	Hard light brown and gray, becoming green, fine sandy clayey silt/silty clay, becoming silty fine sand (Decomposed Rock)					
		71						
50		85		34.4				

Completion Depth 50.0 Feet Water Depth 9.2 Feet Date 7/10/84

Project Name General Motors Project Number 84C2155

LOG of BORING No. SB-12

DATE 7/13/84 SURFACE ELEVATION 81.2 LOCATION See Plate 2

DEPTH, ft.	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		24	Very dense gray and light brown mottled clayey silt and fine sand, trace coarse sand (FILL)	79.2				
		7						
		17						
		7	Medium dense to dense brown micaceous silty fine sand	75.2				
10		7						
			Firm brown, gray and red-brown fine sandy clayey silt	69.2				
		32						
			Very dense brown, gray, orange-brown and red-brown stratified silty gravelly coarse to fine sand, with thin silt seams					
20		33						
		36		53.2				
30		34	Hard light brown and green stratified micaceous fine sandy silty clay/clayey silt					
		35						
40		38						
		48						
50		54		31.2				

Completion Depth 50.0 Feet Water Depth 8.6 Feet Date 7/16/84

Project Name General Motors Project Number 84C2155

LOG of BORING No. SB-13

DATE 7/11/84 SURFACE ELEVATION 85.7 LOCATION See Plate 2

DEPTH, ft.	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		27 8 26 16	Medium dense to very dense brown and gray silty fine sand	79.7				
10		20	Medium dense to very dense brown and gray silty gravelly coarse to fine sand, with seams of silty fine sand, silty medium to fine sand, silty clay/ clayey silt, and possibly with cobbles and/or boulders.					
		13						
20		100/1"						
		23						
30		51						
		151/11"						
40		109		45.7				
		76	Very dense brown, becoming green, micaceous fine sandy silty clay/ clayey silt (decomposed rock)					
50		41		35.7				

Completion Depth 50.0 Feet Water Depth 8.3 Feet Date 7/12/84

Project Name General Motors Project Number 84C2155