



GROUNDWATER MONITORING REPORT OU-2 BULK PRODUCT TANK AREA

**FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

**Prepared For:
Motors Liquidation Company**

DISCLAIMER:
SOME FORMATTING CHANGES MAY HAVE OCCURRED WHEN
THE ORIGINAL DOCUMENT WAS PRINTED TO PDF; HOWEVER,
THE ORIGINAL CONTENT REMAINS UNCHANGED.

**DECEMBER 2010
REF. NO. 17338 (18)**

This report is printed on recycled paper.

**Prepared by:
Conestoga-Rovers
& Associates**

261 Martindale Road, Unit 3
St. Catharines, Ontario
Canada L2W 1A2

Office: (905) 682-0510
Fax: (905) 682-8818

web: <http://www.CRAworld.com>

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
1.1 PURPOSE OF REPORT	1
1.2 BACKGROUND	1
2.0 FIELD ACTIVITIES.....	3
2.1 HYDRAULIC MONITORING.....	4
2.2 GROUNDWATER SAMPLING	4
3.0 ANALYTICAL RESULTS	5
3.1 LIMITED ACTION REMEDY	5
3.2 OUT OF SCOPE.....	13
4.0 DISCUSSION OF RESULTS	15
5.0 CONCLUSIONS AND RECOMMENDATIONS	20
6.0 REFERENCES.....	21

LIST OF FIGURES
(Following Text)

FIGURE 1.1	SITE LOCATION MAP
FIGURE 1.2	SITE LAYOUT
FIGURE 2.1	POTENTIOMETRIC SURFACE MAP, MARCH 2010
FIGURE 3.1	GROUNDWATER ANALYTICAL RESULTS - VOCs
FIGURE 3.2	GROUNDWATER ANALYTICAL RESULTS - SVOCs
FIGURE 3.3	GROUNDWATER ANALYTICAL RESULTS - METALS

LIST OF TABLES
(Following Text)

TABLE 2.1	GROUNDWATER MONITORING PROGRAM
TABLE 2.2	SAMPLE KEY
TABLE 2.3	GROUNDWATER ELEVATIONS
TABLE 2.4	FIELD STABILIZATION PARAMETERS
TABLE 3.1	ANALYTICAL RESULTS
TABLE 3.2	RI/FS CONSTITUENTS OF CONCERN
TABLE 4.1	TREND TEST ANALYSIS

LIST OF APPENDICES

APPENDIX A	LABORATORY ANALYTICAL REPORTS
APPENDIX B	DATA VALIDATION MEMORANDA

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) has prepared this Groundwater Monitoring Report (Report) on behalf of Motors Liquidation Company (MLC) for Operable Unit 2 Bulk Product Tank Area (OU-2 Area) at the former General Motors Corporation (GM) Wilmington Assembly Plant located at 801 Boxwood Road in Wilmington, Delaware (Site) [DNREC Project No. DE-1149]. A Site location map is shown on Figure 1.1. The Site layout is provided on Figure 1.2.

1.1 PURPOSE OF REPORT

This report has been prepared to present the findings of the remedial action for OU-2 Area groundwater, which consisted of quarterly groundwater monitoring for two years as presented in "*Groundwater Remedial Investigation and Feasibility Study, OU-2 Bulk Product Tank Area, GM Wilmington Assembly Plant*" (CRA, 2009) (Groundwater RI/FS).

This Report documents that the OU-2 Area groundwater does not pose an unacceptable risk to human health or the environment, as concluded in the Groundwater RI/FS, by demonstrating that the extent of groundwater contamination has not extended beyond the OU-2 Area boundary, and that the relevant concentrations of groundwater contaminants did not exhibit an increasing trend over the monitoring period.

1.2 BACKGROUND

Bulk product storage areas occupy approximately 1.5 acres near the center of the plant, and are divided into Operable Unit 1 (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 Natural Resources and Environmental Control (DNREC) Underground Storage Tank Branch (USTB). A review of the soil data showed minimal exceedances of DNREC's Uniform Risk-Based Standards (URS). Further investigation and subsequent remedial activities were conducted in the OU-1 Area to address the soil exceedances as presented in "*Report of Findings OU-1 Soils Bulk Product Tank Areas*" (CRA, 2004). The additional work in the OU-1 Area resulted in a no further action (NFA) determination for soil, as documented by DNREC Site Investigation and Restoration Branch's (SIRB's) 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 a NFA determination is appropriate for soil in

the OU-2 Area (CRA, 2006). Based on discussions with DNREC's SIRB, it is MLC's understanding that a NFA determination letter for the OU-2 Area soil will be issued once the groundwater conditions within the OU-2 Area are addressed.

A Remedial Investigation and Feasibility Study (RI/FS) was conducted to evaluate groundwater conditions in the OU-2 Area and propose remedial alternatives to address impacted groundwater. The RI/FS concluded that the Limited Action remedial alternative of continued quarterly groundwater monitoring for two years be implemented to demonstrate that groundwater impacts are neither increasing nor migrating as discussed in the following sections.

2.0 FIELD ACTIVITIES

Quarterly monitoring events were conducted in the OU-2 Area between August 2008 and May 2010 as proposed in the RI/FS. Hydraulic monitoring and groundwater sample collection were conducted at 20 monitoring well locations as shown on Figure 2.1.

The proposed remedial action presented in the RI/FS consisted of eight quarterly groundwater monitoring events as described below:

- The first and fifth sampling events included sampling of monitoring wells that were known to have concentrations above the drinking water criteria prior to commencement of sampling (i.e., MW-2, MW-3, MW-3D, MW-6, MW-7, MW-10, MW-11, MW-11R, MW-12, and MW-13) and three monitoring wells along the downgradient boundary of the OU-2 Area (i.e., MW-8, MW-9, and MW-19)
- The second, fourth, sixth, and eighth sampling events included only the three wells along the downgradient boundary of the OU-2 Area
- The third and seventh sampling events included all the monitoring wells within the OU-2 Area monitoring network

The OU-2 Area groundwater monitoring program is summarized in Table 2.1. A sample key is provided in Table 2.2.

In addition to implementing the scope of work detailed in the RI/FS, additional groundwater sampling was conducted in or near to the OU-2 Area as described below:

- One well downgradient of the OU-2 Area (i.e., MW-14) was sampled in the first quarterly event (i.e., August 2008)
- Perched groundwater grab samples were collected from boreholes advanced in or near the OU-2 Area in April 2009 as part of the a facility assessment for the closure of four aboveground storage tanks (ASTs) (i.e., AST A, AST B, AST C, and AST F)
- Samples were collected from MW-8, MW-20, and MW-21 on January 21, 2010, prior to the seventh quarterly sampling event, to support investigation of potential releases to groundwater from AST F (Tank F)
- Monitoring wells MW-20 and MW-21 were sampled during the seventh quarterly sampling event (i.e., March 2009) to support investigation of Tank F

2.1 HYDRAULIC MONITORING

Hydraulic monitoring was performed routinely at groundwater monitoring wells in the vicinity of the OU-2 Area to document the direction of localized groundwater flow and/or seasonal fluctuations in the groundwater table between August 2008 and May 2010. Static groundwater levels were measured prior to initiating well purging/sampling activities as summarized in Table 2.3. The routine hydraulic monitoring results indicate that groundwater elevations are generally highest in the spring, and can fluctuate by an average of approximately 1-foot. The potentiometric surface, based on the static water level measurements from the March 2010 monitoring event, is presented on Figure 2.1. The map indicates that groundwater generally flows towards the southwest.

2.2 GROUNDWATER SAMPLING

Monitoring wells were purged prior to sample collection to ensure that collected samples were representative of groundwater at the Site. Monitoring wells were purged until consistent field measurements of temperature, pH and conductivity were recorded. Representative groundwater samples were collected using low flow sampling techniques and submitted to TestAmerica's Edison, New Jersey laboratory, under appropriate chain of custody for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs), and/or target analyte list (TAL) metals analysis as shown in the sample key. Field stabilization parameters recorded prior to sampling at each location are presented in Table 2.4.

Groundwater grab/borehole water samples were collected from two boreholes south of Tank F. Borehole water was collected by extending a bailer into the borehole annulus, allowing the bailer to fill with water, and transferring the collected water into laboratory supplied sample containers for laboratory analysis of TCL SVOCs and TAL metals.

3.0 ANALYTICAL RESULTS

Analytical results for groundwater samples are summarized in Table 3.1 and compared to the following:

- DNREC Uniform Risk-Based Standards (URS) Screening Level for the protection of human health in a non-critical water resource area (DNREC, 1999)
- DNREC URS Groundwater Value for the protection of human health in a non-critical water resource area (DNREC, 1999)
- Drinking water criteria based on federal maximum contaminant levels (MCLs) and United States Environmental Protection Agency (U.S. EPA) Region 9 risk-based tap water ingestion preliminary remediation goals (PRGs) for chemicals that lack MCLs (U.S. EPA, 2004). PRGs are based on the lower of a target cancer risk of 10^{-5} , or a target hazard quotient of 1

Consistent with the RI/FS, the discussion of results and presentation of data in the following sections of the Report focus on parameters that exceeded at least one drinking water criterion at one or more locations within or near the OU-2 Area. The presentation parameters are summarized in Table 3.2. For comparative reference, a summary of constituents of concern identified in the RI/FS and relevant statistical information, including the maximum value detected at the time the risk assessment was completed, is provided in Table 3.3. It is noted that bis(2-ethylhexyl)phthalate and chromium had historical groundwater concentrations exceeding the drinking water criteria however, these parameters were not detected during the Limited Action remedy at concentrations exceeding the drinking water criteria. As such, further discussion of the results is not warranted.

Groundwater exceedances of the drinking water criterion are shown on Figure 3.1 (VOCs), Figure 3.2 (SVOCs), and Figure 3.3 (metals).

3.1 LIMITED ACTION REMEDY

The following sections discuss the results of the groundwater sampling conducted as a part of the Limited Action remedy between August 2008 and May 2010. Laboratory analytical reports are provided in Appendix A. Data validation documentation is provided in Appendix B.

With the following exceptions, the data were found to exhibit acceptable levels of accuracy and precision based on the information provided by the laboratory and are

acceptable for their intended use with the qualifications noted in the data validation memoranda:

- The acetone results were rejected for several samples collected in August 2008 due to an initial calibration violation
- The 2-butanone and acetone results were rejected for several samples collected in August 2009 due to an initial calibration violation
- The 4-methyl-2-pentanone and acetone results were rejected for several samples collected in March 2010 due to an initial calibration violation
- The caprolactam results were rejected for several samples collected in May 2010 due to outlying blank species results

Monitoring Well MW-2

Monitoring well MW-2 is a shallow monitoring well located upgradient of the bulk product storage tanks and was sampled semi-annually as part of the Limited Action remedy. Review of the analytical results for MW-2 indicates the following:

- With the exception of benzene, no VOCs were detected above the drinking water criteria at this location for the duration of the Limited Action remedy
- No SVOCs were detected above the drinking water criteria at this location for the duration of the Limited Action remedy
- With the exception of arsenic, iron, and manganese, no metals were detected above the drinking water criteria at this location for the duration of the Limited Action remedy
- The groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-3

Monitoring well MW-3 is a shallow monitoring well located upgradient of the bulk product storage tanks and was sampled semi-annually as part of the Limited Action remedy. Review of the analytical results for MW-3 indicates the following:

- Acetone, benzene, ethylbenzene, methyl tertiary butyl ether (MTBE), toluene, and xylenes were detected above the drinking water criteria consistently throughout the Limited Action remedy. No other VOCs were detected above the drinking water criteria at this location for the duration of the Limited Action remedy

- With the exception of 4-methylphenol, no SVOCs were detected above the drinking water criteria at this location for the duration of the Limited Action remedy
- With the exception of iron, lead, and manganese, no metals were detected above the drinking water criteria at this location for the duration of the Limited Action remedy
- With the exception of iron, manganese, and xylenes, the groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-3D

Monitoring well MW-3D is a deep monitoring well located upgradient of the bulk product storage tanks and was sampled semi-annually as part of the Limited Action remedy. Review of the analytical results for MW-3D indicates the following:

- With the exception of iron no parameters were detected above the drinking water criteria for the duration of the Limited Action remedy
- The groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-6

Monitoring well MW-6 is a shallow monitoring well located upgradient of the bulk product storage tanks and was sampled semi-annually as part of the Limited Action remedy. Review of the analytical results for MW-6 indicates the following:

- With the exception of benzene, ethylbenzene, and toluene, no VOCs were detected above the drinking water criteria for the duration of the Limited Action remedy
- No SVOCs were detected above the drinking water criteria at this location for the duration of the Limited Action remedy
- With the exception of arsenic, iron, and manganese, no metals were detected above the drinking water criteria at this location for the duration of the Limited Action remedy
- The groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-7

Monitoring well MW-7 is a shallow monitoring well located downgradient of the OU-1 Area and was sampled semi-annually as part of the Limited Action remedy. Review of the analytical results for MW-7 indicates the following:

- With the exception of chlorobenzene, no VOCs were detected above the drinking water criteria for the duration of the Limited Action remedy.
- No SVOCs were detected above the drinking water criteria at this location for the duration of the Limited Action remedy
- With the exception of arsenic, iron, and manganese, no metals were detected above the drinking water criteria at this location for the duration of the Limited Action remedy
- With the exception of chlorobenzene, the groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-8

Monitoring well MW-8 is a shallow monitoring well located along the southern boundary of the OU-2 Area, downgradient of the OU-2 ASTs and associated piping. Monitoring well MW-8 was sampled quarterly as part of the Limited Action remedy. Review of the analytical results for MW-8 indicates the following:

- With the exception of benzene, no VOCs were detected above the drinking water criteria for the duration of the Limited Action remedy. It is noted that benzene was only detected above the drinking water criteria during one sampling event (i.e., November 2009).
- No SVOCs were detected above the drinking water criteria at this location for the duration of the Limited Action remedy.
- With the exception of iron and manganese, no metals were detected above the drinking water criteria at this location for the duration of the Limited Action remedy.
- The groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-9

Monitoring well MW-9 is a shallow monitoring well located along the western boundary of the OU-2 Area, downgradient of ASTs A through C. Monitoring well MW-9 was sampled quarterly as part of the Limited Action remedy. Review of the analytical results for MW-9 indicates the following:

- With the exception of antimony and iron, no sampled parameters were detected above the drinking water criteria for the duration of the Limited Action remedy. It is noted that antimony was only detected above the drinking water criteria during one sampling event (i.e., November 2008), and that iron was detected above the drinking water criteria sporadically.
- With the exception of antimony, the groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-10

Monitoring well MW-10 is a shallow monitoring well located upgradient of the bulk product storage tanks and was sampled semi-annually as part of the Limited Action remedy. Review of the analytical results for MW-10 indicates the following:

- With the exception of benzene, no VOCs were detected above the drinking water criteria for the duration of the Limited Action remedy
- No SVOCs were detected above the drinking water criteria at this location for the duration of the Limited Action remedy
- With the exception of iron, and manganese, no metals were detected above the drinking water criteria at this location for the duration of the Limited Action remedy
- The groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-11

Monitoring well MW-11 is a shallow monitoring well located upgradient of the bulk product tank storage and was sampled semi-annually as part of the Limited Action remedy. Review of the analytical results for MW-11 indicates the following:

- With the exception of benzene, ethylbene, MTBE, and toluene, no VOCs were detected above the drinking water criteria for the duration of the Limited Action remedy.
- No SVOCs were detected above the drinking water criteria at this location for the duration of the Limited Action remedy.
- Arsenic, iron, lead, and manganese were detected above the drinking water criteria at this location however, lead only exceeded the drinking water criterion during one sampling event. No other metals were detected above the drinking water criteria at this location of the duration of the Limited Action remedy.
- With the exception of arsenic, the groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-11R

Monitoring well MW-11R is a shallow monitoring well located along the western boundary of the OU-2 Area, downgradient of AST A. Monitoring well MW11-R was sampled semi-annually as part of the Limited Action remedy. Review of the analytical results for MW-11R indicates the following:

- No sampled parameters were detected above the drinking water criteria at this location for the duration of the Limited Action remedy
- The groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-12

Monitoring well MW-12 is a shallow monitoring well located west of ASTs H through K and was sampled semi-annually as part of the Limited Action remedy. Review of the analytical results for MW-12 indicates the following:

- With the exception of benzene and vinyl chloride, no VOCs were detected above the drinking water criteria for the duration of the Limited Action remedy. It is noted that vinyl chloride has not been detected above the drinking water criteria since August 2008.
- No SVOCs were detected above the drinking water criteria at this location for the duration of the Limited Action remedy.

- Arsenic, iron, lead, and vanadium were detected above the drinking water criteria at this location, however, arsenic and vanadium only exceeded the drinking water criteria during one sampling event. No other metals were detected above the drinking water criteria at this location of the duration of the Limited Action remedy.
- With the exception of vinyl chloride, the groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-13

Monitoring well MW-13 is a shallow monitoring well located west of ASTs H through K in the central portion of the OU-2 Area. Monitoring well MW13 was sampled semi-annually as part of the Limited Action remedy. Review of the analytical results for MW-13 indicates the following:

- With the exception of benzene and toluene, no VOCs were detected above the drinking water criteria for the duration of the Limited Action remedy.
- With the exception of dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, and naphthalene, no SVOCs were detected above the drinking water criteria at this location for the duration of the Limited Action remedy. It is noted that dibenz(a,h)anthracene and indeno(1,2,3-cd)pyrene were only detected above the drinking water criteria during the August 2009 sampling event. These parameters were not detected above the laboratory reporting limit during previous or subsequent semi-annual sampling events.
- Arsenic, iron, manganese, and vanadium were detected above the drinking water criteria at this location, however, manganese and vanadium only exceeded the drinking water criteria during one sampling event. No other metals were detected above the drinking water criteria at this location of the duration of the Limited Action remedy.
- With the exception of dibenz(a,h)anthracene, ideno(1,2,3-cd)pyrene and naphthalene, the groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-15

Monitoring well MW-15 is a shallow monitoring well located at the northwest boundary of the OU-2 Area, upgradient of the OU-2 ASTs and associated piping. Monitoring well

MW-15 was sampled annually as part of the Limited Action remedy. Review of the analytical results for MW-15 indicates the following:

- Benzene, chlorobenzene, and 1,4-dichlorobenzene were detected above the drinking water criteria during the February 2009 sampling event. It should be noted that during the February 2010 sampling event, benzene and chlorobenzene were not detected above the laboratory reporting limit, and 1,4-dichlorobenzene had significantly decreased in concentration.
- No SVOCs were detected above the drinking water criteria for the duration of the Limited Action remedy.
- With the exception of iron and lead, no metals were detected above the drinking water criteria at this location for the duration of the Limited Action remedy.
- The groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-16

Monitoring well MW-16 is a shallow monitoring well located upgradient of the bulk product tank storage and was sampled annually as part of the Limited Action remedy. Review of the analytical results for MW-16 indicates the following:

- With the exception of iron, no sampled parameters were detected above the drinking water criteria at this location for the duration of the Limited Action remedy
- The groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-17

Monitoring well MW-17 is a shallow monitoring well located upgradient of the bulk product tank storage and was sampled annually as part of the Limited Action remedy. Review of the analytical results for MW-17 indicates the following:

- With the exception of iron, no sampled parameters were detected above the drinking water criteria at this location for the duration of the Limited Action remedy
- The groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-18

Monitoring well MW-18 is a shallow monitoring well located along the eastern OU-2 Area boundary, upgradient of the OU-2 ASTs and associated piping. Monitoring well MW-18 was sampled annually as part of the Limited Action remedy. Review of the analytical results for MW-18 indicates the following:

- No sampled parameters were detected above the drinking water criteria at this location for the duration of the Limited Action remedy
- The groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

Monitoring Well MW-19

Monitoring well MW-19 is a shallow monitoring well located downgradient of the western boundary of the OU-2 Area and was sampled quarterly as part of the Limited Action remedy. Review of the analytical results for MW-19 indicates the following:

- With the exception of iron, no sampled parameters were detected above the drinking water criteria for the duration of the Limited Action remedy. It is noted that iron was only detected above the drinking water criteria during one sampling event (i.e., February 2009)
- The groundwater concentrations detected at this location during the Limited Action remedy do not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted

3.2 OUT OF SCOPE

The following sections discuss the results of the groundwater/borehole water sampling conducted outside of the scope of the Limited Action remedy between August 2008 and May 2010.

Borehole water samples were collected from GP-12-09 and GP-13-09 as part of the closure activities for Tank F which is located downgradient from The OU-2 Area. Samples were collected in July 2009 for TCL SVOCs and TAL metals analysis. Review of the analytical results for the borehole water samples indicates that, with the exception of benzo(a)anthracene, benzo(a)pyrene, and bis(2-ethylhexyl)phthalate, no sampled parameters exceed the drinking water criteria.

Monitoring well MW-14 is a shallow monitoring well located downgradient of the western boundary of the OU-2 Area and was sampled in August 2008 for TCL VOC, TCL SVOC, and TAL metals analysis. Review of the analytical results for MW-14 indicates that no sampled parameters were detected above the drinking water criteria.

Monitoring wells MW-20 and MW-21 were sampled as part of the closure activities for Tank F. These monitoring wells are located downgradient of AST F and downgradient of the OU-2 Area's south property boundary. Samples were collected in January 2010 for TCL VOC, TCL SVOC, and TAL metals analysis, and in March 2010 for TCL SVOC analysis with reduced reporting limits. Review of the analytical results for MW-19 and MW-20 indicates that no sampled parameters were detected above the drinking water criteria.

4.0 DISCUSSION OF RESULTS

A Baseline Human Health Risk Assessment (HHRA) was conducted to assess the potential risk to human health from exposure to impacted groundwater beneath the OU-2 Area. The results of the HHRA were presented in the Groundwater RI/FS, and concluded that groundwater impacts at the OU-2 downgradient boundary have been delineated to the drinking water criteria. Further, despite the elevated concentrations of benzene, ethylbenzene, toluene, and xylene (BTEX), and other gasoline related compounds in the northeastern portion of the OU-2 Area, the results of the HHRA indicate that the concentrations of constituents in groundwater within the OU-2 Area do not pose a significant risk to human health.

The Limited Action outlined in the RI/FS consisted of quarterly groundwater monitoring events between August 2008 and May 2010 to verify that the extent of groundwater impact remains consistent with the conditions evaluated in the HHRA by demonstrating that the extent of groundwater contamination has not migrated beyond the OU-2 Area, and that the relevant concentrations of groundwater contaminants have not increased over the monitoring period.

Based on the interpreted direction of groundwater flow across the OU-2 Area as shown on Figure 2.1, the downgradient boundaries of the OU-2 Area are the western boundary, south of MW-11R, and southern boundary, west of MW-7. Monitoring wells immediately upgradient of these boundaries include MW-9 and MW-8, respectively. As demonstrated in Section 3.0, detections at these monitoring wells above the drinking water criteria are limited to iron and a one-time exceedance of antimony at MW-9, and iron, manganese, and a one-time exceedance of benzene at MW-8. It is noted that iron and manganese are present throughout the OU-2 Area monitoring network, and do not appear to be a result of activities within the OU-2 Area.

With the exception of a one-time exceedance of iron at MW-19 and unconfirmed exceedances of benzo(a)anthracene, benzo(a)pyrene, and bis(2-ethylhexyl)phthalate in a borehole water sample from GP-12-09, constituents of concern downgradient of the OU-2 Area boundary do not exceed the drinking water criteria. As discussed in the preceding paragraph, iron is found above the drinking water criterion throughout and upgradient of the bulk product storage tanks, and is not likely a result of the activities historically conducted within the OU-2 Area. The presence of benzo(a)anthracene, benzo(a)pyrene, and bis(2-ethylhexyl)phthalate in a borehole water sample may be attributable to the sampling techniques employed and should be confirmed through collection of a groundwater sample from a monitoring well using the low flow sampling techniques employed for the duration of the Limited Action remedy. With the exception

of a one-time estimated detection of benzo(a)anthracene and benzo(a)pyrene at MW-3D, these parameters have not been detected above the laboratory reporting limit in groundwater across the OU-2 Area since August 2008. As such, even if the presence of benzo(a)anthracene, benzo(a)pyrene, and bis(2-ethylhexyl)phthalate are confirmed at this location through proper sampling techniques, they are unlikely to be attributable to activities historically conducted within the OU-2 Area.

Where sufficient data was available, a Mann-Kendall trend evaluation was performed on the groundwater data set generated during implementation of the Limited Action remedy. The results of the trend evaluation are provided in Table 4.1. With the exception of the concentration of iron at MW-7, no increasing trends were identified across the OU-2 Area for the duration of the Limited Action remedy.

During implementation of the Limited Action remedy, the maximum detected concentrations of acetone, benzene, MTBE, toluene, 4-methylphenol, lead, and vanadium did not exceed the historical maximum detected concentrations across the OU-2 Area at the time the risk assessment was conducted. Five new constituents were detected within the OU-2 Area above the drinking water criteria during implementation of the Limited Action remedy (i.e., antimony, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, 1,4-dichlorobenzene, and vinyl chloride). The concentrations of other constituents of concern identified in the RI/FS increased at one monitoring location but the increased concentrations were marginal and were not sustained. A discussion of the constituents of concern that increased during implementation of the Limited Action remedy is provided below.

1,4-Dichlorobenzene

1,4-Dichlorobenzene was detected at a concentration of 0.12 mg/L at MW-15 in February 2009 which exceeds the drinking water criteria of 0.075 mg/L. However, the subsequent annual sampling conducted in March 2010 yielded an estimated concentration of 0.00027 mg/L which is below the drinking water criteria. This one-time and unsustained exceedance of the drinking water criteria at one monitoring location does not represent an increase in unacceptable risk to potential receptors.

Chlorobenzene

During implementation of the Limited Action remedy, chlorobenzene was detected at concentrations of 0.33 mg/L in August 2008, 1.1 mg/L in February 2009, 0.92 mg/L in August 2009, and 1.3 mg/L in March 2010. The maximum detected concentration contemplated by the risk assessment was 0.81 mg/L. The next closest downgradient monitoring well (i.e., MW-8) exhibits concentrations of chlorobenzene from

0.00165 mg/L to 0.0046 mg/L (estimated), which are below the drinking water criteria and the maximum detected concentration contemplated by the risk assessment.

Ethylbenzene

Ethylbenzene was detected at a concentration of 19 mg/L at MW-3 in March 2010 which marginally exceeds the maximum detected concentration contemplated by the risk assessment of 18 mg/L. However, as presented in Table 4.1, there is no evidence of an increasing trend in the concentration of ethylbenzene at this location. This marginal (i.e., 5-percent) increase in the maximum detected concentration contemplated by the risk assessment at one monitoring location does not represent an increase in unacceptable risk to potential receptors.

Vinyl Chloride

Vinyl chloride was detected at an estimated concentration of 0.0025 mg/L at MW-12 in August 2008 which exceeds the drinking water criteria of 0.002 mg/L. However, three subsequent semi-annual monitoring events have yielded results that are either non detect for vinyl chloride or concentrations that are below the drinking water criteria. This one-time and unsustained exceedance of the drinking water criteria at one monitoring location does not represent an increase in unacceptable risk to potential receptors.

Xylenes

Xylenes were detected at a concentration of 32 mg/L at MW-3 in March 2010 which marginally exceeds the maximum detected concentration contemplated by the risk assessment of 30 mg/L. However, as presented in Table 4.1, there is no evidence of an increasing trend in the concentration of xylenes at this location. This marginal (i.e., 5-percent) increase in the maximum detected concentration contemplated by the risk assessment at one monitoring location does not represent an increase in unacceptable risk to potential receptors.

Dibenz(a,h)anthracene

Dibenz(a,h)anthracene was detected at an estimated concentration of 0.0037 mg/L at MW-13 in August 2008 which exceeds the drinking water criteria of 0.0000921 mg/L. However, previous and subsequent samples at this location have been non detect for dibenz(a,h)anthracene with detection limits as low as 0.00012 mg/L. This one-time and unsustained exceedance of the drinking water criteria at one monitoring location does not represent an increase in unacceptable risk to potential receptors.

Indeno(1,2,3-cd)pyrene

Indeno(1,2,3-cd)pyrene was detected at an estimated concentration of 0.0037 mg/L at MW-13 in August 2008. However, previous and subsequent samples at this location have been non detected for indeno(1,2,3-cd)pyrene with a detection limit as low as 0.00012 mg/L. This one-time and unsustained exceedance of the drinking water criteria at one monitoring location does not represent an increase in unacceptable risk to potential receptors.

Naphthalene

Naphthalene was detected at a concentration of 3.2 mg/L at MW-13 in February 2009 which exceeds the drinking water criteria of 0.73 mg/L and the previously detected maximum concentration of 2.4 mg/L. However, two subsequent semi-annual sampling events have yielded naphthalene concentrations of 1.9 mg/L and 1.7 mg/L which are below the maximum detected concentration contemplated by the risk assessment. This one-time and unsustained exceedance of the maximum detected concentration contemplated by the risk assessment one monitoring location does not represent an increase in unacceptable risk to potential receptors.

Antimony

Antimony was detected at MW-9 at an estimated concentration of 0.0067 milligrams per liter (mg/L) which exceeds the drinking water criterion of 0.006 mg/L in November 2008. It is noted that a field duplicate sample collected at the time was non detect at a detection limit of 0.01 mg/L. Assuming a concentration of half of the detection limit and averaging the two results, the concentration of antimony at MW-9 detected in November 2008 is 0.00585 mg/L which does not exceed the drinking water criterion.

Arsenic

Arsenic was detected at MW-11 at a concentration of 0.0478 milligrams per liter (mg/L) in August 2008 which marginally exceeds the maximum detected concentration contemplated during the risk assessment of 0.0421 mg/L. Since August 2008, the concentrations have decreased to 0.0347 mg/L indicating a decreasing trend in the concentration of arsenic, as presented in Table 4.1.

Iron

Iron was detected at a concentration of 285 mg/L during implementation of the Limited Action remedy which exceeds the maximum detected concentration contemplated during the risk assessment. Iron is detected across the OU-2 Area and is not likely attributable to activities historically conducted at the OU-2 Area.

Manganese

Manganese was detected at a concentration of 25.8 mg/L during implementation of the Limited Action remedy which exceeds the maximum detected concentration contemplated during the risk assessment of 21.3 mg/L. Manganese is detected across the OU-2 Area and is not likely attributable to activities historically conducted at the OU-2 Area.

5.0 CONCLUSIONS AND RECOMMENDATIONS

A Limited Action remedy consisting of routine groundwater sampling was conducted in the vicinity of the OU-2 Area from August 2008 through May 2010. The groundwater analytical data generated throughout the duration of the Limited Action remedy demonstrates that the extent of groundwater contamination has not migrated beyond the OU-2 Area, and that with the exception of chlorobenzene at MW-7, the relevant concentrations of groundwater contaminants have not increased significantly over the monitoring period. As such, impacts to groundwater remain relatively consistent with the conditions evaluated in the HHRA which concluded that, despite the elevated concentrations of BTEX and other gasoline-related compounds in the northeastern portion of the OU-2 Area, the concentrations of constituents in groundwater within the OU-2 Area do not pose a significant risk to human health.

The results of the Limited Action remedy that exceed the previously detected maximum concentrations contemplated by the OU-2 Area HHRA will be evaluated as part of the Site-wide HHRA. Based on the results of the Site-wide HHRA, MLC will request a NFA determination for OU-2 Area soil and groundwater or evaluate remedial alternatives, as necessary.

6.0 REFERENCES

Conestoga-Rovers & Associates. (February 2009). *Report of Findings, OU-2 Bulk Product Tank Area Soil Investigation, GM Wilmington Assembly Plant, Wilmington, Delaware.*

Conestoga-Rovers & Associates. (January 2004). *Report of Findings, OU-1 Bulk Product Tank Areas, GM Wilmington Assembly Plant, Wilmington, Delaware.*

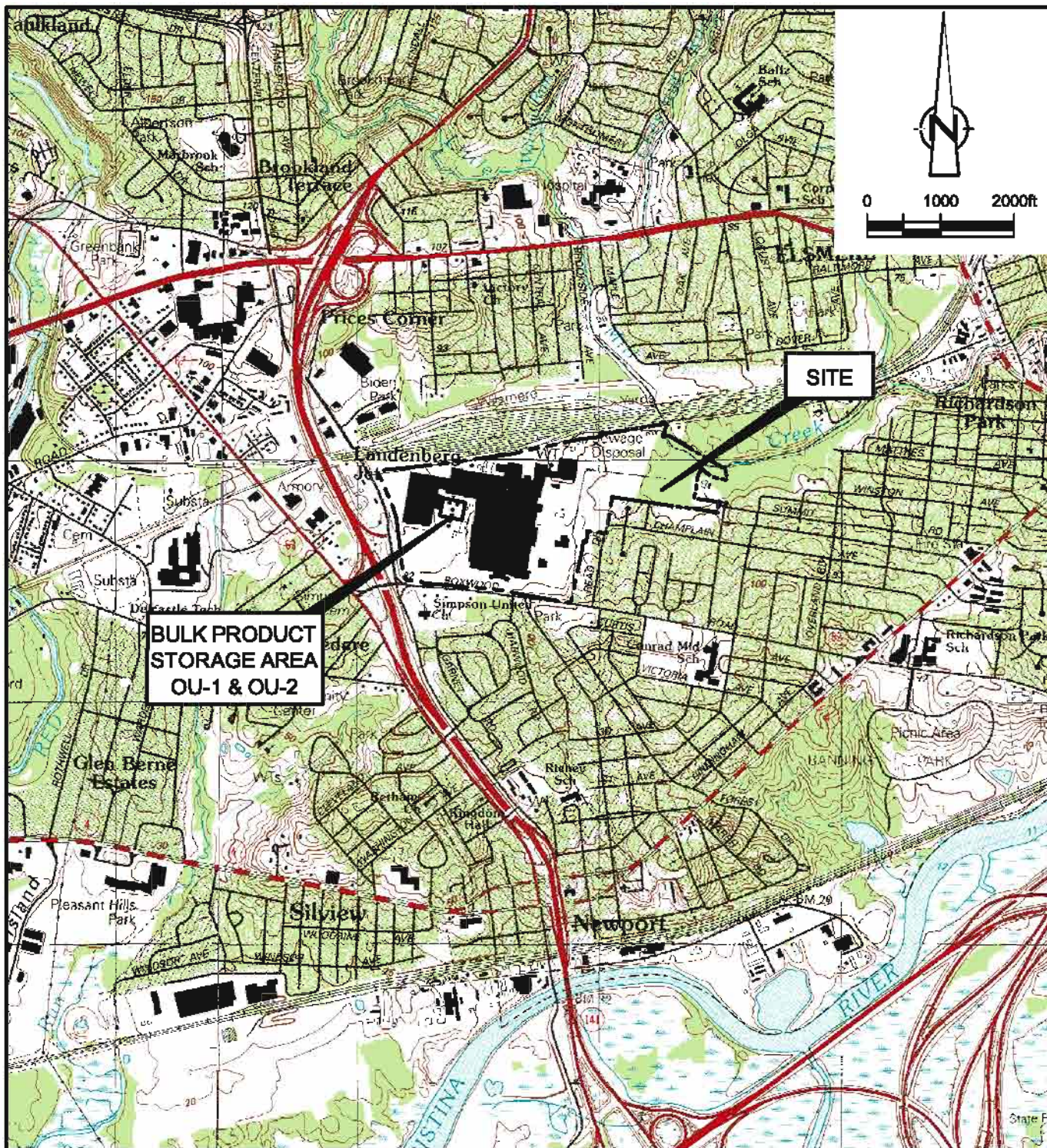
Conestoga-Rovers & Associates. (February 2006). *Report of Findings, OU-2 Bulk Product Tank Area Soil Investigation, GM Wilmington Assembly Plant, Wilmington, Delaware.*

Conestoga-Rovers & Associates. (July 2006). *Quality Assurance Project Plan, Supplemental Groundwater Investigation, OU-2 Bulk Product Tank Areas, GM Assembly Plant, Wilmington, Delaware.*

Conestoga-Rovers & Associates. (January 2009). *Groundwater Remedial Investigation and Feasibility Study Report, OU-2 Bulk Product Tank Area, GM Wilmington Assembly Plant, Wilmington, Delaware.*

Conestoga-Rovers & Associates. (March 2010). *Tank F Investigation Report, Former GM Wilmington Assembly Plant, Wilmington, Delaware.*

Conestoga-Rovers & Associates. (June 2010). *Tank F Investigation Report Amendment, Former GM Wilmington Assembly Plant, Wilmington, Delaware. [Letter].*



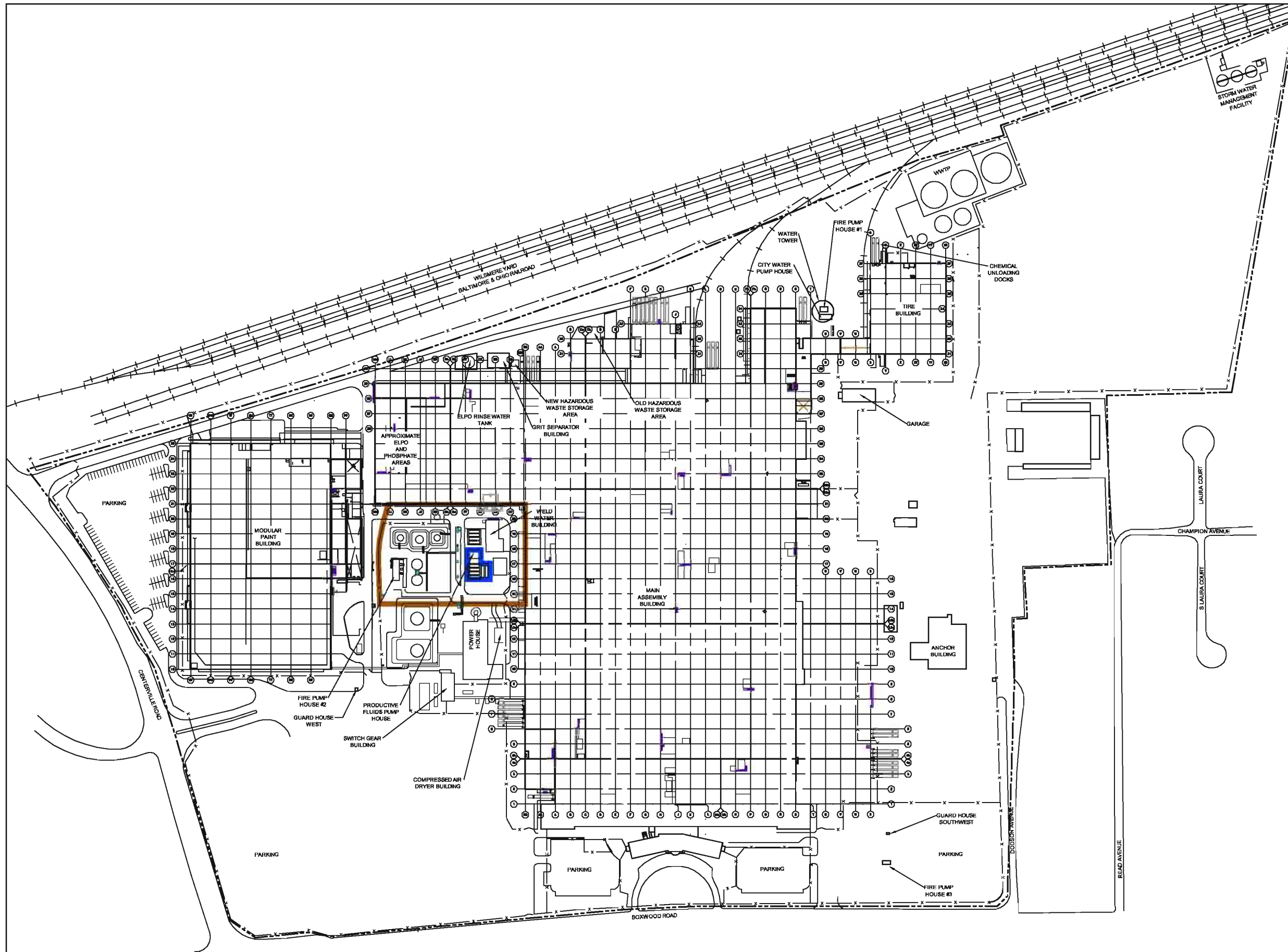
LEGEND
 - - - - -
 APPROXIMATE SITE BOUNDARY

figure 1.1

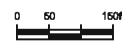
SITE LOCATION MAP
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
Wilmington, Delaware



SOURCE:
 USGS 1:24,000 DIGITAL RASTER QUADS 1987
 WILMINGTON SOUTH, NEWARK EAST



NO	Revision	Date	Initial



LEGEND

- OU-1 BOUNDARY
- OU-2 BOUNDARY

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.



Approved

DRAWING STATUS

Status	Date	Initial

FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

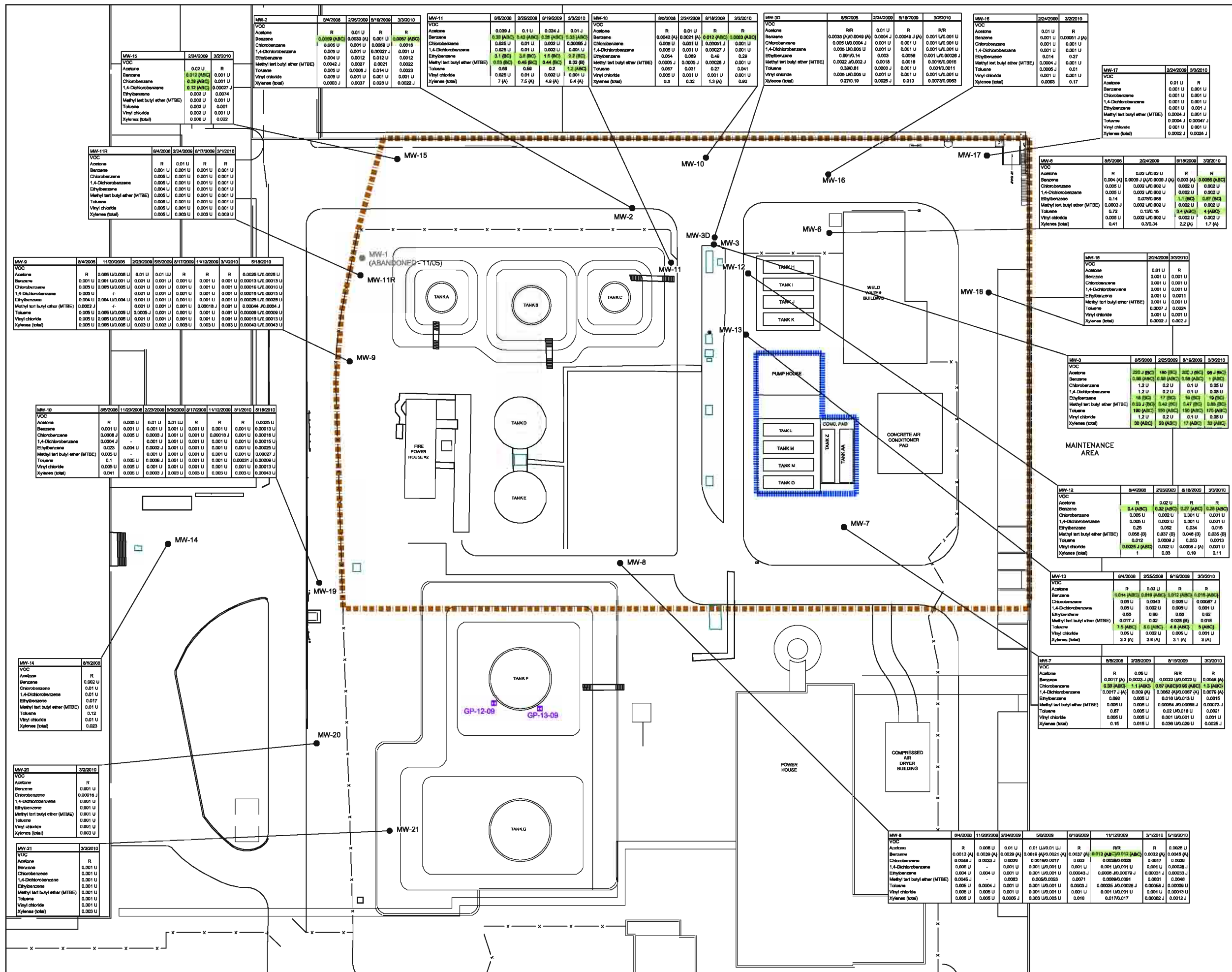
OU-2 BULK GROUNDWATER MONITORING REPORT

SITE LAYOUT



Source Reference:
WILMINGTON SITE PLAN, SATURN ENGINEERING, DWG. SK1001801

Project Manager: S. RICHARDSON	Reviewed By: J. BERGSMAN	Date: NOVEMBER 2010
Scale: 1:1800	Project N°: 17338-T02	Report N°: 018
		Drawing N°: 1.2



0 180 360ft

LEGEND

- OU-1 BOUNDARY
- OU-2 BOUNDARY
- FENCE LINE
- FORMER RAIL SIDING
- BUILDING
- MONITORING WELL LOCATION
- ABANDONED MONITORING WELL LOCATION
- BOREHOLE WATER SAMPLES

LOCATION

SAMPLE DATE

RESULT (mg/L)

PARAMETER

EXCEEDENCE OF CRITERIA "C"

PARAMETER

DRINKING WATER CRITERIA

NOTES:

- U - NOT DETECTED ABOVE THE NOTED LABORATORY REPORTING LIMITS
- J - NOTED VALUE IS ESTIMATED
- R - ANALYTICAL RESULT WAS REJECTED
- A - VALUE EXCEEDS ASSOCIATED URS SCREENING LEVEL
- B - VALUE EXCEEDS ASSOCIATED URS GROUNDWATER LEVEL
- C - VALUE EXCEEDS ASSOCIATED DRINKING WATER CRITERIA

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

OU-2 BULK GROUNDWATER MONITORING REPORT

GROUNDWATER ANALYTICAL RESULTS
VOCs

CONESTOGA-ROVERS & ASSOCIATES

Source Reference

Project Manager: S. RICHARDSON

Rev/revised By: J. BERGSMAN

Date: NOVEMBER 2010

Scale: 1:500

Project N.R.: 17338-T02

Report N.R.: 018

Drawing N.R.: 3.1

TABLE 2.1

**GROUNDWATER MONITORING PROGRAM
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Location</i>	<i>Q1 August 2008</i>	<i>Q2 November 2008</i>	<i>Q3 February 2009</i>	<i>Q4 May 2009</i>	<i>Q5 August 2009</i>	<i>Q6 November 2009</i>	<i>Q7 March 2010</i>	<i>Q8 May 2010</i>
MW-2	X	-	X	-	X	-	X	-
MW-3	X	-	X	-	X	-	X	-
MW-3D	X	-	X	-	X	-	X	-
MW-6	X	-	X	-	X	-	X	-
MW-7	X	-	X	-	X	-	X	-
MW-8	X	X	X	X	X	X	X	X
MW-9	X	X	X	X	X	X	X	X
MW-10	X	-	X	-	X	-	X	-
MW-11	X	-	X	-	X	-	X	-
MW-11R	X	-	X	-	X	-	X	-
MW-12	X	-	X	-	X	-	X	-
MW-13	X	-	X	-	X	-	X	-
MW-14	X ⁽¹⁾	-	-	-	-	-	-	-
MW-15	-	-	X	-	-	-	X	-
MW-16	-	-	X	-	-	-	X	-
MW-17	-	-	X	-	-	-	X	-
MW-18	-	-	X	-	-	-	X	-
MW-19	X	X	X	X	X	X	X	X

Notes:

All samples analyzed for VOCs, SVOCs and metals, unless otherwise noted.

⁽¹⁾ Sample collected during quarterly event not proposed as a part of the Limited Action alternative in the RI/FS.

TABLE 2.2

GROUNDWATER ELEVATIONS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Location	Top of Riser Elevation (ft AMSL)	08/04/08		11/20/08		02/23/09		05/08/09		08/17/09	
		Depth to Water (ft btor)	Elevation (ft AMSL)	Depth to Water (ft btor)	Elevation (ft AMSL)	Depth to Water (ft btor)	Elevation (ft AMSL)	Depth to Water (ft btor)	Elevation (ft AMSL)	Depth to Water (ft btor)	Elevation (ft AMSL)
MW-2	77.15	11.77	65.38	--	--	12.17	64.98	--	--	11.35	65.80
MW-3	77.59	11.63	65.96	--	--	12.03	65.56	--	--	11.48	66.11
MW-3D	77.60	13.60	64.00	--	--	12.81	64.79	--	--	12.46	65.14
MW-6	77.84	12.47	65.37	--	--	13.64	64.20	--	--	12.32	65.52
MW-7	78.07	13.25	64.82	--	--	13.78	64.29	--	--	13.09	64.98
MW-8	77.46	12.93	64.53	13.27	64.19	13.33	64.13	12.95	64.51	12.54	64.92
MW-9	74.92	10.89	64.03	11.05	63.87	11.12	63.80	10.70	64.22	10.15	64.77
MW-10	77.48	11.85	65.63	--	--	12.31	65.17	--	--	11.46	66.02
MW-11	77.71	12.49	65.22	--	--	12.99	64.72	--	--	12.24	65.47
MW-11R	77.30	12.74	64.56	--	--	13.01	64.29	--	--	12.04	65.26
MW-12	77.87	12.32	65.55	--	--	12.87	65.00	--	--	12.16	65.71
MW-13	77.82	12.83	64.99	--	--	13.28	64.54	--	--	12.59	65.23
MW-14	79.17	16.09	63.08	--	--	16.21	62.96	--	--	15.20	63.97
MW-15	78.76	13.50	65.26	--	--	13.76	65.00	--	--	12.80	65.96
MW-16	78.14	12.05	66.09	--	--	12.62	65.52	--	--	11.88	66.26
MW-17	78.76	12.86	65.90	--	--	13.56	65.20	--	--	12.86	65.90
MW-18	78.99	14.05	64.94	--	--	13.95	65.04	--	--	13.31	65.68
MW-19	78.74	14.49	64.25	14.79	63.95	14.81	63.93	14.40	64.34	13.76	64.98
MW-20	78.38	--	--	--	--	--	--	--	--	--	--
MW-21	78.64	--	--	--	--	--	--	--	--	--	--

Notes:

AMSL - above mean sea level

btor - below top of riser

-- not recorded/measured

TABLE 2.2

GROUNDWATER ELEVATIONS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Location</i>	<i>Top of Riser Elevation (ft AMSL)</i>	<i>11/12/09</i>		<i>01/21/10</i>		<i>03/01/10</i>		<i>05/18/10</i>	
		<i>Depth to Water (ft btor)</i>	<i>Elevation (ft AMSL)</i>	<i>Depth to Water (ft btor)</i>	<i>Elevation (ft AMSL)</i>	<i>Depth to Water (ft btor)</i>	<i>Elevation (ft AMSL)</i>	<i>Depth to Water (ft btor)</i>	<i>Elevation (ft AMSL)</i>
MW-2	77.15	--	--	11.61	65.54	11.29	65.86	--	--
MW-3	77.59	--	--	11.61	65.98	11.01	66.58	--	--
MW-3D	77.60	--	--	12.70	64.90	11.81	65.79	--	--
MW-6	77.84	--	--	12.19	65.65	11.78	66.06	--	--
MW-7	78.07	--	--	12.97	65.10	12.55	65.52	--	--
MW-8	77.46	12.91	64.55	13.29	64.17	12.26	65.20	12.30	65.16
MW-9	74.92	10.90	64.02	10.90	64.02	10.56	64.36	10.61	64.31
MW-10	77.48	--	--	11.65	65.83	11.18	66.30	--	--
MW-11	77.71	--	--	12.30	65.41	11.88	65.83	--	--
MW-11R	77.30	--	--	12.86	64.44	12.50	64.80	--	--
MW-12	77.87	--	--	12.33	65.54	11.74	66.13	--	--
MW-13	77.82	--	--	12.59	65.23	12.18	65.64	--	--
MW-14	79.17	--	--	15.99	63.18	15.82	63.35	--	--
MW-15	78.76	--	--	13.44	65.32	13.19	65.57	--	--
MW-16	78.14	--	--	11.79	66.35	11.27	66.87	--	--
MW-17	78.76	--	--	12.54	66.22	12.15	66.61	--	--
MW-18	78.99	--	--	12.89	66.10	12.60	66.39	--	--
MW-19	78.74	14.40	64.34	14.40	64.34	14.21	64.53	14.50	64.24
MW-20	78.38	--	--	14.47	63.91	14.14	64.24	--	--
MW-21	78.64	--	--	14.46	64.18	13.94	64.70	--	--

Notes:

AMSL - above mean sea level

btor - below top of riser

-- not recorded/measured

TABLE 2.3

SAMPLE KEY
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location</i>	<i>Sample Identification</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>VOCs</i>	<i>SVOCs</i>	<i>Metals</i>
MW-2	GW-17338-080408-05	08/04/08	Normal	X	X	X
MW-2	GW-017338-022509-016	02/25/09	Normal	X	X	X
MW-2	GW-017338-081909-ACH-11	08/19/09	Normal	X	X	X
MW-2	GW-017338-030310-ACH-018	03/03/10	Normal	X	X	X
MW-3	GW-17338-080508-07	08/05/08	Normal	X	X	X
MW-3	GW-017338-022509-019	02/25/09	Normal	X	X	X
MW-3	GW-017338-081909-ACH-15	08/19/09	Normal	X	X	X
MW-3	GW-017338-030310-RAM-019	03/03/10	Normal	X	X	X
MW-3D	GW-17338-080508-09	08/05/08	Normal	X	X	X
MW-3D	GW-17338-080508-10	08/05/08	Field Duplicate	X	X	X
MW-3D	GW-017338-022409-005	02/24/09	Normal	X	X	X
MW-3D	GW-017338-081809-ACH-04	08/18/09	Normal	X	X	X
MW-3D	GW-017338-030210-ACH-008	03/02/10	Normal	X	X	X
MW-3D	GW-017338-030210-ACH-010	03/02/10	Field Duplicate	X	X	X
MW-6	GW-17338-080508-11	08/05/08	MS/MSD	X	X	X
MW-6	GW-017338-022409-011	02/24/09	Normal	X	X	X
MW-6	GW-017338-022409-012	02/24/09	Field Duplicate	X	X	X
MW-6	GW-017338-081809-ACH-07	08/18/09	Normal	X	X	X
MW-6	GW-017338-030210-ACH-012	03/02/10	Normal	X	X	X
MW-7	GW-17338-080508-12	08/05/08	Normal	X	X	X
MW-7	GW-017338-022509-015	02/25/09	Normal	X	X	X
MW-7	GW-017338-081909-ACH-09	08/19/09	Normal	X	X	X
MW-7	GW-017338-081909-ACH-10	08/19/09	Field Duplicate	X	X	X
MW-7	GW-017338-030310-ACH-016	03/03/10	Normal	X	X	X
MW-8	GW-17338-080408-02	08/04/08	Normal	X	X	X
MW-8	GW-17338-112008-01	11/20/08	MS/MSD	X	X	X
MW-8	GW-017338-022409-009	02/24/09	Normal	X	X	X
MW-8	GW-017338-050809-ACH-003	05/08/09	Normal	X	X	X
MW-8	GW-017338-050809-ACH-004	05/08/09	Field Duplicate	X	X	X
MW-8	GW-017338-081809-ACH-05	08/18/09	Normal	X	X	X
MW-8	GW-017338-111209-ACH-03	11/12/09	MS/MSD	X	X	X
MW-8	GW-017338-111209-ACH-04	11/12/09	Field Duplicate	X	X	X
MW-8	GW-017338-012110-ACH-001	01/21/10	MS/MSD		X	
MW-8	GW-017338-030110-ACH-003	03/01/10	MS/MSD	X	X	X
MW-8	GW-017338-051810-ACH-02	05/18/10	MS/MSD	X	X	X
MW-9	GW-17338-080408-03	08/04/08	Normal	X	X	X
MW-9	GW-17338-112008-03	11/20/08	Normal	X	X	X
MW-9	GW-17338-112008-04	11/20/08	Field Duplicate	X	X	X
MW-9	GW-017338-022309-001	02/23/09	Normal	X	X	X
MW-9	GW-017338-050809-ACH-001	05/08/09	MS/MSD	X	X	X
MW-9	GW-017338-081709-ACH-01	08/17/09	Normal	X	X	X
MW-9	GW-017338-111209-ACH-02	11/12/09	Normal	X	X	X
MW-9	GW-017338-030110-ACH-001	03/01/10	Normal	X	X	X
MW-9	GW-017338-051810-ACH-03	05/18/10	Normal	X	X	X
MW-9	GW-017338-051810-ACH-04	05/18/10	Field Duplicate	X	X	X
MW-10	GW-17338-080508-13	08/05/08	Normal	X	X	X
MW-10	GW-017338-022409-010	02/24/09	Normal	X	X	X
MW-10	GW-017338-081809-ACH-06	08/18/09	Normal	X	X	X

TABLE 2.3

SAMPLE KEY
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location</i>	<i>Sample Identification</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>VOCs</i>	<i>SVOCs</i>	<i>Metals</i>
MW-10	GW-017338-030210-RAM-009	03/02/10	Normal	X	X	X
MW-11	GW-17338-080508-08	08/05/08	Normal	X	X	X
MW-11	GW-017338-022509-018	02/25/09	Normal	X	X	X
MW-11	GW-017338-081909-ACH-13	08/19/09	Normal	X	X	X
MW-11	GW-017338-030310-ACH-020	03/03/10	Normal	X	X	X
MW-11R	GW-17338-080408-01	08/04/08	Normal	X	X	X
MW-11R	GW-017338-022409-003	02/24/09	Normal	X	X	X
MW-11R	GW-017338-081709-ACH-03	08/17/09	Normal	X	X	X
MW-11R	GW-017338-030110-ACH-002	03/01/10	Normal	X	X	X
MW-12	GW-17338-080408-06	08/04/08	Normal	X	X	X
MW-12	GW-017338-022509-014	02/25/09	Normal	X	X	X
MW-12	GW-017338-081809-ACH-08	08/18/09	Normal	X	X	X
MW-12	GW-017338-030310-RAM-017	03/03/10	Normal	X	X	X
MW-13	GW-17338-080408-04	08/04/08	Normal	X	X	X
MW-13	GW-017338-022509-017	02/25/09	Normal	X	X	X
MW-13	GW-017338-081909-ACH-12	08/19/09	MS/MSD	X	X	X
MW-13	GW-017338-030310-RAM-021	03/03/10	Normal	X	X	X
MW-14	GW-17338-080508-15	08/05/08	Normal	X	X	X
MW-15	GW-017338-022409-004	02/24/09	MS/MSD	X	X	X
MW-15	GW-017338-030210-RAM-011	03/02/10	Normal	X	X	X
MW-16	GW-017338-022409-006	02/24/09	Normal	X	X	X
MW-16	GW-017338-030210-ACH-013	03/02/10	Normal	X	X	X
MW-17	GW-017338-022409-007	02/24/09	Normal	X	X	X
MW-17	GW-017338-030310-RAM-015	03/03/10	Normal	X	X	X
MW-18	GW-017338-022409-008	02/24/09	Normal	X	X	X
MW-18	GW-017338-030310-ACH-014	03/03/10	Normal	X	X	X
MW-19	GW-17338-080508-16	08/05/08	Normal	X	X	X
MW-19	GW-17338-112008-05	11/20/08	Normal	X	X	X
MW-19	GW-017338-022309-002	02/23/09	Normal	X	X	X
MW-19	GW-017338-050809-ACH-002	05/08/09	Normal	X	X	X
MW-19	GW-017338-081709-ACH-02	08/17/09	Normal	X	X	X
MW-19	GW-017338-111209-ACH-05	11/12/09	Normal	X	X	X
MW-19	GW-017338-030110-ACH-004	03/01/10	Normal	X	X	X
MW-19	GW-017338-051810-ACH-05	05/18/10	Normal	X	X	X
MW-20	GW-017338-012110-ACH-004	01/21/10	Normal		X	
MW-20	GW-017338-030210-RAM-005	03/02/10	Normal	X	X	X
MW-21	GW-017338-012110-ACH-002	01/21/10	Normal		X	
MW-21	GW-017338-012110-ACH-003	01/21/10	Field Duplicate		X	
MW-21	GW-017338-030210-RAM-007	03/02/10	Normal	X	X	X

Notes

VOCs - volatile organic compounds

SVOCs - Semivolatile organic compounds

MS/MSD - Matrix Spike/Matrix Spike Duplicate

TABLE 2.4

**FIELD STABILIZATION PARAMETERS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Location ID</i>	<i>Sample Date</i>	<i>Field pH</i>	<i>Sample Temp. (° F)</i>	<i>Conductivity (mS/cm)</i>	<i>Eh/ORP (mV)</i>	<i>DO (mg/L)</i>	<i>Turbidity (ntu)</i>
MW-2	08/04/08	6.65	72.68	1.92	-206	0.00	629
MW-3	08/05/08	6.11	71.24	2.77	-161	0.00	7
MW-3D	08/05/08	6.42	68.18	1.32	-159	0.00	150
MW-6	08/05/08	6.53	66.56	1.92	-102	3.78	49
MW-7	08/05/08	7.60	66.02	1.04	-223	0.00	109
MW-8	08/04/08	6.45	69.26	1.24	-155	3.42	29.4
MW-9	08/04/08	0.63	66.02	1.12	159	0.00	726
MW-10	08/05/08	6.37	72.68	0.955	-97	5.02	82
MW-11	08/05/08	6.22	67.82	1.71	-82	5.33	187
MW-11R	08/04/08	5.23	68.54	0.643	159	0.91	166
MW-12	08/04/08	6.40	68.18	0.864	-120	6.12	143
MW-13	08/04/08	6.23	67.1	0.876	-133	2.66	238
MW-14	08/05/08	3.37	70.16	3.09	68	0.00	107
MW-19	08/05/08	7.09	69.62	0.954	-201	4.46	318
MW-8	11/20/08	6.65	64.76	0.99	-164	0.00	74
MW-9	11/20/08	5.59	63.5	1.1	174	0.06	300
MW-19	11/20/08	7.30	62.96	0.71	-198	0.00	54
MW-2	02/25/09	6.44	60.98	1.93	-134	0.00	0
MW-3	02/25/09	5.85	56.48	2.67	-54	1.59	0.0
MW-3D	02/24/09	6.06	63.68	0.921	-30	3.54	137
MW-6	02/24/09	6.49	60.62	1.72	-102	3.14	7.81
MW-7	02/25/09	6.54	55.4	0.863	-114	1.70	80.7
MW-8	02/24/09	6.59	58.28	1.21	-91	3.57	15.6
MW-9	02/23/09	5.30	57.02	1.49	292	3.64	543
MW-10	02/24/09	6.41	59.36	1.02	-110	0.00	39
MW-11	02/25/09	6.16	59.72	1.73	-113	0.00	220
MW-11R	02/24/09	5.69	56.12	0.508	269	4.33	123
MW-12	02/25/09	6.32	54.68	0.922	-121	0.00	140
MW-13	02/25/09	6.29	58.64	0.982	-93	2.61	> 1,000
MW-15	02/24/09	5.31	62.24	1.48	155	1.66	52
MW-16	02/24/09	6.21	58.28	1.17	-71	0.26	150
MW-17	02/24/09	5.34	62.42	0.396	270	4.94	299
MW-18	02/24/09	6.50	57.02	0.638	-48	0.00	93
MW-19	02/23/09	7.04	55.76	2.22	-110	4.00	94.5
MW-8	05/08/09	6.83	63.14	1.29	-185	0.28	313
MW-9	05/08/09	5.58	59.72	1.34	276	0.45	892
MW-19	05/08/09	7.32	60.8	1.42	-192	0.30	327

TABLE 2.4

**FIELD STABILIZATION PARAMETERS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Location ID</i>	<i>Sample Date</i>	<i>Field pH</i>	<i>Sample Temp. (° F)</i>	<i>Conductivity (mS/cm)</i>	<i>Eh/ORP (mV)</i>	<i>DO (mg/L)</i>	<i>Turbidity (ntu)</i>
MW-2	08/19/09	7.20	68.27	2.13	-224	0.00	0.0
MW-3	08/19/09	6.26	78.422	3.10	-113	0.00	1.9
MW-3D	08/18/09	6.63	69.26	1.16	-115	0.00	207
MW-6	08/18/09	7.26	70.43	1.85	-188	0.00	4.43
MW-7	08/19/09	7.26	73.346	1.14	-226	0.00	188
MW-8	08/18/09	7.15	71.564	1.84	-204	0.00	225
MW-9	08/17/09	5.64	68.018	1.62	275	0.00	123
MW-10	08/18/09	6.97	75.542	0.99	-159	0.00	347
MW-11	08/19/09	6.81	75.506	1.96	-153	0.00	413
MW-11R	08/17/09	5.63	71.492	0.514	193	1.54	348
MW-12	08/18/09	7.17	72.338	0.836	-199	0.00	176
MW-13	08/19/09	6.99	73.004	1.06	-198	0.00	788
MW-19	08/17/09	7.60	71.402	0.628	-230	0.00	608
MW-8	11/12/09	6.45	60.8	1.55	-162	0.20	150
MW-9	11/12/09	5.40	62.6	1.35	252	0.64	> 1,000
MW-19	11/12/09	6.98	61.52	0.740	-201	0.23	408
MW-8	01/21/10	--	58.28	1.52	-136	0.00	0
MW-20	01/21/10	--	53.6	0.615	141	2.09	149
MW-21	01/21/10	--	54.14	0.187	308	5.39	295
MW-2	03/03/10	7.12	58.46	1.31	-104	0.00	0
MW-3	03/03/10	5.94	56.84	2.93	-73	0.24	0
MW-3D	03/02/10	6.80	63.68	1.31	-70	0.00	110
MW-6	03/02/10	7.34	59.9	1.62	-106	0.00	48.5
MW-7	03/03/10	7.38	53.96	0.765	-146	0.00	30.9
MW-8	03/01/10	7.44	57.92	1.1	-155	0.00	124
MW-9	03/01/10	5.95	56.84	1.34	265	0.14	> 1,000
MW-10	03/02/10	6.32	61.16	0.797	-125	0.12	33
MW-11	03/03/10	6.75	59.72	1.53	-84	0.53	37.8
MW-11R	03/01/10	6.22	57.56	0.554	139	1.10	194
MW-12	03/03/10	6.51	55.94	0.678	-126	0.19	0
MW-13	03/03/10	6.56	56.3	0.729	-135	0.14	670
MW-15	03/02/10	5.38	61.7	1.31	165	1.67	220
MW-16	03/02/10	7.67	60.08	1.67	-143	0.00	68.2
MW-17	03/03/10	5.51	59	0.515	249	2.24	230
MW-18	03/03/10	7.11	56.3	0.725	122	0.00	59.9
MW-19	03/01/10	8.10	54.14	1.71	-180	0.00	0.0
MW-20	03/02/10	6.79	51.26	6.13	265	0.90	160
MW-21	03/02/10	4.72	48.56	0.190	332	6.27	19
MW-8	05/18/10	7.36	57.92	1.38	-167	0.00	227
MW-9	05/18/10	5.77	56.66	1.21	247	0.00	509
MW-19	05/18/10	7.87	57.02	0.624	-180	0.00	125

TABLE 2.4

**FIELD STABILIZATION PARAMETERS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

Notes

° F - degrees fahrenheit

mS/cm - millisiemens per centimetre

mV - millivolts

mg/L - milligrams per litre

ntu - Nephelometric Turbidity Units

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:	URS	URS	Drinking	GP-12-09	GP-12-09	GP-13-09	MW-2
Sample ID:	Screening	Groundwater	Water	SO-55786-7109-MM-25	SO-55786-7109-MM-26-FD	SO-55786-7109-MM-27	GW-17338-080408-05
Sample Date:	Criteria	Values	Criteria ¹	7/1/2009	7/1/2009	7/1/2009	8/4/2008
	Units	a	b	c	(Duplicate)		
Volatile Organic Compounds							
Acetone	mg/L	NC	0.061	32.9	--	--	R
Benzene	mg/L	0.0004	0.005	0.005	--	--	0.0069 ^{abc}
Bromodichloromethane	mg/L	0.0002	0.1	0.08	--	--	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	--	--	0.004 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	--	--	0.005 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	--	--	0.005 U
Carbon disulfide	mg/L	NC	0.1	3.65	--	--	0.005 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	--	--	0.002 U
Chlorobenzene	mg/L	0.011	0.1	0.1	--	--	0.005 U
Chloroethane	mg/L	NC	0.004	14.6	--	--	0.005 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	--	--	0.005 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	--	--	0.005 U
Cyclohexane	mg/L	NC	NC	62.1	--	--	0.036
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	--	--	0.005 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	--	--	0.005 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	--	--	0.005 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	--	--	0.005 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	--	--	0.005 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	--	--	0.005 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	--	--	0.005 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	--	--	0.005 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	--	--	0.002 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	--	--	0.002 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	--	--	0.005 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	--	--	0.005 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	--	--	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	--	--	0.005 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	--	--	0.005 U
Ethylbenzene	mg/L	NC	0.7	0.7	--	--	0.004 U
2-Hexanone	mg/L	NC	0.15	NC	--	--	0.005 U
Isopropyl benzene	mg/L	NC	0.066	3.65	--	--	0.018
Methyl acetate	mg/L	NC	0.61	36.5	--	--	0.005 U
Methyl cyclohexane	mg/L	NC	NC	31.4	--	--	0.013
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	--	--	0.0042 J
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	--	--	0.005 U
Methylene chloride	mg/L	0.004	0.005	0.005	--	--	0.003 U
Styrene	mg/L	NC	0.1	0.1	--	--	0.005 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	--	--	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	--	--	0.001 U
Toluene	mg/L	0.75	1	1	--	--	0.005 U
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	--	--	0.005 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	--	--	0.005 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	--	--	0.003 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	GP-12-09	GP-12-09	GP-13-09	MW-2
<i>Sample ID:</i>	Screening	Groundwater	Water	SO-55786-7109-MM-25	SO-55786-7109-MM-26-FD	SO-55786-7109-MM-27	GW-17338-080408-05
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	7/1/2009	7/1/2009	7/1/2009	8/4/2008
<i>Units</i>	a	b	c		(Duplicate)		
<i>Volatile Organic Compounds</i>							
Trichloroethene	mg/L	0.002	0.005	0.005	--	--	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	--	--	0.005 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	--	--	0.005 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	--	--	0.005 U
Xylenes (total)	mg/L	1.2	10	10	--	--	0.0003 J
<i>Semi-volatile Organic Compounds</i>							
Acenaphthene	mg/L	NC	0.037	2.19	0.0074 U	0.0042 U	0.01 U
Acenaphthylene	mg/L	NC	NC	1.1	0.0079 U	0.0045 U	0.01 U
Acetophenone	mg/L	NC	0.000004	NC	0.0084 U	0.0048 U	0.01 U
Anthracene	mg/L	NC	0.18	11	0.007 U	0.0039 U	0.01 U
Atrazine	mg/L	0.0003	0.003	0.003	0.0094 U	0.0053 U	0.01 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.0026 U	0.0015 U	0.01 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.00097 J ^{bc}	0.00084 J ^b	0.001 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.0009 J ^{abc}	0.00085 J ^{abc}	0.001 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.00085 J ^b	0.00064 J ^b	0.00028 U *
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.0053 U	0.003 U	0.01 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.001 J ^b	0.00078 J	0.00039 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.011 U	0.006 U	0.01 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.0068 U	0.0039 U	0.01 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.0008 U	0.00046 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.06 ^{abc}	0.13 ^{abc}	0.01 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.0077 U	0.0044 U	0.01 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.0055 U	0.0031 U	0.01 U
Caprolactam	mg/L	NC	1.8	18.3	0.00098 U	0.00056 U	0.00066 U
Carbazole	mg/L	NC	0.003	0.0336	0.006 U	0.0034 U	0.01 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.0039 U	0.0022 U	0.01 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.0041 U	0.0023 U	0.01 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.0074 U	0.0042 U	0.01 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.0051 U	0.0029 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.0077 U	0.0044 U	0.01 U
Chrysene	mg/L	NC	0.009	0.0921	0.0074 U	0.0042 U	0.01 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.0000921	0.00031 U	0.00018 U	0.00021 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.007 U	0.004 U	0.01 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.014 U	0.0077 U	0.0092 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.0054 U	0.0031 U	0.01 U
Diethyl phthalate	mg/L	NC	5	29.2	0.0075 U	0.0042 U	0.01 U
Dimethyl phthalate	mg/L	NC	37	365	0.0064 U	0.0036 U	0.01 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.0049 U	0.0028 U	0.01 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.0054 U	0.0031 U	0.01 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.01 U	0.0058 U	0.0069 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.0094 U	0.0053 U	0.03 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.00084 U	0.00048 U	0.00057 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location: Sample ID: Sample Date:	URS Screening Criteria	URS Groundwater Values	Drinking Water Criteria ¹	GP-12-09 SO-55786-7109-MM-25 7/1/2009	GP-12-09 SO-55786-7109-MM-26-FD 7/1/2009 (Duplicate)	GP-13-09 SO-55786-7109-MM-27 7/1/2009	MW-2 GW-17338-080408-05 8/4/2008
Units	a	b	c				
Semi-volatile Organic Compounds							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.0012 U	0.00066 U	0.00078 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.0037 U	0.0021 U	0.0025 U
Fluoranthene	mg/L	NC	0.15	1.46	0.0052 U	0.0029 U	0.0035 U
Fluorene	mg/L	NC	0.024	1.46	0.0064 U	0.0036 U	0.0043 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.00053 U	0.0003 U	0.00036 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.0018 U	0.001 U	0.0012 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.009 U	0.0051 U	0.006 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.00098 U	0.00056 U	0.00066 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.00024 U	0.00044 J^b	0.00016 U
Isophorone	mg/L	0.071	0.1	0.708	0.007 U	0.004 U	0.0047 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.0061 U	0.0034 U	0.0041 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.0033 U *	0.0018 U	0.0022 U
4-Methylphenol	mg/L	NC	0.018	0.183	0.0031 U	0.0018 U	0.0021 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.0072 U	0.0041 U	0.0048 U
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.011 U	0.0063 U	0.0075 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.0085 U	0.0048 U	0.0057 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.0078 U	0.0044 U	0.0052 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.0008 U	0.00046 U	0.00054 U
2-Nitrophenol	mg/L	NC	NC	NC	0.0066 U	0.0038 U	0.0045 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.0045 U	0.0026 U	0.0031 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.00063 U	0.00036 U	0.00042 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.0076 U	0.0043 U	0.0051 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.0063 U	0.0036 U	0.0042 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.01 U *	0.0057 U	0.0067 U
Phenanthrene	mg/L	NC	0.12	1.1	0.007 U	0.004 U	0.0047 U
Phenol	mg/L	NC	4	11	0.0017 U	0.00099 U	0.0012 U
Pyrene	mg/L	NC	0.018	1.1	0.0084 U	0.0047 U	0.0056 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.0049 U	0.0028 U	0.0033 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.0062 U	0.0035 U	0.0042 U
Metals							
Aluminum	mg/L	NC	0.2	36.5	0.0046 U	0.0046 U	0.0046 U
Antimony	mg/L	NC	0.006	0.006	--	--	--
Arsenic	mg/L	0.0005	0.05	0.01	0.0038 U	0.0038 U	0.0165^{bc}
Barium	mg/L	0.26	2	2	--	--	--
Beryllium	mg/L	NC	0.004	0.004	0.00094 U	0.00094 U	0.00094 U
Cadmium	mg/L	NC	0.005	0.005	0.00092 U	0.00092 U	0.00092 U
Calcium	mg/L	NC	NC	NC	--	--	--
Chromium	mg/L	NC	0.1	0.1	0.0032 U	0.0032 U	0.0032 U
Cobalt	mg/L	NC	0.22	0.73	--	--	--
Copper	mg/L	NC	1.3	1.3	0.0036 U	0.0047 J	0.0036 U
Iron	mg/L	NC	0.3	11	--	--	--
Lead	mg/L	NC	0.015	0.015	0.0028 U	0.0028 U	0.0028 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location:</i>		URS	URS	Drinking	<i>GP-12-09</i>	<i>GP-12-09</i>	<i>GP-13-09</i>	<i>MW-2</i>
<i>Sample ID:</i>		Screening	Groundwater	Water	<i>SO-55786-7109-MM-25</i>	<i>SO-55786-7109-MM-26-FD</i>	<i>SO-55786-7109-MM-27</i>	<i>GW-17338-080408-05</i>
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	<i>7/1/2009</i>	<i>7/1/2009</i>	<i>7/1/2009</i>	<i>8/4/2008</i>
	<i>Units</i>	a	b	c		<i>(Duplicate)</i>		
Metals								
Magnesium	mg/L	NC	NC	NC	--	--	--	38.6
Manganese	mg/L	NC	0.05	0.876	--	--	--	1.17^{bc}
Mercury	mg/L	NC	0.002	0.002	0.00018 U	0.00018 U	0.00018 U	0.0002 U
Nickel	mg/L	NC	0.1	0.73	0.0035 U	0.0041 J	0.007 J	0.065 U
Potassium	mg/L	NC	NC	NC	--	--	--	6.01
Selenium	mg/L	NC	0.05	0.05	0.0048 U	0.0048 U	0.0048 U	0.0057 U
Silver	mg/L	NC	0.1	0.183	0.00097 U	0.00097 U	0.00097 U	0.0086 U
Sodium	mg/L	NC	NC	NC	--	--	--	217
Thallium	mg/L	NC	0.002	0.002	0.0046 U	0.0046 U	0.0046 U	0.0097 U
Vanadium	mg/L	NC	0.026	0.0365	--	--	--	0.016 U
Zinc	mg/L	NC	2	11	0.0058 U	0.0076 J	0.0065 J	0.0061 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- - Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-2	MW-2	MW-2	MW-3
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-022509-016	GW-017338-081909-ACH-11	GW-017338-030310-ACH-018	GW-17338-080508-07
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	2/25/2009	8/19/2009	3/3/2010	8/5/2008
<i>Units</i>	a	b	c				
<i>Volatile Organic Compounds</i>							
Acetone	mg/L	NC	0.061	32.9	0.01 U	R	220 J ^{bc}
Benzene	mg/L	0.0004	0.005	0.005	0.0033 ^a	0.001 U	0.96 ^{abc}
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.001 U	0.001 U	0.25 U
Bromoform	mg/L	0.008	0.1	0.08	0.001 U	0.001 U	1 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.001 U	0.001 U	1.2 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.01 U	R	1.2 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.001 U	0.001 U	1.2 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.5 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.001 U	0.0059 U	1.2 U
Chloroethane	mg/L	NC	0.004	14.6	0.001 U	0.001 U	1.2 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.001 U	0.001 U	1.2 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.001 U	0.001 U	1.2 U
Cyclohexane	mg/L	NC	NC	62.1	0.036	0.0059	1.2 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.001 U	0.001 U	1.2 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.001 U	0.001 U	1.2 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.001 U	0.001 U	1.2 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.001 U	0.0002 J	1.2 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.001 U	0.001 U	1.2 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.001 U	0.00027 J	1.2 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.001 U	0.001 U	1.2 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.001 U	0.001 U	1.2 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.001 U	0.001 U	0.5 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.001 U	0.001 U	0.5 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.001 U	0.001 U	1.2 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.001 U	0.001 U	1.2 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.25 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.001 U	1.2 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.001 U	1.2 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.0012	0.012 U	18 ^{bc}
2-Hexanone	mg/L	NC	0.15	NC	0.01 U	0.01 U	1.2 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.017	0.01	1.2 U
Methyl acetate	mg/L	NC	0.61	36.5	0.001 U	0.002 U	1.2 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.013	0.0054	1.2 U
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.0027	0.0021	0.53 J ^{bc}
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.01 U	0.01 U	0.54 J ^b
Methylene chloride	mg/L	0.004	0.005	0.005	0.001 U	0.001 U	0.75 U
Styrene	mg/L	NC	0.1	0.1	0.001 U	0.001 U	1.2 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.001 U	0.001 U	0.25 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.001 U	0.001 U	0.25 U
Toluene	mg/L	0.75	1	1	0.0008 J	0.014 U	190 ^{abc}
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.001 U	0.001 U	1.2 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.001 U	0.001 U	1.2 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.75 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location: Sample ID: Sample Date:	URS Screening Criteria	URS Groundwater Values	Drinking Water Criteria ¹	MW-2 GW-017338-022509-016 2/25/2009	MW-2 GW-017338-081909-ACH-11 8/19/2009	MW-2 GW-017338-030310-ACH-018 3/3/2010	MW-3 GW-17338-080508-07 8/5/2008
Units	a	b	c				
Volatile Organic Compounds							
Trichloroethene	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.25 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.001 U	0.001 U	1.2 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.001 U	0.001 U	1.2 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.001 U	0.001 U	1.2 U
Xylenes (total)	mg/L	1.2	10	10	0.0037	0.028 U	0.0022 J
Semi-volatile Organic Compounds							
Acenaphthene	mg/L	NC	0.037	2.19	0.01 U	0.01 U	0.0038 U
Acenaphthylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.004 U
Acetophenone	mg/L	NC	0.000004	NC	0.01 U	0.01 U	0.0043 U
Anthracene	mg/L	NC	0.18	11	0.01 U	0.01 U	0.0036 U
Atrazine	mg/L	0.0003	0.003	0.003	0.01 U	0.01 U	0.0048 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.01 UJ	0.01 U	0.0013 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.00002 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.001 U	0.001 U	0.00003 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.00004 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.0027 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.001 U	0.001 U	0.0003 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.01 U	0.01 U	0.0054 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.01 U	0.01 U	0.0035 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.001 U	0.001 U	0.00041 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.01 U	0.01 U	0.0024 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.0039 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.01 U	0.01 U	0.0028 U
Caprolactam	mg/L	NC	1.8	18.3	0.01 U	0.01 U	0.0005 U
Carbazole	mg/L	NC	0.003	0.0336	0.01 U	0.01 U	0.0031 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.002 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.01 U	0.01 U	0.0021 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.01 U	0.01 U	0.0038 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.01 U	0.01 U	0.0026 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.0039 U
Chrysene	mg/L	NC	0.009	0.0921	0.01 U	0.01 U	0.0038 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.001 U	0.001 U	0.00016 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.01 U	0.01 U	0.0036 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.02 U	0.021 U	0.007 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.01 U	0.01 U	0.0028 U
Diethyl phthalate	mg/L	NC	5	29.2	0.01 U	0.01 U	0.0038 U
Dimethyl phthalate	mg/L	NC	37	365	0.01 U	0.01 U	0.0033 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.01 U	0.01 U	0.0025 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.01 U	0.01 U	0.0028 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.03 UJ	0.031 U	0.0052 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.03 UJ	0.031 UJ	0.0048 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.002 U	0.0021 U	0.00043 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location: Sample ID: Sample Date:	URS Screening Criteria	URS Groundwater Values	Drinking Water Criteria ¹	MW-2 GW-017338-022509-016 2/25/2009	MW-2 GW-017338-081909-ACH-11 8/19/2009	MW-2 GW-017338-030310-ACH-018 3/3/2010	MW-3 GW-17338-080508-07 8/5/2008
Units	a	b	c				
Semi-volatile Organic Compounds							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.002 U	0.0021 U	0.00059 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.01 U	0.01 U	0.0019 U
Fluoranthene	mg/L	NC	0.15	1.46	0.01 U	0.01 U	0.0026 U
Fluorene	mg/L	NC	0.024	1.46	0.01 U	0.01 U	0.0033 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.001 U	0.001 U	0.00001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.002 U	0.0021 U	0.00094 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.01 U	0.01 U	0.0046 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.001 U	0.001 U	0.0005 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.00012 U
Isophorone	mg/L	0.071	0.1	0.708	0.01 U	0.01 U	0.0036 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.01 U	0.01 U	0.0031 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.01 U	0.01 U	0.0017 U
4-Methylphenol	mg/L	NC	0.018	0.183	0.01 U	0.01 U	0.0016 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.0005 J	0.01 U	0.0037 U
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.02 U	0.021 U	0.0057 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.02 U	0.021 U	0.0043 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.02 U	0.021 U	0.004 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.001 U	0.001 U	0.00041 U
2-Nitrophenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.0034 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.03 U	0.031 U	0.0023 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.001 U	0.001 U	0.00032 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.01 U	0.01 U	0.0039 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.01 U	0.01 U	0.0032 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.03 UJ	0.031 U	0.00014 U
Phenanthrene	mg/L	NC	0.12	1.1	0.01 U	0.01 U	0.0036 U
Phenol	mg/L	NC	4	11	0.01 U	0.01 U	0.00089 U
Pyrene	mg/L	NC	0.018	1.1	0.01 U	0.01 U	0.0043 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.01 U	0.01 U	0.0025 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.01 U	0.01 U	0.0032 U
Metals							
Aluminum	mg/L	NC	0.2	36.5	0.2 U	0.2 U	0.2 U
Antimony	mg/L	NC	0.006	0.006	0.01 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.0103 ^{ac}	0.0133 ^{ac}	0.012 ^{ac}
Barium	mg/L	0.26	2	2	0.67 ^a	0.526 ^a	0.456 ^a
Beryllium	mg/L	NC	0.004	0.004	0.002 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.004 U	0.005 U	0.005 U
Calcium	mg/L	NC	NC	NC	54.6	46.4	48
Chromium	mg/L	NC	0.1	0.1	0.01 U	0.01 U	0.01 U
Cobalt	mg/L	NC	0.22	0.73	0.0073 J	0.0042 J	0.0406 J
Copper	mg/L	NC	1.3	1.3	0.025 U	0.0081 J	0.025 U
Iron	mg/L	NC	0.3	11	90.5 ^{bc}	61.8 ^{bc}	55.6 ^{bc}
Lead	mg/L	NC	0.015	0.015	0.003 U	0.005 U	0.005 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

Sample Location:		URS	URS	Drinking	MW-2	MW-2	MW-2	MW-3
Sample ID:		Screening	Groundwater	Water	GW-017338-022509-016	GW-017338-081909-ACH-11	GW-017338-030310-ACH-018	GW-17338-080508-07
Sample Date:		Criteria	Values	Criteria ¹	2/25/2009	8/19/2009	3/3/2010	8/5/2008
Units		a	b	c				
Metals								
Magnesium	mg/L	NC	NC	NC	44.1	41.4	39.4	109
Manganese	mg/L	NC	0.05	0.876	1.35 ^{bc}	0.948 ^{bc}	0.87 ^b	22.2 ^{bc}
Mercury	mg/L	NC	0.002	0.002	0.0002 U	0.00032	0.0002 U	0.00015 J
Nickel	mg/L	NC	0.1	0.73	0.04 U	0.04 U	0.0037 J	0.065 U
Potassium	mg/L	NC	NC	NC	6.26	4.61 J	4.52 J	5.07
Selenium	mg/L	NC	0.05	0.05	0.005 U	0.01 U	0.01 U	0.0057 U
Silver	mg/L	NC	0.1	0.183	0.01 U	0.01 U	0.0016 J	0.0086 U
Sodium	mg/L	NC	NC	NC	184	174	139	97.4
Thallium	mg/L	NC	0.002	0.002	0.0095 U	0.01 U	0.01 U	0.0097 U
Vanadium	mg/L	NC	0.026	0.0365	0.05 U	0.05 U	0.05 U	0.016 U
Zinc	mg/L	NC	2	11	0.03 U	0.019 J	0.0701	0.03 U

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

Sample Location:	URS	URS	Drinking	MW-3	MW-3	MW-3	MW-3D	
Sample ID:	Screening	Groundwater	Water	GW-017338-022509-019	GW-017338-081909-ACH-15	GW-017338-030310-RAM-019	GW-17338-080508-09	
Sample Date:	Criteria	Values	Criteria ¹	2/25/2009	8/19/2009	3/3/2010	8/5/2008	
Units	a	b	c					
Volatile Organic Compounds								
Acetone	mg/L	NC	0.061	32.9	180 ^{bc}	200 J ^{bc}	96 J ^{bc}	R
Benzene	mg/L	0.0004	0.005	0.005	0.98 ^{abc}	0.58 ^{abc}	1 ^{abc}	0.0049 ^a
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.2 U	0.1 U	0.05 U	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.2 U	0.1 U	0.05 U	0.004 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.2 U	0.1 U	0.05 U	0.005 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	2 U	0.17 J	0.5 U	0.005 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.2 U	0.1 U	0.05 U	0.005 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.2 U	0.1 U	0.05 U	0.002 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.2 U	0.1 U	0.05 U	0.0004 J
Chloroethane	mg/L	NC	0.004	14.6	0.2 U	0.1 U	0.05 UJ	0.005 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.2 U	0.1 U	0.05 U	0.005 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.2 U	0.1 U	0.05 U	0.005 U
Cyclohexane	mg/L	NC	NC	62.1	0.2 U	0.1 U	0.05 U	0.0005 J
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.2 U	0.1 U	0.05 U	0.005 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.2 U	0.1 U	0.05 U	0.005 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.2 U	0.1 U	0.05 U	0.005 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.2 U	0.1 U	0.05 U	0.005 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.2 U	0.1 U	0.05 U	0.005 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.2 U	0.1 U	0.05 U	0.005 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.2 U	0.1 U	0.05 U	0.005 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.2 U	0.1 U	0.05 U	0.005 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.2 U	0.1 U	0.05 U	0.002 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.2 U	0.1 U	0.05 U	0.002 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.2 U	0.1 U	0.05 U	0.005 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.2 U	0.1 U	0.05 U	0.005 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.2 U	0.1 U	0.05 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.2 U	0.1 U	0.05 U	0.005 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.2 U	0.1 U	0.05 U	0.005 U
Ethylbenzene	mg/L	NC	0.7	0.7	17 ^{bc}	10 ^{bc}	19 ^{bc}	0.14
2-Hexanone	mg/L	NC	0.15	NC	2 U	1 U	0.5 U	0.005 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.2 U	0.1 U	0.022 J	0.0046 J
Methyl acetate	mg/L	NC	0.61	36.5	0.2 U	0.2 U	0.1 U	0.005 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.2 U	0.1 U	0.05 U	0.001 J
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.42 ^{bc}	0.47 ^{bc}	0.63 ^{bc}	0.0022 J
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.82 J ^b	0.44 J ^b	0.38 J ^b	0.005 U
Methylene chloride	mg/L	0.004	0.005	0.005	0.2 U	0.1 U	0.05 U	0.003 U
Styrene	mg/L	NC	0.1	0.1	0.2 U	0.1 U	0.05 U	0.005 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.2 U	0.1 U	0.05 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.2 U	0.1 U	0.05 U	0.001 U
Toluene	mg/L	0.75	1	1	150 ^{abc}	150 ^{abc}	170 ^{abc}	0.39
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.2 U	0.1 U	0.05 U	0.005 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.2 U	0.1 U	0.05 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.2 U	0.1 U	0.05 U	0.003 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		URS	URS	Drinking	MW-3	MW-3	MW-3	MW-3D
Sample ID:		Screening	Groundwater	Water	GW-017338-022509-019	GW-017338-081909-ACH-15	GW-017338-030310-RAM-019	GW-17338-080508-09
Sample Date:		Criteria	Values	Criteria ¹	2/25/2009	8/19/2009	3/3/2010	8/5/2008
	Units	a	b	c				
Volatile Organic Compounds								
Trichloroethene	mg/L	0.002	0.005	0.005	0.2 U	0.1 U	0.05 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.2 U	0.1 U	0.05 U	0.005 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.2 U	0.1 U	0.05 U	0.005 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.2 U	0.1 U	0.05 U	0.005 U
Xylenes (total)	mg/L	1.2	10	10	28 ^{abc}	17 ^{abc}	32 ^{abc}	0.27
Semi-volatile Organic Compounds								
Acenaphthene	mg/L	NC	0.037	2.19	0.05 U	0.01 U	0.0038 U	0.01 U
Acenaphthylene	mg/L	NC	NC	1.1	0.05 U	0.01 U	0.004 U	0.01 U
Acetophenone	mg/L	NC	0.000004	NC	0.05 U	0.014 ^b	0.02 ^b	0.01 U
Anthracene	mg/L	NC	0.18	11	0.05 U	0.01 U	0.0036 U	0.01 U
Atrazine	mg/L	0.0003	0.003	0.003	0.05 U	0.01 U	0.0048 U	0.01 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.05 UJ	0.01 U	0.014 J	0.01 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.005 U	0.001 U	0.00002 U	0.001 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.005 U	0.001 U	0.00003 U	0.001 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.005 U	0.001 U	0.00004 U	0.001 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.05 U	0.01 U	0.0027 U	0.01 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.005 U	0.001 U	0.0003 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.05 U	0.01 U	0.0054 U	0.01 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.05 U	0.01 U	0.0035 U	0.01 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.005 U	0.001 U	0.00041 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.05 U	0.01 U	0.0024 U	0.01 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.05 U	0.01 U	0.0039 U	0.01 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.05 U	0.01 U	0.0028 U	0.01 U
Caprolactam	mg/L	NC	1.8	18.3	0.05 U	0.01 U	0.0005 U	0.01 U
Carbazole	mg/L	NC	0.003	0.0336	0.05 U	0.01 U	0.0031 U	0.01 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.05 U	0.01 U	0.002 U	0.01 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.05 U	0.01 U	0.0021 U	0.01 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.05 U	0.01 U	0.0038 U	0.01 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.05 U	0.01 U	0.0026 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.05 U	0.01 U	0.0039 U	0.01 U
Chrysene	mg/L	NC	0.009	0.0921	0.05 U	0.01 U	0.0038 U	0.01 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.005 U	0.001 U	0.00016 U	0.001 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.05 U	0.01 U	0.0036 U	0.01 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.1 U	0.02 U	0.007 U	0.02 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.05 U	0.01 U	0.0028 U	0.01 U
Diethyl phthalate	mg/L	NC	5	29.2	0.05 U	0.01 U	0.0038 U	0.01 U
Dimethyl phthalate	mg/L	NC	37	365	0.05 U	0.01 U	0.0033 U	0.01 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.28 ^b	0.2 ^b	0.22 ^b	0.01 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.05 U	0.01 U	0.0028 U	0.01 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.15 UJ	0.03 U	0.0052 U	0.03 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.15 UJ	0.03 UJ	0.0048 U	0.03 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.01 U	0.002 U	0.00043 U	0.002 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:	URS	URS	Drinking	MW-3	MW-3	MW-3	MW-3D
Sample ID:	Screening	Groundwater	Water	GW-017338-022509-019	GW-017338-081909-ACH-15	GW-017338-030310-RAM-019	GW-17338-080508-09
Sample Date:	Criteria	Values	Criteria ¹	2/25/2009	8/19/2009	3/3/2010	8/5/2008
Units	a	b	c				
Semi-volatile Organic Compounds							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.01 U	0.002 U	0.00059 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.05 U	0.01 U	0.0019 U
Fluoranthene	mg/L	NC	0.15	1.46	0.05 U	0.01 U	0.0026 U
Fluorene	mg/L	NC	0.024	1.46	0.05 U	0.01 U	0.0033 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.005 U	0.001 U	0.00001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.01 U	0.002 U	0.00094 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.05 U	0.01 U	0.0046 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.005 U	0.001 U	0.0005 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.005 U	0.001 U	0.00012 U
Isophorone	mg/L	0.071	0.1	0.708	0.05 U	0.01 U	0.0036 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.0015 J	0.01 U	0.0031 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.095	0.1	0.14
4-Methylphenol	mg/L	NC	0.018	0.183	0.46 ^{bc}	0.24 ^{bc}	0.37 ^{bc}
Naphthalene	mg/L	0.0007	0.02	0.73	0.042 J ^{ab}	0.019 U	0.0037 U
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.1 U	0.02 U	0.0057 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.1 U	0.02 U	0.0043 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.1 U	0.02 U	0.004 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.005 U	0.001 U	0.00041 U
2-Nitrophenol	mg/L	NC	NC	NC	0.05 U	0.01 U	0.0034 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.15 U	0.03 U	0.0023 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.005 U	0.001 U	0.00032 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.05 U	0.01 U	0.0039 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.05 U	0.01 U	0.0032 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.15 UJ	0.03 U	0.00014 U
Phenanthrene	mg/L	NC	0.12	1.1	0.05 U	0.01 U	0.0036 U
Phenol	mg/L	NC	4	11	0.015 J	0.01 U	0.00089 U
Pyrene	mg/L	NC	0.018	1.1	0.05 U	0.01 U	0.0043 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.05 U	0.01 U	0.0025 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.05 U	0.01 U	0.0032 U
Metals							
Aluminum	mg/L	NC	0.2	36.5	0.23 ^b	0.193 J	0.13 J
Antimony	mg/L	NC	0.006	0.006	0.01 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.021 U	0.005 U	0.005 U
Barium	mg/L	0.26	2	2	0.68 ^a	0.705 ^a	0.722 ^a
Beryllium	mg/L	NC	0.004	0.004	0.002 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.004 U	0.005 U	0.005 U
Calcium	mg/L	NC	NC	NC	109	92.5	92.2
Chromium	mg/L	NC	0.1	0.1	0.0026 J	0.01 U	0.01 U
Cobalt	mg/L	NC	0.22	0.73	0.05 U	0.05 U	0.0044 J
Copper	mg/L	NC	1.3	1.3	0.025 U	0.0066 J	0.025 U
Iron	mg/L	NC	0.3	11	285 ^{bc}	258 ^{bc}	264 ^{bc}
Lead	mg/L	NC	0.015	0.015	0.0066	0.005 U	0.0049 J
							0.0072

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-3	MW-3	MW-3	MW-3D
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-022509-019	GW-017338-081909-ACH-15	GW-017338-030310-RAM-019	GW-17338-080508-09
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	2/25/2009	8/19/2009	3/3/2010	8/5/2008
<i>Units</i>	a	b	c				
Metals							
Magnesium	mg/L	NC	NC	117	98.6	99.7	22.9
Manganese	mg/L	NC	0.05	25.8 ^{bc}	22.1 ^{bc}	23.6 ^{bc}	0.604 ^b
Mercury	mg/L	NC	0.002	0.00015 J	0.0004	0.0002 U	0.0002 U
Nickel	mg/L	NC	0.1	0.04 U	0.04 U	0.04 U	0.065 U
Potassium	mg/L	NC	NC	4.79 J	4.58 J	5.05	6.2
Selenium	mg/L	NC	0.05	0.005 U	0.01 U	0.01 U	0.0057 U
Silver	mg/L	NC	0.1	0.01 U	0.01 U	0.0096 J	0.0072 J
Sodium	mg/L	NC	NC	107	131	160	81.6
Thallium	mg/L	NC	0.002	0.019 U	0.01 U	0.01 U	0.0097 U
Vanadium	mg/L	NC	0.026	0.05 U	0.0023 J	0.05 U	0.0044 J
Zinc	mg/L	NC	11	0.0109 J	0.0348	0.0201 J	0.0104 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- - Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-3D	MW-3D	MW-3D	MW-3D
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-17338-080508-10	GW-017338-022409-005	GW-017338-081809-ACH-04	GW-017338-030210-ACH-008
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	8/5/2008	2/24/2009	8/18/2009	3/2/2010
<i>Units</i>	a	b	c	(Duplicate)			
<i>Volatile Organic Compounds</i>							
Acetone	mg/L	NC	0.061	32.9	R	0.01 U	R
Benzene	mg/L	0.0004	0.005	0.005	0.0035 ^a	0.0004 J	0.00049 J ^a
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.004 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.005 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.005 U	0.01 U	0.01 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.005 U	0.001 U	0.001 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.002 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.005 U	0.001 U	0.001 U
Chloroethane	mg/L	NC	0.004	14.6	0.005 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.005 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.005 U	0.001 U	0.001 U
Cyclohexane	mg/L	NC	NC	62.1	0.005 U	0.0004 J	0.00064 J
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.005 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.005 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.005 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.005 U	0.0002 J	0.001 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.005 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.005 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.005 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.005 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.002 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.002 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.005 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.005 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.005 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.005 U	0.001 U	0.001 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.091	0.003	0.0058
2-Hexanone	mg/L	NC	0.15	NC	0.005 U	0.01 U	0.01 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.004 J	0.0026	0.0044
Methyl acetate	mg/L	NC	0.61	36.5	0.005 U	0.001 U	0.002 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.0003 J	0.0005 J	0.00077 J
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.002 J	0.0018	0.0015
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.005 U	0.01 U	0.01 U
Methylene chloride	mg/L	0.004	0.005	0.005	0.003 U	0.001 U	0.001 U
Styrene	mg/L	NC	0.1	0.1	0.005 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.75	1	1	0.61	0.0003 J	0.001 U
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.005 U	0.001 U	0.001 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.005 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.003 U	0.001 U	0.001 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-3D	MW-3D	MW-3D	MW-3D
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-17338-080508-10	GW-017338-022409-005	GW-017338-081809-ACH-04	GW-017338-030210-ACH-008
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	8/5/2008	2/24/2009	8/18/2009	3/2/2010
<i>Units</i>	a	b	c	(Duplicate)			
<i>Volatile Organic Compounds</i>							
Trichloroethene	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.005 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.005 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.005 U	0.001 U	0.001 U
Xylenes (total)	mg/L	1.2	10	10	0.19	0.0025 J	0.013
							0.0073
<i>Semi-volatile Organic Compounds</i>							
Acenaphthene	mg/L	NC	0.037	2.19	0.01 U	0.01 U	0.0038 U
Acenaphthylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.0041 U
Acetophenone	mg/L	NC	0.000004	NC	0.01 U	0.01 U	0.0044 U
Anthracene	mg/L	NC	0.18	11	0.01 U	0.01 U	0.0036 U
Atrazine	mg/L	0.0003	0.003	0.003	0.01 U	0.01 U	0.0049 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.01 UJ	0.01 UJ	0.0014 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.000042 J
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.001 U	0.001 U	0.000035 J ^a
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.00005 J
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.0028 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.001 U	0.001 U	0.00031 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.01 U	0.01 U	0.0055 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.01 U	0.01 U	0.0035 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.001 U	0.001 U	0.00042 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.01 U	0.01 U	0.0024 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.004 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.01 U	0.01 U	0.0028 U
Caprolactam	mg/L	NC	1.8	18.3	0.01 U	0.0027 J	0.00051 U
Carbazole	mg/L	NC	0.003	0.0336	0.01 U	0.01 U	0.0031 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.002 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.01 U	0.01 U	0.0021 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.01 U	0.01 U	0.0038 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.01 U	0.01 U	0.0027 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.004 U
Chrysene	mg/L	NC	0.009	0.0921	0.01 U	0.01 U	0.0038 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.001 U	0.001 U	0.00016 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.01 U	0.01 U	0.0037 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.02 U	0.02 U	0.0071 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.01 U	0.01 U	0.0028 U
Diethyl phthalate	mg/L	NC	5	29.2	0.01 U	0.01 U	0.0039 U
Dimethyl phthalate	mg/L	NC	37	365	0.01 U	0.01 U	0.0033 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.01 U	0.01 U	0.0026 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.01 U	0.01 U	0.0028 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.03 U	0.03 U	0.0053 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.03 U	0.03 U	0.0049 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.002 U	0.0021 U	0.00044 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-3D	MW-3D	MW-3D	MW-3D
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-17338-080508-10	GW-017338-022409-005	GW-017338-081809-ACH-04	GW-017338-030210-ACH-008
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	8/5/2008	2/24/2009	8/18/2009	3/2/2010
<i>Units</i>	a	b	c	(Duplicate)			
<i>Semi-volatile Organic Compounds</i>							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.002 U	0.002 U	0.0006 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.01 U	0.01 U	0.0019 U
Fluoranthene	mg/L	NC	0.15	1.46	0.01 U	0.01 U	0.0027 U
Fluorene	mg/L	NC	0.024	1.46	0.01 U	0.01 U	0.0033 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.001 U	0.001 U	0.00001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.002 U	0.002 U	0.00096 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.01 U	0.01 U	0.0047 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.001 U	0.001 U	0.00051 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.00012 U
Isophorone	mg/L	0.071	0.1	0.708	0.01 U	0.01 U	0.0037 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.0003 J	0.0004 J	0.0032 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.01 U	0.01 U	0.0017 U
4-Methylphenol	mg/L	NC	0.018	0.183	0.01 U	0.01 U	0.0016 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.01 U	0.01 U	0.0037 U
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.02 U	0.02 U	0.0058 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.02 U	0.02 U	0.0044 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.02 U	0.02 U	0.0041 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.001 U	0.001 U	0.00042 U
2-Nitrophenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.0035 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.03 U	0.03 U	0.0024 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.001 U	0.001 U	0.00033 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.01 U	0.01 U	0.0039 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.01 U	0.01 U	0.0033 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.03 U	0.03 U	0.00014 U
Phenanthrene	mg/L	NC	0.12	1.1	0.01 U	0.01 U	0.0036 U
Phenol	mg/L	NC	4	11	0.01 U	0.01 U	0.00091 U
Pyrene	mg/L	NC	0.018	1.1	0.01 U	0.01 U	0.0044 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.01 U	0.01 U	0.0026 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.01 U	0.01 U	0.0032 U
<i>Metals</i>							
Aluminum	mg/L	NC	0.2	36.5	2.66 ^b	2.73 ^b	3.71 ^b
Antimony	mg/L	NC	0.006	0.006	0.0084 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.0059 U	0.0042 U	0.005 U
Barium	mg/L	0.26	2	2	0.375 ^a	0.36 ^a	0.456 ^a
Beryllium	mg/L	NC	0.004	0.004	0.00067 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.005 U	0.004 U	0.005 U
Calcium	mg/L	NC	NC	NC	42.9	44.4	44.1
Chromium	mg/L	NC	0.1	0.1	0.0033 J	0.0037 J	0.0047 J
Cobalt	mg/L	NC	0.22	0.73	0.1 U	0.0026 J	0.05 U
Copper	mg/L	NC	1.3	1.3	0.004 J	0.0365	0.0355
Iron	mg/L	NC	0.3	11	36.5 ^{bc}	28.7 ^{bc}	30.3 ^{bc}
Lead	mg/L	NC	0.015	0.015	0.0078	0.0028 J	0.005 U
							0.007 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location:</i>		URS	URS	Drinking	<i>MW-3D</i>	<i>MW-3D</i>	<i>MW-3D</i>	<i>MW-3D</i>
<i>Sample ID:</i>		Screening	Groundwater	Water	<i>GW-17338-080508-10</i>	<i>GW-017338-022409-005</i>	<i>GW-017338-081809-ACH-04</i>	<i>GW-017338-030210-ACH-008</i>
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	<i>8/5/2008</i>	<i>2/24/2009</i>	<i>8/18/2009</i>	<i>3/2/2010</i>
	<i>Units</i>	a	b	c	<i>(Duplicate)</i>			
Metals								
Magnesium	mg/L	NC	NC	NC	24.3	27.5	27.4	32.5
Manganese	mg/L	NC	0.05	0.876	0.64^b	0.453^b	0.423^b	0.528^b
Mercury	mg/L	NC	0.002	0.002	0.0002 U	0.0002 U	0.00028	0.0002 U
Nickel	mg/L	NC	0.1	0.73	0.0043 J	0.0042 J	0.0064 J	0.04 U
Potassium	mg/L	NC	NC	NC	6.65	6.54	5.64	6.61
Selenium	mg/L	NC	0.05	0.05	0.0057 U	0.005 U	0.01 U	0.01 U
Silver	mg/L	NC	0.1	0.183	0.0063 J	0.0117	0.0077 J	0.0057 J
Sodium	mg/L	NC	NC	NC	85.9	85.9	81.4	96.7
Thallium	mg/L	NC	0.002	0.002	0.0097 U	0.0095 U	0.01 U	0.01 U
Vanadium	mg/L	NC	0.026	0.0365	0.0052 J	0.05 U	0.0068 J	0.0059 J
Zinc	mg/L	NC	2	11	0.0108 J	0.0165 J	0.026 J	0.0215 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	<i>MW-3D</i>	<i>MW-6</i>	<i>MW-6</i>	<i>MW-6</i>
<i>Sample ID:</i>		Screening	Groundwater	Water	<i>GW-017338-030210-ACH-010</i>	<i>GW-17338-080508-11</i>	<i>GW-017338-022409-011</i>	<i>GW-017338-022409-012</i>
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	<i>3/2/2010</i>	<i>8/5/2008</i>	<i>2/24/2009</i>	<i>2/24/2009</i>
	<i>Units</i>	<i>a</i>	<i>b</i>	<i>c</i>	<i>(Duplicate)</i>			<i>(Duplicate)</i>
<i>Volatile Organic Compounds</i>								
Acetone	mg/L	NC	0.061	32.9	R	R	0.02 U	0.02 U
Benzene	mg/L	0.0004	0.005	0.005	0.001 U	0.004 ^a	0.0009 J ^a	0.0009 J ^a
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.001 U	0.001 U	0.002 U	0.002 U
Bromoform	mg/L	0.008	0.1	0.08	0.001 U	0.004 U	0.002 U	0.002 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.001 U	0.005 U	0.002 U	0.002 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.01 U	0.005 U	0.02 U	0.02 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.001 U	0.005 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.001 U	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.001 U	0.005 U	0.002 U	0.002 U
Chloroethane	mg/L	NC	0.004	14.6	0.001 U	0.005 U	0.002 U	0.002 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.001 U	0.005 U	0.002 U	0.002 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.001 U	0.005 U	0.002 U	0.002 U
Cyclohexane	mg/L	NC	NC	62.1	0.001 U	0.005	0.0097	0.0096
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.001 U	0.005 U	0.002 U	0.002 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.001 U	0.005 U	0.002 U	0.002 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.001 U	0.005 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.001 U	0.005 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.001 U	0.005 U	0.002 U	0.002 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.001 U	0.005 U	0.002 U	0.002 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.001 U	0.005 U	0.002 U	0.002 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.001 U	0.005 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.001 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.001 U	0.002 U	0.002 U	0.002 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.001 U	0.005 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.001 U	0.005 U	0.002 U	0.002 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.005 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.005 U	0.002 U	0.002 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.00026 J	0.14	0.078	0.088
2-Hexanone	mg/L	NC	0.15	NC	0.01 U	0.005 U	0.02 U	0.02 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.005	0.13^b	0.21^b	0.23^b
Methyl acetate	mg/L	NC	0.61	36.5	0.002 U	0.005 U	0.002 U	0.002 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.00069 J	0.0097	0.018	0.017
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.0015	0.0003 J	0.002 U	0.002 U
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	R	0.005 U	0.02 U	0.02 U
Methylene chloride	mg/L	0.004	0.005	0.005	0.001 U	0.003 U	0.002 U	0.002 U
Styrene	mg/L	NC	0.1	0.1	0.001 U	0.005 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.001 U	0.001 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.001 U	0.001 U	0.002 U	0.002 U
Toluene	mg/L	0.75	1	1	0.0011	0.72	0.13	0.15
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.001 U	0.005 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.001 U	0.005 U	0.002 U	0.002 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.001 U	0.003 U	0.002 U	0.002 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-3D	MW-6	MW-6	MW-6
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-030210-ACH-010	GW-17338-080508-11	GW-017338-022409-011	GW-017338-022409-012
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	3/2/2010	8/5/2008	2/24/2009	2/24/2009
<i>Units</i>	a	b	c	(Duplicate)			(Duplicate)
<i>Volatile Organic Compounds</i>							
Trichloroethene	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.002 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.001 U	0.005 U	0.002 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.001 U	0.005 U	0.002 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.001 U	0.005 U	0.002 U
Xylenes (total)	mg/L	1.2	10	10	0.0083	0.41	0.34
<i>Semi-volatile Organic Compounds</i>							
Acenaphthene	mg/L	NC	0.037	2.19	0.004 U	0.01 U	0.0009 J
Acenaphthylene	mg/L	NC	NC	1.1	0.0042 U	0.01 U	0.011 U
Acetophenone	mg/L	NC	0.000004	NC	0.0045 U	0.0008 J ^b	0.0024 J ^b
Anthracene	mg/L	NC	0.18	11	0.0037 U	0.01 U	0.011 U
Atrazine	mg/L	0.0003	0.003	0.003	0.005 U	0.01 U	0.011 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.0014 UJ	0.01 UJ	0.011 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.000031 J	0.001 U	0.0011 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.000032 U	0.001 U	0.0011 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.000042 U	0.001 U	0.0011 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.0029 U	0.01 U	0.011 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.00032 U	0.001 U	0.0011 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.0057 U	0.01 U	0.011 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.0037 U	0.01 U	0.011 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.00043 U	0.001 U	0.0011 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.0025 U	0.01 U	0.011 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.0041 U	0.01 U	0.011 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.0029 U	0.01 U	0.011 U
Caprolactam	mg/L	NC	1.8	18.3	0.00063 J	0.01 U	0.011 U
Carbazole	mg/L	NC	0.003	0.0336	0.0032 U	0.01 U	0.0006 J
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.0021 U	0.01 U	0.011 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.0022 U	0.01 U	0.011 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.0039 U	0.01 U	0.011 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.0028 U	0.01 U	0.011 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.0041 U	0.01 U	0.011 U
Chrysene	mg/L	NC	0.009	0.0921	0.004 U	0.01 U	0.011 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.00017 U	0.001 U	0.0011 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.0038 U	0.01 U	0.0003 J
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.0073 U	0.021 U	0.022 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.0029 U	0.01 U	0.011 U
Diethyl phthalate	mg/L	NC	5	29.2	0.004 U	0.01 U	0.011 U
Dimethyl phthalate	mg/L	NC	37	365	0.0034 U	0.01 U	0.011 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.0026 U	0.003 J	0.0069 J
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.0029 U	0.01 U	0.011 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.0055 U	0.032 U	0.033 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.0051 U	0.032 U	0.033 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.00045 U	0.0021 U	0.0022 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location: Sample ID: Sample Date:	URS Screening Criteria	URS Groundwater Values	Drinking Water Criteria ¹	MW-3D GW-017338-030210-ACH-010 3/2/2010 (Duplicate)	MW-6 GW-17338-080508-11 8/5/2008	MW-6 GW-017338-022409-011 2/24/2009	MW-6 GW-017338-022409-012 2/24/2009 (Duplicate)
Units	a	b	c				
Semi-volatile Organic Compounds							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0062 U	0.0021 U	0.0021 U	0.0022 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	0.002 U	0.01 U	0.01 U	0.011 U
Fluoranthene	mg/L	NC	0.15	0.0028 U	0.0006 J	0.0012 J	0.0011 J
Fluorene	mg/L	NC	0.024	0.0034 U	0.01 U	0.01 U	0.011 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.000011 U	0.001 U	0.001 U	0.0011 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00099 U	0.0021 U	0.0021 U	0.0022 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.0048 U	0.01 U	0.01 U	0.011 U
Hexachloroethane	mg/L	NC	0.001	0.00053 U	0.001 U	0.001 U	0.0011 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921 U	0.001 U	0.001 U	0.0011 U
Isophorone	mg/L	0.071	0.1	0.0038 U	0.01 U	0.01 U	0.011 U
2-Methylnaphthalene	mg/L	NC	0.012	0.0033 U	0.0004 J	0.0012 J	0.0012 J
2-Methylphenol	mg/L	NC	0.18	0.0017 U	0.024	0.01 U	0.0049 J
4-Methylphenol	mg/L	NC	0.018	0.0017 U	0.002 J	0.0008 J	0.0012 J
Naphthalene	mg/L	0.0007	0.02	0.0039 U	0.0014 J ^a	0.043 ^{ab}	0.042 ^{ab}
2-Nitroaniline	mg/L	NC	0.0002	0.006 U	0.021 U	0.021 U	0.022 U
3-Nitroaniline	mg/L	NC	NC	0.0046 U	0.021 U	0.021 U	0.022 U
4-Nitroaniline	mg/L	NC	NC	0.0042 U	0.021 U	0.021 U	0.022 U
Nitrobenzene	mg/L	NC	0.0004	0.00043 U	0.001 U	0.001 U	0.0011 U
2-Nitrophenol	mg/L	NC	NC	0.0036 U	0.01 U	0.01 U	0.011 U
4-Nitrophenol	mg/L	NC	0.06	0.0024 U	0.032 U	0.032 U	0.033 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.001 U	0.001 U	0.0011 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.0041 U	0.01 U	0.01 U	0.011 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0034 U	0.01 U	0.01 U	0.011 U
Pentachlorophenol	mg/L	0.0006	0.001	0.00015 U	0.032 U	0.032 U	0.033 U
Phenanthrene	mg/L	NC	0.12	0.0037 U	0.01 U	0.0004 J	0.0004 J
Phenol	mg/L	NC	4	0.00094 U	0.01 U	0.01 U	0.011 U
Pyrene	mg/L	NC	0.018	0.0045 U	0.01 U	0.0007 J	0.0007 J
2,4,5-Trichlorophenol	mg/L	NC	0.37	0.0026 U	0.01 U	0.01 U	0.011 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.0033 U	0.01 U	0.01 U	0.011 U
Metals							
Aluminum	mg/L	NC	0.2	2.46 ^b	0.342 ^b	1.77 ^b	1.7 ^b
Antimony	mg/L	NC	0.006	0.006	0.0084 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.005 U	0.011 ^{ac}	0.01 ^a	0.0064 ^a
Barium	mg/L	0.26	2	0.443 ^a	0.658 ^a	0.663 ^a	0.702 ^a
Beryllium	mg/L	NC	0.004	0.002 U	0.00067 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005 U	0.005 U	0.004 U	0.004 U
Calcium	mg/L	NC	NC	55.1	74.1	76.2	81.8
Chromium	mg/L	NC	0.1	0.0036 J	0.018 U	0.0016 J	0.0017 J
Cobalt	mg/L	NC	0.22	0.0028 J	0.1 U	0.05 U	0.05 U
Copper	mg/L	NC	1.3	0.0219 J	0.021 U	0.0265	0.025 U
Iron	mg/L	NC	0.3	11	29.4 ^{bc}	23 ^{bc}	28.1 ^{bc}
Lead	mg/L	NC	0.015	0.015	0.0064 U	0.0023 J	0.003 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

Sample Location:	URS	URS	Drinking	MW-3D	MW-6	MW-6	MW-6
Sample ID:	Screening	Groundwater	Water	GW-017338-030210-ACH-010	GW-17338-080508-11	GW-017338-022409-011	GW-017338-022409-012
Sample Date:	Criteria	Values	Criteria ¹	3/2/2010	8/5/2008	2/24/2009	2/24/2009
	Units	a	b	c	(Duplicate)		(Duplicate)
Metals							
Magnesium	mg/L	NC	NC	NC	31.8	26.2	26.1
Manganese	mg/L	NC	0.05	0.876	0.516 ^b	0.939 ^{bc}	0.892 ^{bc}
Mercury	mg/L	NC	0.002	0.002	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	NC	0.1	0.73	0.04 U	0.065 U	0.04 U
Potassium	mg/L	NC	NC	NC	6.5	19	17.5
Selenium	mg/L	NC	0.05	0.05	0.01 U	0.0057 U	0.005 U
Silver	mg/L	NC	0.1	0.183	0.0053 J	0.0086 U	0.01 U
Sodium	mg/L	NC	NC	NC	95.1	203	185
Thallium	mg/L	NC	0.002	0.002	0.01 U	0.0097 U	0.0095 U
Vanadium	mg/L	NC	0.026	0.0365	0.0047 J	0.016 U	0.05 U
Zinc	mg/L	NC	2	11	0.0172 J	0.03 U	0.03 U

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- - Not analyzed.

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.

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:	URS	URS	Drinking	MW-6	MW-6	MW-7	MW-7
Sample ID:	Screening	Groundwater	Water	GW-017338-081809-ACH-07	GW-017338-030210-ACH-012	GW-17338-080508-12	GW-017338-022509-015
Sample Date:	Criteria	Values	Criteria ¹	8/18/2009	3/2/2010	8/5/2008	2/25/2009
Units	a	b	c				
Volatile Organic Compounds							
Acetone	mg/L	NC	0.061	32.9	R	R	0.05 U
Benzene	mg/L	0.0004	0.005	0.005	0.003 ^a	0.0017 ^a	0.0023 J ^a
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.002 U	0.001 U	0.005 U
Bromoform	mg/L	0.008	0.1	0.08	0.002 U	0.004 U	0.005 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.002 UJ	0.002 U	0.005 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	R	0.005 U	0.05 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.002 U	0.002 U	0.005 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.002 U	0.002 U	0.005 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.002 U	0.002 U	0.33 ^{abc}
Chloroethane	mg/L	NC	0.004	14.6	0.002 U	0.002 U	1.1 ^{abc}
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.002 U	0.002 U	0.005 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.002 U	0.002 U	0.005 U
Cyclohexane	mg/L	NC	NC	62.1	0.0037	0.0099	0.005 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.002 U	0.002 U	0.005 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.002 U	0.002 U	0.005 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.002 U	0.002 U	0.005 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.002 U	0.002 U	0.0006 J
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.002 U	0.002 U	0.0004 J
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.002 U	0.002 U	0.0017 J ^a
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.002 U	0.002 U	0.005 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.002 U	0.002 U	0.005 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.002 U	0.002 U	0.005 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.002 U	0.002 U	0.005 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.002 U	0.002 U	0.005 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.002 U	0.002 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.002 U	0.002 U	0.005 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.002 U	0.002 U	0.005 U
Ethylbenzene	mg/L	NC	0.7	0.7	1.1 ^{bc}	0.87 ^{bc}	0.092
2-Hexanone	mg/L	NC	0.15	NC	0.02 U	0.02 U	0.005 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.093 ^b	0.36 ^b	0.0005 J
Methyl acetate	mg/L	NC	0.61	36.5	0.004 U	0.004 U	0.005 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.011	0.028	0.005 U
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.002 U	0.002 U	0.005 U
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.02 U	R	0.005 U
Methylene chloride	mg/L	0.004	0.005	0.005	0.002 U	0.002 U	0.003 U
Styrene	mg/L	NC	0.1	0.1	0.002 U	0.002 U	0.005 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.002 U	0.002 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.002 U	0.002 U	0.001 U
Toluene	mg/L	0.75	1	1	3.4 ^{abc}	4 ^{abc}	0.67
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.002 U	0.002 U	0.005 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.002 U	0.002 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.002 U	0.002 U	0.003 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location:</i>		URS	URS	Drinking	MW-6	MW-6	MW-7	MW-7
<i>Sample ID:</i>		Screening	Groundwater	Water	GW-017338-081809-ACH-07	GW-017338-030210-ACH-012	GW-17338-080508-12	GW-017338-022509-015
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	8/18/2009	3/2/2010	8/5/2008	2/25/2009
	<i>Units</i>	a	b	c				
<i>Volatile Organic Compounds</i>								
Trichloroethene	mg/L	0.002	0.005	0.005	0.002 U	0.002 U	0.001 U	0.005 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.002 U	0.002 U	0.005 U	0.005 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.002 U	0.002 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.002 U	0.002 U	0.005 U	0.005 U
Xylenes (total)	mg/L	1.2	10	10	2.2 ^a	1.7 ^a	0.15	0.015 U
<i>Semi-volatile Organic Compounds</i>								
Acenaphthene	mg/L	NC	0.037	2.19	0.01 U	0.0038 U	0.01 U	0.01 U
Acenaphthylene	mg/L	NC	NC	1.1	0.01 U	0.0041 U	0.01 U	0.01 U
Acetophenone	mg/L	NC	0.000004	NC	0.01 U	0.011^b	0.01 U	0.01 U
Anthracene	mg/L	NC	0.18	11	0.01 U	0.0036 U	0.01 U	0.01 U
Atrazine	mg/L	0.0003	0.003	0.003	0.01 U	0.0049 U	0.01 U	0.01 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.01 U	0.0054 J	0.01 UJ	0.01 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.001 U	0.00002 U	0.001 U	0.001 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.001 U	0.000031 U	0.001 U	0.001 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.001 U	0.000041 U	0.001 U	0.001 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.01 U	0.0028 U	0.01 U	0.01 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.001 U	0.00031 U	0.001 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.01 U	0.0055 U	0.01 U	0.01 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.01 U	0.0035 U	0.01 U	0.01 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.001 U	0.00042 U	0.001 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.01 U	0.0024 U	0.01 U	0.01 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.004 U	0.01 U	0.01 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.01 U	0.0028 U	0.01 U	0.01 U
Caprolactam	mg/L	NC	1.8	18.3	0.01 U	0.00051 U	0.01 U	0.01 U
Carbazole	mg/L	NC	0.003	0.0336	0.01 U	0.0031 U	0.01 U	0.01 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.01 U	0.002 U	0.01 U	0.01 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.01 U	0.0021 U	0.01 U	0.01 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.01 U	0.0038 U	0.01 U	0.01 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.01 U	0.0027 U	0.01 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.004 U	0.01 U	0.01 U
Chrysene	mg/L	NC	0.009	0.0921	0.01 U	0.0038 U	0.01 U	0.01 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.001 U	0.00016 U	0.001 U	0.001 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.01 U	0.0037 U	0.01 U	0.01 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.02 U	0.0071 U	0.021 U	0.02 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.01 U	0.0028 U	0.01 U	0.01 U
Diethyl phthalate	mg/L	NC	5	29.2	0.01 U	0.0039 U	0.01 U	0.01 U
Dimethyl phthalate	mg/L	NC	37	365	0.01 U	0.0033 U	0.01 U	0.01 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.01 U	0.0026 U	0.01 U	0.01 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.01 U	0.0028 U	0.01 U	0.01 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.03 U	0.0053 U	0.032 U	0.031 UJ
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.03 UJ	0.0049 U	0.032 U	0.031 UJ
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.002 U	0.00044 U	0.0021 U	0.002 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-6	MW-6	MW-7	MW-7
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-081809-ACH-07	GW-017338-030210-ACH-012	GW-17338-080508-12	GW-017338-022509-015
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	8/18/2009	3/2/2010	8/5/2008	2/25/2009
<i>Units</i>	a	b	c				
<i>Semi-volatile Organic Compounds</i>							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.002 U	0.0006 U	0.002 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.01 U	0.0019 U	0.01 U
Fluoranthene	mg/L	NC	0.15	1.46	0.01 U	0.0027 U	0.01 U
Fluorene	mg/L	NC	0.024	1.46	0.01 U	0.0033 U	0.01 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.0001 U	0.001 U	0.001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.002 U	0.00096 U	0.002 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.01 U	0.0047 U	0.01 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.001 U	0.00051 U	0.001 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.001 U	0.00012 U	0.001 U
Isophorone	mg/L	0.071	0.1	0.708	0.01 U	0.0037 U	0.01 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.01 U	0.0032 U	0.01 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.0097 J	0.0017 U	0.01 U
4-Methylphenol	mg/L	NC	0.018	0.183	0.01	0.029 ^b	0.01 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.01 U	0.029 ^{ab}	0.0004 J
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.02 U	0.0058 U	0.02 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.02 U	0.0044 U	0.02 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.02 U	0.0041 U	0.02 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.001 U	0.00042 U	0.001 U
2-Nitrophenol	mg/L	NC	NC	NC	0.01 U	0.0035 U	0.01 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.03 U	0.0024 U	0.032 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.001 U	0.00033 U	0.001 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.01 U	0.0039 U	0.01 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.01 U	0.0033 U	0.01 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.03 U	0.00014 U	0.032 U
Phenanthrene	mg/L	NC	0.12	1.1	0.01 U	0.0036 U	0.01 U
Phenol	mg/L	NC	4	11	0.01 U	0.00091 U	0.01 U
Pyrene	mg/L	NC	0.018	1.1	0.01 U	0.0044 U	0.01 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.01 U	0.0026 U	0.01 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.01 U	0.0032 U	0.01 U
<i>Metals</i>							
Aluminum	mg/L	NC	0.2	36.5	9.25 ^b	1.29 ^b	3.71 ^b
Antimony	mg/L	NC	0.006	0.006	0.01 U	0.01 U	0.0084 U
Arsenic	mg/L	0.0005	0.05	0.01	0.0215 ^{ac}	0.0132 ^{ac}	0.0113 ^{ac}
Barium	mg/L	0.26	2	2	0.644 ^a	0.615 ^a	0.313 ^a
Beryllium	mg/L	NC	0.004	0.004	0.002 U	0.002 U	0.00067 U
Cadmium	mg/L	NC	0.005	0.005	0.005 U	0.005 U	0.005 U
Calcium	mg/L	NC	NC	NC	62.7	67.2	29.4
Chromium	mg/L	NC	0.1	0.1	0.009 J	0.01 U	0.0049 J
Cobalt	mg/L	NC	0.22	0.73	0.0064 J	0.0031 J	0.0173 J
Copper	mg/L	NC	1.3	1.3	0.0257	0.025 U	0.0076 J
Iron	mg/L	NC	0.3	11	31.4 ^{bc}	28.4 ^{bc}	62.5 ^{bc}
Lead	mg/L	NC	0.015	0.015	0.005 U	0.0031 J	0.0133

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

Sample Location:	URS	URS	Drinking	MW-6	MW-6	MW-7	MW-7	
Sample ID:	Screening	Groundwater	Water	GW-017338-081809-ACH-07	GW-017338-030210-ACH-012	GW-17338-080508-12	GW-017338-022509-015	
Sample Date:	Criteria	Values	Criteria ¹	8/18/2009	3/2/2010	8/5/2008	2/25/2009	
	Units	a	b	c				
Metals								
Magnesium	mg/L	NC	NC	NC	23.2	25	26.4	28.2
Manganese	mg/L	NC	0.05	0.876	0.758 ^b	0.933 ^{bc}	2.38 ^{bc}	2.21 ^{bc}
Mercury	mg/L	NC	0.002	0.002	0.00028	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	NC	0.1	0.73	0.0069 J	0.04 U	0.065 U	0.0051 J
Potassium	mg/L	NC	NC	NC	14.8	14.7	3.44 J	3.79 J
Selenium	mg/L	NC	0.05	0.05	0.01 U	0.01 U	0.0057 U	0.005 U
Silver	mg/L	NC	0.1	0.183	0.0015 J	0.0034 J	0.0013 J	0.0027 J
Sodium	mg/L	NC	NC	NC	180	204	63.1	58.4
Thallium	mg/L	NC	0.002	0.002	0.01 U	0.01 U	0.0097 U	0.0095 U
Vanadium	mg/L	NC	0.026	0.0365	0.0122 J	0.0024 J	0.0088 J	0.0049 J
Zinc	mg/L	NC	2	11	0.0211 J	0.0114 J	0.0064 J	0.008 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

Sample Location:		URS	URS	Drinking	MW-7	MW-7	MW-7	MW-8
Sample ID:		Screening	Groundwater	Water	GW-017338-081909-ACH-09	GW-017338-081909-ACH-10	GW-017338-030310-ACH-016	GW-017338-012110-ACH-001
Sample Date:		Criteria	Values	Criteria ¹	8/19/2009	8/19/2009	3/3/2010	1/21/2010
	Units	a	b	c		(Duplicate)		
Volatile Organic Compounds								
Acetone	mg/L	NC	0.061	32.9	R	R	R	-
Benzene	mg/L	0.0004	0.005	0.005	0.0022 U	0.0022 U	0.0046 ^a	-
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.001 U	0.001 U	0.001 U	-
Bromoform	mg/L	0.008	0.1	0.08	0.001 U	0.001 U	0.001 U	-
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.001 U	0.001 U	0.001 U	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	R	R	0.01 U	-
Carbon disulfide	mg/L	NC	0.1	3.65	0.001 U	0.001 U	0.001 U	-
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.001 U	-
Chlorobenzene	mg/L	0.011	0.1	0.1	0.87 ^{abc}	0.96 ^{abc}	1.3 ^{abc}	-
Chloroethane	mg/L	NC	0.004	14.6	0.001 U	0.001 U	0.001 U	-
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.001 U	0.001 U	0.001 U	-
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.001 U	0.001 U	0.001 U	-
Cyclohexane	mg/L	NC	NC	62.1	0.001 U	0.001 U	0.001 U	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.001 U	0.001 U	0.001 U	-
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.001 U	0.001 U	0.001 U	-
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.001 U	0.001 U	0.001 U	-
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.00067 J	0.0007 J	0.00088 J	-
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.00081 J ^a	0.00081 J ^a	0.0011 ^a	-
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.0062 ^a	0.0067 ^a	0.0079 ^a	-
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.001 U	0.001 U	0.001 U	-
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.001 U	0.001 U	0.001 U	-
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.001 U	0.001 U	0.001 U	-
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.001 U	0.001 U	0.001 U	-
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.001 U	0.001 U	0.001 U	-
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.001 U	0.001 U	0.001 U	-
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.001 U	-
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.001 U	0.001 U	-
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.001 U	0.001 U	-
Ethylbenzene	mg/L	NC	0.7	0.7	0.016 U	0.013 U	0.0015	-
2-Hexanone	mg/L	NC	0.15	NC	0.01 U	0.01 U	0.01 U	-
Isopropyl benzene	mg/L	NC	0.066	3.65	0.0019 U	0.0019 U	0.0043	-
Methyl acetate	mg/L	NC	0.61	36.5	0.002 U	0.002 U	0.002 U	-
Methyl cyclohexane	mg/L	NC	NC	31.4	0.001 U	0.001 U	0.001 U	-
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.00054 J	0.00058 J	0.00073 J	-
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.01 U	0.01 U	R	-
Methylene chloride	mg/L	0.004	0.005	0.005	0.001 U	0.001 U	0.001 U	-
Styrene	mg/L	NC	0.1	0.1	0.001 U	0.001 U	0.001 U	-
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.001 U	0.001 U	0.001 U	-
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.001 U	0.001 U	0.001 U	-
Toluene	mg/L	0.75	1	1	0.02 U	0.016 U	0.0021	-
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.001 U	0.001 U	0.001 U	-
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.001 U	0.001 U	0.001 U	-
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.001 U	-

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-7	MW-7	MW-7	MW-8
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-081909-ACH-09	GW-017338-081909-ACH-10	GW-017338-030310-ACH-016	GW-017338-012110-ACH-001
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	8/19/2009	8/19/2009	3/3/2010	1/21/2010
<i>Units</i>	a	b	c		(Duplicate)		
<i>Volatile Organic Compounds</i>							
Trichloroethene	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	-
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.001 U	0.001 U	-
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.001 U	0.001 U	-
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.001 U	0.001 U	-
Xylenes (total)	mg/L	1.2	10	10	0.036 U	0.029 U	0.0025 J
<i>Semi-volatile Organic Compounds</i>							
Acenaphthene	mg/L	NC	0.037	2.19	0.011 U	0.011 U	0.0038 U
Acenaphthylene	mg/L	NC	NC	1.1	0.011 U	0.011 U	0.004 U
Acetophenone	mg/L	NC	0.000004	NC	0.011 U	0.011 U	0.0043 U
Anthracene	mg/L	NC	0.18	11	0.011 U	0.011 U	0.0036 U
Atrazine	mg/L	0.0003	0.003	0.003	0.011 U	0.011 U	0.0048 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.011 U	0.011 U	0.0013 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.0011 U	0.0011 U	0.00002 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.0011 U	0.0011 U	0.00003 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.0011 U	0.0011 U	0.00004 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.011 U	0.011 U	0.0027 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.0011 U	0.0011 U	0.0003 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.011 U	0.011 U	0.0054 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.011 U	0.011 U	0.0035 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.0011 U	0.0011 U	0.00041 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.011 U	0.011 U	0.0024 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.011 U	0.011 U	0.0039 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.011 U	0.011 U	0.0028 U
Caprolactam	mg/L	NC	1.8	18.3	0.011 U	0.011 U	0.0005 U
Carbazole	mg/L	NC	0.003	0.0336	0.011 U	0.011 U	0.0031 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.011 U	0.011 U	0.002 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.011 U	0.011 U	0.0021 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.011 U	0.011 U	0.0038 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.011 U	0.011 U	0.0026 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.011 U	0.011 U	0.0039 U
Chrysene	mg/L	NC	0.009	0.0921	0.011 U	0.011 U	0.0038 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.0011 U	0.0011 U	0.00016 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.011 U	0.011 U	0.0036 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.022 U	0.021 U	0.007 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.011 U	0.011 U	0.0028 U
Diethyl phthalate	mg/L	NC	5	29.2	0.011 U	0.011 U	0.0038 U
Dimethyl phthalate	mg/L	NC	37	365	0.011 U	0.011 U	0.0033 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.011 U	0.011 U	0.0025 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.011 U	0.011 U	0.0028 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.033 U	0.032 U	0.0052 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.033 UJ	0.032 UJ	0.0048 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.0022 U	0.0021 U	0.00043 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:	URS	URS	Drinking	MW-7	MW-7	MW-7	MW-8
Sample ID:	Screening	Groundwater	Water	GW-017338-081909-ACH-09	GW-017338-081909-ACH-10	GW-017338-030310-ACH-016	GW-017338-012110-ACH-001
Sample Date:	Criteria	Values	Criteria ¹	8/19/2009	8/19/2009	3/3/2010	1/21/2010
	Units	a	b	c	(Duplicate)		
Semi-volatile Organic Compounds							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.0022 U	0.0021 U	0.00059 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.011 U	0.011 U	0.0019 U
Fluoranthene	mg/L	NC	0.15	1.46	0.011 U	0.011 U	0.0026 U
Fluorene	mg/L	NC	0.024	1.46	0.011 U	0.011 U	0.0033 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.0011 U	0.0011 U	0.00001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.0022 U	0.0021 U	0.00094 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.011 U	0.011 U	0.0046 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.0011 U	0.0011 U	0.0005 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.0011 U	0.0011 U	0.00012 U
Isophorone	mg/L	0.071	0.1	0.708	0.011 U	0.011 U	0.0036 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.011 U	0.011 U	0.0031 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.011 U	0.011 U	0.0017 U
4-Methylphenol	mg/L	NC	0.018	0.183	0.011 U	0.011 U	0.0016 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.011 U	0.011 U	0.0037 U
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.022 U	0.021 U	0.0057 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.022 U	0.021 U	0.0043 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.022 U	0.021 U	0.004 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.0011 U	0.0011 U	0.00041 U
2-Nitrophenol	mg/L	NC	NC	NC	0.011 U	0.011 U	0.0034 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.033 U	0.032 U	0.0023 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.0011 U	0.0011 U	0.00032 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.011 U	0.011 U	0.0039 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.011 U	0.011 U	0.0032 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.033 U	0.032 U	0.00014 U
Phenanthrene	mg/L	NC	0.12	1.1	0.011 U	0.011 U	0.0036 U
Phenol	mg/L	NC	4	11	0.011 U	0.011 U	0.00089 U
Pyrene	mg/L	NC	0.018	1.1	0.011 U	0.011 U	0.0043 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.011 U	0.011 U	0.0025 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.011 U	0.011 U	0.0032 U
Metals							
Aluminum	mg/L	NC	0.2	36.5	7.3 J ^b	2.38 J ^b	1.34 ^b
Antimony	mg/L	NC	0.006	0.006	0.01 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.0162 ^{ac}	0.014 ^{ac}	0.0139 ^{ac}
Barium	mg/L	0.26	2	2	0.424 ^a	0.348 ^a	0.463 ^a
Beryllium	mg/L	NC	0.004	0.004	0.002 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.005 U	0.005 U	0.005 U
Calcium	mg/L	NC	NC	NC	38.6	32.7	36.9
Chromium	mg/L	NC	0.1	0.1	0.009 J	0.01 U	0.01 U
Cobalt	mg/L	NC	0.22	0.73	0.017 J	0.0135 J	0.0131 J
Copper	mg/L	NC	1.3	1.3	0.0341	0.0258	0.025 U
Iron	mg/L	NC	0.3	11	86.2 ^{bc}	72.5 ^{bc}	84.8 ^{bc}
Lead	mg/L	NC	0.015	0.015	0.005 U	0.005 U	0.005 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-7	MW-7	MW-7	MW-8
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-081909-ACH-09	GW-017338-081909-ACH-10	GW-017338-030310-ACH-016	GW-017338-012110-ACH-001
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	8/19/2009	8/19/2009	3/3/2010	1/21/2010
<i>Units</i>	a	b	c		(Duplicate)		
Metals							
Magnesium	mg/L	NC	NC	30.7	26.3	31	-
Manganese	mg/L	NC	0.05	0.876	2.19 ^{bc}	1.9 ^{bc}	2.41 ^{bc}
Mercury	mg/L	NC	0.002	0.002	0.00051	0.00043	0.0002 U
Nickel	mg/L	NC	0.1	0.73	0.0087 J	0.04 U	0.04 U
Potassium	mg/L	NC	NC	NC	4.16 J	3.37 J	4.2 J
Selenium	mg/L	NC	0.05	0.05	0.01 U	0.01 U	0.01 U
Silver	mg/L	NC	0.1	0.183	0.0086 J	0.0011 J	0.0029 J
Sodium	mg/L	NC	NC	NC	58.8	49.7	72
Thallium	mg/L	NC	0.002	0.002	0.01 U	0.01 U	0.01 U
Vanadium	mg/L	NC	0.026	0.0365	0.0176 J	0.0058 J	0.0037 J
Zinc	mg/L	NC	2	11	0.0314	0.03 U	0.03 U

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-8	MW-8	MW-8	MW-8
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-17338-080408-02	GW-17338-112008-01	GW-017338-022409-009	GW-017338-050809-ACH-003
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	8/4/2008	11/20/2008	2/24/2009	5/8/2009
<i>Units</i>	a	b	c				
<i>Volatile Organic Compounds</i>							
Acetone	mg/L	NC	0.061	32.9	R	0.005 U	0.01 UJ
Benzene	mg/L	0.0004	0.005	0.005	0.0012 ^a	0.0039 ^a	0.0029 ^a
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.004 U	0.004 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.005 U	0.005 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.005 U	0.005 U	0.01 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.005 U	0.005 U	0.001 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.002 U	0.002 U	0.001 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.0046 J	0.0033 J	0.0029
Chloroethane	mg/L	NC	0.004	14.6	0.005 U	0.005 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.005 U	0.005 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.005 U	0.005 U	0.001 U
Cyclohexane	mg/L	NC	NC	62.1	0.0009 J	-	0.0031
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.005 U	-	0.001 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.005 U	0.005 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.005 U	-	0.001 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.005 U	-	0.001 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.005 U	-	0.001 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.005 U	-	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.005 U	-	0.001 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.005 U	0.005 U	0.001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.002 U	0.002 U	0.001 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.002 U	0.002 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.005 U	0.005 U	0.001 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.005 U	0.005 U	0.001 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.005 U	0.005 U	0.001 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.005 U	0.005 U	0.001 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.004 U	0.004 U	0.001 U
2-Hexanone	mg/L	NC	0.15	NC	0.005 U	0.005 U	0.01 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.0006 J	-	0.0059
Methyl acetate	mg/L	NC	0.61	36.5	0.005 U	-	0.001 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.0024 J	-	0.011
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.0045 J	-	0.0063
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.005 U	0.005 U	0.01 U
Methylene chloride	mg/L	0.004	0.005	0.005	0.003 U	0.003 U	0.001 U
Styrene	mg/L	NC	0.1	0.1	0.005 U	0.005 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.75	1	1	0.005 U	0.0004 J	0.001 U
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.005 U	-	0.001 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.005 U	0.005 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.003 U	0.003 U	0.001 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	MW-8	MW-8	MW-8	MW-8
<i>Sample ID:</i>		Screening	Groundwater	Water	GW-17338-080408-02	GW-17338-112008-01	GW-017338-022409-009	GW-017338-050809-ACH-003
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	8/4/2008	11/20/2008	2/24/2009	5/8/2009
	<i>Units</i>	a	b	c				
<i>Volatile Organic Compounds</i>								
Trichloroethene	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.005 U	-	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.005 U	-	0.001 U	0.001 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.005 U	0.005 U	0.001 U	0.001 U
Xylenes (total)	mg/L	1.2	10	10	0.005 U	0.005 U	0.0005 J	0.003 U
<i>Semi-volatile Organic Compounds</i>								
Acenaphthene	mg/L	NC	0.037	2.19	0.0003 J	0.0008 J	0.0008 J	0.01 U
Acenaphthylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.01 U	0.01 U
Acetophenone	mg/L	NC	0.000004	NC	0.01 U	0.01 U	0.01 U	0.01 U
Anthracene	mg/L	NC	0.18	11	0.01 U	0.01 U	0.01 U	0.01 U
Atrazine	mg/L	0.0003	0.003	0.003	0.01 U	0.01 U	0.01 U	0.01 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.01 UJ	0.01 UJ	0.01 UJ	0.01 U
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.001 U	0.001 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.001 U	0.001 U	0.001 U	0.001 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.001 U	0.001 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.000921	0.001 U	0.001 U	0.001 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.01 U	0.01 U	0.01 U	0.01 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.01 U	0.01 U	0.01 U	0.01 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.001 U	0.001 U	0.001 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.01 U	0.01 U	0.01 U	0.01 UJ
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.01 U	0.01 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.01 U	0.01 U	0.01 U	0.01 U
Caprolactam	mg/L	NC	1.8	18.3	0.01 U	0.01 U	0.01 U	0.01 U
Carbazole	mg/L	NC	0.003	0.0336	0.01 U	0.01 U	0.01 U	0.01 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.01 U	0.01 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.01 U	0.01 U	0.01 U	0.01 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.01 U	0.01 U	0.01 U	0.01 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.01 U	0.01 U	0.01 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.01 U	0.01 U
Chrysene	mg/L	NC	0.009	0.0921	0.01 U	0.01 U	0.01 U	0.01 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.001 U	0.001 U	0.001 U	0.001 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.01 U	0.0003 J	0.01 U	0.01 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.02 U	0.02 U	0.021 U	0.02 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.01 U	0.01 U	0.01 U	0.01 U
Diethyl phthalate	mg/L	NC	5	29.2	0.01 U	0.01 U	0.01 U	0.01 U
Dimethyl phthalate	mg/L	NC	37	365	0.01 U	0.01 U	0.01 U	0.01 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.01 U	0.01 U	0.01 U	0.01 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.01 U	0.01 U	0.01 U	0.01 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.03 U	0.031 U	0.032 U	0.03 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.03 U	0.031 U	0.032 U	0.03 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.002 U	0.002 U	0.0021 U	0.002 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location: Sample ID: Sample Date:	URS Screening Criteria	URS Groundwater Values	Drinking Water Criteria ¹	MW-8 GW-17338-080408-02 8/4/2008	MW-8 GW-17338-112008-01 11/20/2008	MW-8 GW-017338-022409-009 2/24/2009	MW-8 GW-017338-050809-ACH-003 5/8/2009
Units	a	b	c				
Semi-volatile Organic Compounds							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.002 U	0.002 U	0.002 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.01 U	0.01 U	0.01 U
Fluoranthene	mg/L	NC	0.15	1.46	0.01 U	0.01 U	0.0003 J
Fluorene	mg/L	NC	0.024	1.46	0.01 U	0.0004 J	0.01 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.001 U	0.001 U	0.001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.002 U	0.002 U	0.0021 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.01 U	0.01 U	0.01 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.001 U	0.001 U	0.001 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.001 U
Isophorone	mg/L	0.071	0.1	0.708	0.01 U	0.01 U	0.01 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.01 U	0.0004 J	0.01 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.01 U	0.01 U	0.01 U
4-Methylphenol	mg/L	NC	0.018	0.183	0.01 U	-	0.01 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.01 U	0.043 ^{ab}	0.032 ^{ab}
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.02 U	0.02 U	0.021 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.02 U	0.02 U	0.021 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.02 U	0.02 U	0.021 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.001 U	0.001 U	0.001 U
2-Nitrophenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.01 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.03 U	0.031 U	0.032 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.001 U	0.001 U	0.001 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.01 U	0.01 U	0.01 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.01 U	0.01 U	0.01 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.03 U	0.031 U	0.032 U
Phenanthrene	mg/L	NC	0.12	1.1	0.01 U	0.01 U	0.01 U
Phenol	mg/L	NC	4	11	0.01 U	0.01 U	0.01 U
Pyrene	mg/L	NC	0.018	1.1	0.01 U	0.01 U	0.01 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.01 U	0.01 U	0.01 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.01 U	0.01 U	0.01 U
Metals							
Aluminum	mg/L	NC	0.2	36.5	0.387 ^b	0.946 ^b	0.477 ^b
Antimony	mg/L	NC	0.006	0.006	0.0084 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.0059 U	0.0042 U	0.0042 U
Barium	mg/L	0.26	2	2	0.41 ^a	0.529 ^a	0.462 ^a
Beryllium	mg/L	NC	0.004	0.004	0.00067 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.00059 J	0.004 U	0.004 U
Calcium	mg/L	NC	NC	NC	53.5	53.8	58
Chromium	mg/L	NC	0.1	0.1	0.018 U	0.01 U	0.01 U
Cobalt	mg/L	NC	0.22	0.73	0.019 J	0.0178 J	0.0195 J
Copper	mg/L	NC	1.3	1.3	0.0033 J	0.025 U	0.025 U
Iron	mg/L	NC	0.3	11	67.8 ^{bc}	72.7 ^{bc}	75.5 ^{bc}
Lead	mg/L	NC	0.015	0.015	0.0137	0.003 U	0.003 U
							0.0034 J

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

Sample Location:	URS	URS	Drinking	MW-8	MW-8	MW-8	MW-8	
Sample ID:	Screening	Groundwater	Water	GW-17338-080408-02	GW-17338-112008-01	GW-017338-022409-009	GW-017338-050809-ACH-003	
Sample Date:	Criteria	Values	Criteria ¹	8/4/2008	11/20/2008	2/24/2009	5/8/2009	
	Units	a	b	c				
Metals								
Magnesium	mg/L	NC	NC	NC	35.3	37.5	37.1	32.9
Manganese	mg/L	NC	0.05	0.876	1.9 ^{bc}	1.87 ^{bc}	1.99 ^{bc}	1.71 ^{bc}
Mercury	mg/L	NC	0.002	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	NC	0.1	0.73	0.065 U	0.04 U	0.04 U	0.04 U
Potassium	mg/L	NC	NC	NC	3.22 J	3.78 J	3.37 J	3.62 J
Selenium	mg/L	NC	0.05	0.05	0.0057 U	0.005 U	0.005 U	0.01 U
Silver	mg/L	NC	0.1	0.183	0.0086 U	0.01 U	0.01 U	0.01 U
Sodium	mg/L	NC	NC	NC	78.5	101	85.4	102
Thallium	mg/L	NC	0.002	0.002	0.0097 U	0.0095 U	0.0095 U	0.01 U
Vanadium	mg/L	NC	0.026	0.0365	0.016 U	0.05 U	0.05 U	0.05 U
Zinc	mg/L	NC	2	11	0.03 U	0.03 U	0.03 U	0.03 U

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- - Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-8	MW-8	MW-8	MW-8
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-050809-ACH-004	GW-017338-081809-ACH-05	GW-017338-111209-ACH-03	GW-017338-111209-ACH-04
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	5/8/2009	8/18/2009	11/12/2009	11/12/2009
<i>Units</i>	a	b	c	(Duplicate)			(Duplicate)
<i>Volatile Organic Compounds</i>							
Acetone	mg/L	NC	0.061	32.9	0.01 UJ	R	R
Benzene	mg/L	0.0004	0.005	0.005	0.0021 ^a	0.0037 ^a	0.012 ^{abc}
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.01 U	R	0.01 UJ
Carbon disulfide	mg/L	NC	0.1	3.65	0.001 U	0.001 U	0.001 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.0017	0.002	0.0028
Chloroethane	mg/L	NC	0.004	14.6	0.001 U	0.001 U	0.001 UJ
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.001 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	NC	NC	62.1	0.0029	0.0021	0.0053
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.001 U	0.001 U	0.001 UJ
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.001 U	0.00043 J	0.00079 J
2-Hexanone	mg/L	NC	0.15	NC	0.01 U	0.01 U	0.01 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.0032	0.0071	0.024
Methyl acetate	mg/L	NC	0.61	36.5	0.002 U	0.002 U	0.002 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.018	0.0072	0.018
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.0053	0.0071	0.0089
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.01 U	0.01 U	0.01 U
Methylene chloride	mg/L	0.004	0.005	0.005	0.001 U	0.001 U	0.001 U
Styrene	mg/L	NC	0.1	0.1	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.75	1	1	0.001 U	0.0003 J	0.00025 J
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.001 U	0.001 U	0.001 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.001 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-8	MW-8	MW-8	MW-8
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-050809-ACH-004	GW-017338-081809-ACH-05	GW-017338-111209-ACH-03	GW-017338-111209-ACH-04
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	5/8/2009	8/18/2009	11/12/2009	11/12/2009
<i>Units</i>	a	b	c	(Duplicate)			(Duplicate)
<i>Volatile Organic Compounds</i>							
Trichloroethene	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	1.2	10	10	0.003 U	0.018	0.017
<i>Semi-volatile Organic Compounds</i>							
Acenaphthene	mg/L	NC	0.037	2.19	0.01 U	0.011 U	0.01 U
Acenaphthylene	mg/L	NC	NC	1.1	0.01 U	0.011 U	0.01 U
Acetophenone	mg/L	NC	0.000004	NC	0.01 U	0.011 U	0.01 U
Anthracene	mg/L	NC	0.18	11	0.01 U	0.011 U	0.01 U
Atrazine	mg/L	0.0003	0.003	0.003	0.01 U	0.011 U	0.01 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.01 U	0.011 U	0.01 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.001 U	0.0011 U	0.001 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.001 U	0.0011 U	0.001 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.001 U	0.0011 U	0.001 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.01 U	0.011 U	0.01 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.001 U	0.0011 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.01 U	0.011 U	0.01 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.01 U	0.011 U	0.01 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.001 U	0.0011 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.01 UJ	0.011 U	0.01 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.011 U	0.01 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.01 U	0.011 U	0.01 U
Caprolactam	mg/L	NC	1.8	18.3	0.01 U	0.011 U	0.01 U
Carbazole	mg/L	NC	0.003	0.0336	0.01 U	0.011 U	0.01 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.01 U	0.011 U	0.01 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.01 U	0.011 U	0.01 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.01 U	0.011 U	0.01 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.01 U	0.011 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.011 U	0.01 U
Chrysene	mg/L	NC	0.009	0.0921	0.01 U	0.011 U	0.01 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.001 U	0.0011 U	0.001 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.01 U	0.011 U	0.01 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.02 U	0.021 U	0.02 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.01 U	0.011 U	0.01 U
Diethyl phthalate	mg/L	NC	5	29.2	0.01 U	0.011 U	0.01 U
Dimethyl phthalate	mg/L	NC	37	365	0.01 U	0.011 U	0.01 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.01 U	0.011 U	0.01 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.01 U	0.011 U	0.01 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.03 U	0.032 U	0.031 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.03 U	0.032 UJ	0.031 UJ
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.002 U	0.0021 U	0.002 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-8	MW-8	MW-8	MW-8
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-050809-ACH-004	GW-017338-081809-ACH-05	GW-017338-111209-ACH-03	GW-017338-111209-ACH-04
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	5/8/2009	8/18/2009	11/12/2009	11/12/2009
<i>Units</i>	a	b	c	(Duplicate)			(Duplicate)
<i>Semi-volatile Organic Compounds</i>							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.002 U	0.0021 U	0.002 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.01 U	0.011 U	0.01 U
Fluoranthene	mg/L	NC	0.15	1.46	0.01 U	0.011 U	0.01 U
Fluorene	mg/L	NC	0.024	1.46	0.01 U	0.011 U	0.01 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.001 U	0.0011 U	0.001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.002 U	0.0021 U	0.002 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.01 U	0.011 U	0.01 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.001 U	0.0011 U	0.001 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.001 U	0.0011 U	0.001 U
Isophorone	mg/L	0.071	0.1	0.708	0.01 U	0.011 U	0.01 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.01 U	0.011 U	0.01 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.01 U	0.011 U	0.01 U
4-Methylphenol	mg/L	NC	0.018	0.183	0.01 U	0.011 U	0.01 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.018 ^a	0.083 ^{ab}	0.22 ^{ab}
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.02 U	0.021 U	0.02 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.02 U	0.021 U	0.02 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.02 U	0.021 U	0.02 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.001 U	0.0011 U	0.001 U
2-Nitrophenol	mg/L	NC	NC	NC	0.01 U	0.011 U	0.01 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.03 U	0.032 U	0.031 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.001 U	0.0011 U	0.001 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.01 U	0.011 U	0.01 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.01 U	0.011 U	0.01 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.03 U	0.032 U	0.031 U
Phenanthrene	mg/L	NC	0.12	1.1	0.01 U	0.011 U	0.01 U
Phenol	mg/L	NC	4	11	0.01 U	0.011 U	0.01 UJ
Pyrene	mg/L	NC	0.018	1.1	0.01 U	0.011 U	0.01 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.01 U	0.011 U	0.01 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.01 U	0.011 U	0.01 U
<i>Metals</i>							
Aluminum	mg/L	NC	0.2	36.5	1.05 ^b	6.53 ^b	2.53 J ^b
Antimony	mg/L	NC	0.006	0.006	0.01 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.005 U	0.005 U	0.0039 J ^a
Barium	mg/L	0.26	2	2	0.465 ^a	0.614 ^a	0.613 ^a
Beryllium	mg/L	NC	0.004	0.004	0.002 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.005 U	0.005 U	0.005 U
Calcium	mg/L	NC	NC	NC	46.6	61.3	60.1
Chromium	mg/L	NC	0.1	0.1	0.01 U	0.0058 J	0.01 U
Cobalt	mg/L	NC	0.22	0.73	0.0161 J	0.0215 J	0.0214 J
Copper	mg/L	NC	1.3	1.3	0.025 U	0.0313	0.025 U
Iron	mg/L	NC	0.3	11	63.8 ^{bc}	87.5 ^{bc}	85.1 ^{bc}
Lead	mg/L	NC	0.015	0.015	0.0034 J	0.005 U	0.005 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-8	MW-8	MW-8	MW-8
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-050809-ACH-004	GW-017338-081809-ACH-05	GW-017338-111209-ACH-03	GW-017338-111209-ACH-04
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	5/8/2009	8/18/2009	11/12/2009	11/12/2009
<i>Units</i>	a	b	c	(Duplicate)			(Duplicate)
Metals							
Magnesium	mg/L	NC	NC	31.3	42	40.8	40.8
Manganese	mg/L	NC	0.05	0.876	1.62 ^{bc}	2.07 ^{bc}	1.98 ^{bc}
Mercury	mg/L	NC	0.002	0.002	0.0002 U	0.00033	0.0002 U
Nickel	mg/L	NC	0.1	0.73	0.04 U	0.0055 J	0.04 U
Potassium	mg/L	NC	NC	NC	3.39 J	3.76 J	4.02 J
Selenium	mg/L	NC	0.05	0.05	0.01 U	0.01 U	0.01 U
Silver	mg/L	NC	0.1	0.183	0.01 U	0.01 U	0.01 U
Sodium	mg/L	NC	NC	NC	98.5	101	109
Thallium	mg/L	NC	0.002	0.002	0.01 U	0.01 U	0.01 U
Vanadium	mg/L	NC	0.026	0.0365	0.05 U	0.0085 J	0.003 J
Zinc	mg/L	NC	2	11	0.03 U	0.0089 J	0.03 U

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- - Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

Sample Location:		URS	URS	Drinking	MW-8	MW-8	MW-9	MW-9
Sample ID:		Screening	Groundwater	Water	GW-017338-030110-ACH-003	GW-017338-051810-ACH-02	GW-17338-080408-03	GW-17338-112008-03
Sample Date:		Criteria	Values	Criteria ¹	3/1/2010	5/18/2010	8/4/2008	11/20/2008
	Units	a	b	c				
Volatile Organic Compounds								
Acetone	mg/L	NC	0.061	32.9	R	0.0025 U	R	0.005 U
Benzene	mg/L	0.0004	0.005	0.005	0.0022 ^a	0.0045 ^a	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.001 U	0.000093 U	0.001 U	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.001 U	0.0001 U	0.004 U	0.004 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.001 U	0.00031 U	0.005 U	0.005 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.01 U	0.00082 U	0.005 U	0.005 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.001 U	0.00015 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.001 U	0.00019 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.0017	0.0029	0.005 U	0.005 U
Chloroethane	mg/L	NC	0.004	14.6	0.001 U	0.00045 U	0.005 U	0.005 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.001 U	0.00015 U	0.005 U	0.005 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.001 U	0.00021 U	0.005 U	0.005 U
Cyclohexane	mg/L	NC	NC	62.1	0.0023	0.0028	0.005 U	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.001 U	0.00015 U	0.005 U	-
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.001 U	0.00011 U	0.005 U	0.005 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.001 U	0.00009 U	0.005 U	-
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.001 U	0.00027 J	0.005 U	-
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.001 U	0.00022 U	0.005 U	-
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.001 U	0.00028 J	0.005 U	-
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.001 U	0.00029 U	0.005 U	-
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.001 U	0.0001 U	0.005 U	0.005 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.001 U	0.00024 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.001 U	0.00014 U	0.002 U	0.002 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.001 U	0.0002 U	0.005 U	0.005 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.001 U	0.00014 U	0.005 U	0.005 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.001 U	0.00009 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.00011 U	0.005 U	0.005 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.00012 U	0.005 U	0.005 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.00031 J	0.00033 J	0.004 U	0.004 U
2-Hexanone	mg/L	NC	0.15	NC	0.01 U	0.00055 U	0.005 U	0.005 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.0033	0.006	0.005 U	-
Methyl acetate	mg/L	NC	0.61	36.5	0.002 U	0.00033 U	0.005 U	-
Methyl cyclohexane	mg/L	NC	NC	31.4	0.01	0.011	0.005 U	-
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.0031	0.0046	0.0002 J	-
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	R	0.00068 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.004	0.005	0.005	0.001 U	0.00019 U	0.003 U	0.003 U
Styrene	mg/L	NC	0.1	0.1	0.001 U	0.00013 U	0.005 U	0.005 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.001 U	0.00009 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.001 U	0.0002 U	0.001 U	0.001 U
Toluene	mg/L	0.75	1	1	0.00058 J	0.00009 U	0.005 U	0.005 U
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.001 U	0.00044 U	0.005 U	-
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.001 U	0.00025 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.001 U	0.0001 U	0.003 U	0.003 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	MW-8	MW-8	MW-9	MW-9
<i>Sample ID:</i>		Screening	Groundwater	Water	GW-017338-030110-ACH-003	GW-017338-051810-ACH-02	GW-17338-080408-03	GW-17338-112008-03
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	3/1/2010	5/18/2010	8/4/2008	11/20/2008
	<i>Units</i>	a	b	c				
<i>Volatile Organic Compounds</i>								
Trichloroethene	mg/L	0.002	0.005	0.005	0.001 U	0.00018 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.001 U	0.00016 U	0.005 U	-
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.001 U	0.00028 U	0.005 U	-
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.001 U	0.00013 U	0.005 U	0.005 U
Xylenes (total)	mg/L	1.2	10	10	0.00082 J	0.0012 J	0.005 U	0.005 U
<i>Semi-volatile Organic Compounds</i>								
Acenaphthene	mg/L	NC	0.037	2.19	0.0038 U	0.0038 U	0.01 U	0.01 U
Acenaphthylene	mg/L	NC	NC	1.1	0.0041 U	0.0041 U	0.01 U	0.01 U
Acetophenone	mg/L	NC	0.000004	NC	0.0044 U	0.0043 U	0.01 U	0.01 U
Anthracene	mg/L	NC	0.18	11	0.0036 U	0.0036 U	0.01 U	0.01 U
Atrazine	mg/L	0.0003	0.003	0.003	0.0049 U	0.0048 U	0.01 U	0.01 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.0014 UJ	0.0014 UJ	0.01 UJ	0.01 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.00002 U	0.00002 U	0.001 U	0.001 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.000031 U	0.00003 U	0.001 U	0.001 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.000041 U	0.00004 U	0.001 U	0.001 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.0028 U	0.0027 U	0.01 U	0.01 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.00031 U	0.0003 U	0.001 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.0055 U	0.0055 U	0.01 U	0.01 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.0035 U	0.0035 U	0.01 U	0.01 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.00042 U	0.00041 U	0.001 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.0024 U	0.0024 U	0.01 U	0.01 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.004 U	0.004 U	0.01 U	0.01 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.0028 U	0.0028 U	0.01 U	0.01 U
Caprolactam	mg/L	NC	1.8	18.3	0.00051 U	R	0.01 U	0.01 U
Carbazole	mg/L	NC	0.003	0.0336	0.0031 U	0.0031 U	0.01 U	0.01 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.002 U	-	0.01 U	0.01 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.0021 U	0.0021 UJ	0.01 U	0.01 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.0038 U	0.0038 U	0.01 U	0.01 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.0027 U	-	0.01 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.004 U	0.004 U	0.01 U	0.01 U
Chrysene	mg/L	NC	0.009	0.0921	0.0038 U	0.0038 U	0.01 U	0.01 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.00016 U	0.00016 U	0.001 U	0.001 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.0037 U	0.0036 U	0.01 U	0.01 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.0071 U	0.007 U	0.02 U	0.02 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.0028 U	-	0.01 U	0.01 U
Diethyl phthalate	mg/L	NC	5	29.2	0.0039 U	0.0039 U	0.01 U	0.01 U
Dimethyl phthalate	mg/L	NC	37	365	0.0033 U	0.0033 U	0.01 U	0.01 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.0026 U	-	0.01 U	0.01 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.0028 U	0.0028 U	0.01 U	0.01 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.0053 U	-	0.03 U	0.03 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.0049 U	-	0.03 U	0.03 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.00044 U	0.00043 U	0.002 U	0.002 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location: Sample ID: Sample Date:	URS Screening Criteria	URS Groundwater Values	Drinking Water Criteria ¹	MW-8 GW-017338-030110-ACH-003 3/1/2010	MW-8 GW-017338-051810-ACH-02 5/18/2010	MW-9 GW-17338-080408-03 8/4/2008	MW-9 GW-17338-112008-03 11/20/2008
Units	a	b	c				
Semi-volatile Organic Compounds							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.006 U	0.006 U	0.002 U	0.002 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	0.0019 U	0.0019 U	0.01 U	0.01 U
Fluoranthene	mg/L	NC	0.15	0.0027 U	0.0027 U	0.01 U	0.01 U
Fluorene	mg/L	NC	0.024	0.0033 U	0.0033 U	0.01 U	0.01 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.00001 U	0.00001 U	0.001 U	0.001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00096 U	0.00095 UJ	0.002 U	0.002 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.0047 U	0.0046 U	0.01 U	0.01 U
Hexachloroethane	mg/L	NC	0.001	0.00051 U	0.00051 U	0.001 U	0.001 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921 U	0.00012 U	0.001 U	0.001 U
Isophorone	mg/L	0.071	0.1	0.0037 U	0.0036 U	0.01 U	0.01 U
2-Methylnaphthalene	mg/L	NC	0.012	0.0032 U	0.0031 U	0.01 U	0.01 U
2-Methylphenol	mg/L	NC	0.18	0.0017 U	-	0.01 U	0.01 U
4-Methylphenol	mg/L	NC	0.018	0.0016 U	-	0.01 U	-
Naphthalene	mg/L	0.0007	0.02	0.1 J ^{ab}	0.11 ^{ab}	0.01 U	0.01 U
2-Nitroaniline	mg/L	NC	0.0002	0.0058 U	0.0058 U	0.02 U	0.02 U
3-Nitroaniline	mg/L	NC	NC	0.0044 U	0.0044 UJ	0.02 U	0.02 U
4-Nitroaniline	mg/L	NC	NC	0.0041 U	0.004 U	0.02 U	0.02 U
Nitrobenzene	mg/L	NC	0.0004	0.00042 U	0.00041 U	0.001 U	0.001 U
2-Nitrophenol	mg/L	NC	NC	0.0035 U	-	0.01 U	0.01 U
4-Nitrophenol	mg/L	NC	0.06	0.0024 U	-	0.03 U	0.03 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096 U	0.00032 U	0.001 U	0.001 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.0039 U	0.0039 U	0.01 U	0.01 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0033 U	0.0032 U	0.01 U	0.01 U
Pentachlorophenol	mg/L	0.0006	0.001	0.00014 U	-	0.03 U	0.03 U
Phenanthrene	mg/L	NC	0.12	0.0036 U	0.0036 U	0.01 U	0.01 U
Phenol	mg/L	NC	4	0.00091 U	-	0.01 U	0.01 U
Pyrene	mg/L	NC	0.018	0.0044 U	0.0043 U	0.01 U	0.01 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	0.0026 U	-	0.01 U	0.01 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.0032 U	-	0.01 U	0.01 U
Metals							
Aluminum	mg/L	NC	0.2	1.05 ^b	5.19 J ^b	1 ^b	1.46 ^b
Antimony	mg/L	NC	0.006	0.01 U	0.0046 U	0.0084 U	0.0067 J ^{bc}
Arsenic	mg/L	0.0005	0.05	0.005 U	0.0038 U	0.0059 U	0.0042 U
Barium	mg/L	0.26	2	0.427 ^a	0.474 ^a	0.284 ^a	0.287 ^a
Beryllium	mg/L	NC	0.004	0.002 U	0.00094 U	0.00013 J	0.002 U
Cadmium	mg/L	NC	0.005	0.005 U	0.00092 U	0.005 U	0.004 U
Calcium	mg/L	NC	NC	49.4	58.9	52.1	58.5
Chromium	mg/L	NC	0.1	0.01 U	0.0032 J	0.0034 J	0.0033 J
Cobalt	mg/L	NC	0.22	0.0181 J	0.0203 J	0.1 U	0.05 U
Copper	mg/L	NC	1.3	0.025 U	0.0036 U	0.021 U	0.025 U
Iron	mg/L	NC	0.3	62 ^{bc}	74.5 ^{bc}	3.94 ^b	5.03 ^b
Lead	mg/L	NC	0.015	0.005 U	0.007	0.0024 U	0.003 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	MW-8	MW-8	MW-9	MW-9
<i>Sample ID:</i>		Screening	Groundwater	Water	GW-017338-030110-ACH-003	GW-017338-051810-ACH-02	GW-17338-080408-03	GW-17338-112008-03
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	3/1/2010	5/18/2010	8/4/2008	11/20/2008
	<i>Units</i>	a	b	c				
Metals								
Magnesium	mg/L	NC	NC	NC	30.6	36.2	26	28.2
Manganese	mg/L	NC	0.05	0.876	1.69^{bc}	1.99^{bc}	0.682^b	0.627^b
Mercury	mg/L	NC	0.002	0.002	0.0002 U	0.00018 U	0.00028	0.00029
Nickel	mg/L	NC	0.1	0.73	0.04 U	0.005 J	0.065 U	0.0046 J
Potassium	mg/L	NC	NC	NC	3.23 J	3.6 J	8.58	9.19
Selenium	mg/L	NC	0.05	0.05	0.01 U	0.0048 U	0.0057 U	0.005 U
Silver	mg/L	NC	0.1	0.183	0.0016 J	0.00097 U	0.0086 U	0.01 U
Sodium	mg/L	NC	NC	NC	86.7	93.9	117	153
Thallium	mg/L	NC	0.002	0.002	0.01 U	0.0046 U	0.0097 U	0.0095 U
Vanadium	mg/L	NC	0.026	0.0365	0.05 U	0.0058 J	0.0017 J	0.05 U
Zinc	mg/L	NC	2	11	0.03 U	0.0105 J	0.0082 J	0.03 U

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- - Not analyzed.

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.

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location:</i>	URS	URS	Drinking	MW-9	MW-9	MW-9	MW-9
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-17338-112008-04	GW-017338-022309-001	GW-017338-050809-ACH-001	GW-017338-081709-ACH-01
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	11/20/2008	2/23/2009	5/8/2009	8/17/2009
	Units	a	b	c	(Duplicate)		
<i>Volatile Organic Compounds</i>							
Acetone	mg/L	NC	0.061	32.9	0.005 U	0.01 U	0.01 UJ
Benzene	mg/L	0.0004	0.005	0.005	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.004 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.005 U	0.001 U	0.001 UJ
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.005 U	0.01 U	R
Carbon disulfide	mg/L	NC	0.1	3.65	0.005 U	0.001 U	0.001 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.002 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.005 U	0.001 U	0.001 U
Chloroethane	mg/L	NC	0.004	14.6	0.005 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.005 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.005 U	0.001 U	0.001 U
Cyclohexane	mg/L	NC	NC	62.1	-	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	-	0.001 U	0.001 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.005 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	-	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	-	0.0002 J	0.001 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	-	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	-	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	-	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.005 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.002 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.002 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.005 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.005 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.005 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.005 U	0.001 U	0.001 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.004 U	0.001 U	0.001 U
2-Hexanone	mg/L	NC	0.15	NC	0.005 U	0.01 U	0.01 U
Isopropyl benzene	mg/L	NC	0.066	3.65	-	0.001 U	0.001 U
Methyl acetate	mg/L	NC	0.61	36.5	-	0.001 U	0.002 U
Methyl cyclohexane	mg/L	NC	NC	31.4	-	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	-	0.001 U	0.001 U
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.005 U	0.01 U	0.01 U
Methylene chloride	mg/L	0.004	0.005	0.005	0.003 U	0.001 U	0.001 U
Styrene	mg/L	NC	0.1	0.1	0.005 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.001 U	0.001 U	0.00032 J
Toluene	mg/L	0.75	1	1	0.005 U	0.0005 J	0.001 U
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	-	0.001 U	0.001 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.005 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.003 U	0.001 U	0.001 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location:</i>	URS	URS	Drinking	MW-9	MW-9	MW-9	MW-9
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-17338-112008-04	GW-017338-022309-001	GW-017338-050809-ACH-001	GW-017338-081709-ACH-01
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	11/20/2008	2/23/2009	5/8/2009	8/17/2009
<i>Units</i>	a	b	c	(Duplicate)			
<i>Volatile Organic Compounds</i>							
Trichloroethene	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	-	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	-	0.001 U	0.001 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.005 U	0.001 U	0.001 U
Xylenes (total)	mg/L	1.2	10	10	0.005 U	0.003 U	0.003 U
<i>Semi-volatile Organic Compounds</i>							
Acenaphthene	mg/L	NC	0.037	2.19	0.01 U	0.01 U	0.01 U
Acenaphthylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.01 U
Acetophenone	mg/L	NC	0.000004	NC	0.01 U	0.01 U	0.01 U
Anthracene	mg/L	NC	0.18	11	0.01 U	0.01 U	0.01 U
Atrazine	mg/L	0.0003	0.003	0.003	0.01 U	0.01 U	0.01 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.01 UJ	0.01 UJ	0.01 U
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.001 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.001 U	0.001 U	0.001 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.001 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.000921	0.001 U	0.001 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.01 U	0.01 U	0.01 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.01 U	0.01 U	0.01 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.001 U	0.001 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.01 U	0.01 U	0.01 UJ
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.01 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.01 U	0.01 U	0.01 U
Caprolactam	mg/L	NC	1.8	18.3	0.0003 J	0.01 U	0.01 U
Carbazole	mg/L	NC	0.003	0.0336	0.01 U	0.01 U	0.01 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.01 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.01 U	0.01 U	0.01 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.01 U	0.01 U	0.01 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.01 U	0.01 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.01 U
Chrysene	mg/L	NC	0.009	0.0921	0.01 U	0.01 U	0.01 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.001 U	0.001 U	0.001 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.01 U	0.01 U	0.01 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.02 U	0.02 U	0.02 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.01 U	0.01 U	0.01 U
Diethyl phthalate	mg/L	NC	5	29.2	0.01 U	0.01 U	0.01 U
Dimethyl phthalate	mg/L	NC	37	365	0.01 U	0.01 U	0.01 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.01 U	0.01 U	0.01 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.01 U	0.01 U	0.01 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.03 U	0.03 U	0.03 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.03 U	0.03 U	0.031 UJ
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.002 U	0.002 U	0.002 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	MW-9	MW-9	MW-9	MW-9
<i>Sample ID:</i>		Screening	Groundwater	Water	GW-17338-112008-04	GW-017338-022309-001	GW-017338-050809-ACH-001	GW-017338-081709-ACH-01
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	11/20/2008	2/23/2009	5/8/2009	8/17/2009
	<i>Units</i>	a	b	c	(Duplicate)			
<i>Semi-volatile Organic Compounds</i>								
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.002 U	0.002 U	0.002 U	0.002 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.01 U	0.01 U	0.01 U	0.01 U
Fluoranthene	mg/L	NC	0.15	1.46	0.01 U	0.01 U	0.01 U	0.01 U
Fluorene	mg/L	NC	0.024	1.46	0.01 U	0.01 U	0.01 U	0.01 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.001 U	0.001 U	0.001 U	0.001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.002 U	0.002 U	0.002 U	0.002 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.01 U	0.01 U	0.01 U	0.01 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.001 U	0.001 U	0.001 U	0.001 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.001 U	0.001 U
Isophorone	mg/L	0.071	0.1	0.708	0.01 U	0.01 U	0.01 U	0.01 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.01 U	0.01 U	0.01 U	0.01 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.01 U	0.01 U	0.01 U	0.01 U
4-Methylphenol	mg/L	NC	0.018	0.183	-	0.01 U	0.01 U	0.01 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.01 U	0.01 U	0.01 U	0.01 U
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.02 U	0.02 U	0.02 U	0.02 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.02 U	0.02 U	0.02 U	0.02 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.02 U	0.02 U	0.02 U	0.02 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.001 U	0.001 U	0.001 U	0.001 U
2-Nitrophenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.01 U	0.01 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.03 U	0.03 U	0.03 U	0.031 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.001 U	0.001 U	0.001 U	0.001 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.01 U	0.01 U	0.01 U	0.01 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.01 U	0.01 U	0.01 U	0.01 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.03 U	0.03 U	0.03 U	0.031 U
Phenanthrene	mg/L	NC	0.12	1.1	0.01 U	0.01 U	0.01 U	0.01 U
Phenol	mg/L	NC	4	11	0.01 U	0.01 U	0.01 U	0.01 U
Pyrene	mg/L	NC	0.018	1.1	0.01 U	0.01 U	0.01 U	0.01 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.01 U	0.01 U	0.01 U	0.01 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.01 U	0.01 U	0.01 U	0.01 U
<i>Metals</i>								
Aluminum	mg/L	NC	0.2	36.5	1.47 ^b	3.67 ^b	6.22 ^b	1.39 ^b
Antimony	mg/L	NC	0.006	0.006	0.01 U	0.01 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.0042 U	0.0042 U	0.005 U	0.005 U
Barium	mg/L	0.26	2	2	0.287 ^a	0.275 ^a	0.278 ^a	0.22
Beryllium	mg/L	NC	0.004	0.004	0.002 U	0.002 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.004 U	0.004 U	0.005 U	0.005 U
Calcium	mg/L	NC	NC	NC	58.3	61.2	51.4	55.1
Chromium	mg/L	NC	0.1	0.1	0.0036 J	0.0069 J	0.0106	0.01 U
Cobalt	mg/L	NC	0.22	0.73	0.05 U	0.0039 J	0.0048 J	0.05 U
Copper	mg/L	NC	1.3	1.3	0.025 U	0.0256	0.0266	0.025 U
Iron	mg/L	NC	0.3	11	5.57 ^b	14.3 ^{bc}	22.9 ^{bc}	4.22 ^b
Lead	mg/L	NC	0.015	0.015	0.003 U	0.003 U	0.0045 J	0.005 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location:</i>		URS	URS	Drinking	MW-9	MW-9	MW-9	MW-9
<i>Sample ID:</i>		Screening	Groundwater	Water	GW-17338-112008-04	GW-017338-022309-001	GW-017338-050809-ACH-001	GW-017338-081709-ACH-01
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	11/20/2008	2/23/2009	5/8/2009	8/17/2009
	<i>Units</i>	a	b	c	(Duplicate)			
Metals								
Magnesium	mg/L	NC	NC	NC	28.2	30.1	25.6	27.5
Manganese	mg/L	NC	0.05	0.876	0.619^b	0.607^b	0.531^b	0.536^b
Mercury	mg/L	NC	0.002	0.002	0.00028	0.00038	0.0004	0.00044
Nickel	mg/L	NC	0.1	0.73	0.0043 J	0.0062 J	0.0069 J	0.04 U
Potassium	mg/L	NC	NC	NC	9.15	9.27	8.57	8.4
Selenium	mg/L	NC	0.05	0.05	0.005 U	0.005 U	0.01 U	0.01 U
Silver	mg/L	NC	0.1	0.183	0.01 U	0.01 U	0.0017 J	0.01 U
Sodium	mg/L	NC	NC	NC	152	140	133	145
Thallium	mg/L	NC	0.002	0.002	0.0095 U	0.0095 U	0.01 U	0.01 U
Vanadium	mg/L	NC	0.026	0.0365	0.05 U	0.05 U	0.05 U	0.05 U
Zinc	mg/L	NC	2	11	0.03 U	0.0167 J	0.0191 J	0.008 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-9	MW-9	MW-9	MW-9
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-111209-ACH-02	GW-017338-030110-ACH-001	GW-017338-051810-ACH-03	GW-017338-051810-ACH-04
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	11/12/2009	3/1/2010	5/18/2010	5/18/2010
<i>Units</i>	a	b	c				(Duplicate)
<i>Volatile Organic Compounds</i>							
Acetone	mg/L	NC	0.061	32.9	R	R	0.0025 U
Benzene	mg/L	0.0004	0.005	0.005	0.001 U	0.001 U	0.00013 U
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.001 U	0.001 U	0.000093 U
Bromoform	mg/L	0.008	0.1	0.08	0.001 U	0.001 U	0.0001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.001 U	0.001 U	0.00031 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.01 UJ	0.01 U	0.00082 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.001 U	0.001 U	0.00015 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.00019 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.001 U	0.001 U	0.00016 U
Chloroethane	mg/L	NC	0.004	14.6	0.001 UJ	0.001 U	0.00045 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.001 U	0.001 U	0.00015 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.001 U	0.001 U	0.00021 U
Cyclohexane	mg/L	NC	NC	62.1	0.001 U	0.001 U	0.00013 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.001 UJ	0.001 U	0.00015 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.001 U	0.001 U	0.00011 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.001 U	0.001 U	0.00009 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.001 U	0.001 U	0.00016 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.001 U	0.001 U	0.00022 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.001 U	0.001 U	0.00015 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.001 U	0.001 U	0.00029 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.001 U	0.001 U	0.0001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.001 U	0.001 U	0.00024 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.001 U	0.001 U	0.00014 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.001 U	0.001 U	0.0002 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.001 U	0.001 U	0.00014 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.00009 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.001 U	0.00011 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.001 U	0.00012 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.001 U	0.001 U	0.00025 U
2-Hexanone	mg/L	NC	0.15	NC	0.01 U	0.01 U	0.00055 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.001 U	0.001 U	0.00021 U
Methyl acetate	mg/L	NC	0.61	36.5	0.002 U	0.002 U	0.00033 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.001 U	0.001 U	0.00009 U
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.00018 J	0.001 U	0.00044 J
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.01 U	R	0.00068 U
Methylene chloride	mg/L	0.004	0.005	0.005	0.001 U	0.001 U	0.00019 U
Styrene	mg/L	NC	0.1	0.1	0.001 U	0.001 U	0.00013 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.001 U	0.001 U	0.00009 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.00053 J	0.00041 J	0.00051 J
Toluene	mg/L	0.75	1	1	0.001 U	0.001 U	0.00009 U
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.001 U	0.001 U	0.00044 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.001 U	0.001 U	0.00025 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.0001 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-9	MW-9	MW-9	MW-9
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-111209-ACH-02	GW-017338-030110-ACH-001	GW-017338-051810-ACH-03	GW-017338-051810-ACH-04
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	11/12/2009	3/1/2010	5/18/2010	5/18/2010
<i>Units</i>	a	b	c				(Duplicate)
<i>Volatile Organic Compounds</i>							
Trichloroethene	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.00018 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.001 U	0.001 U	0.00016 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.001 U	0.001 U	0.00028 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.001 U	0.001 U	0.00013 U
Xylenes (total)	mg/L	1.2	10	10	0.003 U	0.003 U	0.00043 U
<i>Semi-volatile Organic Compounds</i>							
Acenaphthene	mg/L	NC	0.037	2.19	0.0056 U	0.0038 U	0.0039 U
Acenaphthylene	mg/L	NC	NC	1.1	0.0056 U	0.0041 U	0.0042 U
Acetophenone	mg/L	NC	0.000004	NC	0.0056 U	0.0044 U	0.0045 U
Anthracene	mg/L	NC	0.18	11	0.0056 U	0.0036 U	0.0037 U
Atrazine	mg/L	0.0003	0.003	0.003	0.0056 U	0.0049 U	0.005 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.0056 UJ	0.0014 UJ	0.0014 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.00056 U	0.00002 U	0.000021 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.00056 U	0.000031 U	0.000031 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.00056 U	0.000041 U	0.000042 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.0056 U	0.0028 U	0.0028 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.00056 U	0.00031 U	0.00031 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.0056 U	0.0055 U	0.0056 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.0056 U	0.0035 U	0.0036 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.00056 U	0.00042 U	0.00043 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.0056 U	0.0024 U	0.0025 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.0056 U	0.004 U	0.0041 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.0056 U	0.0028 U	0.0029 U
Caprolactam	mg/L	NC	1.8	18.3	0.0056 UJ	0.00051 U	R
Carbazole	mg/L	NC	0.003	0.0336	0.0056 U	0.0031 U	0.0032 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.0056 U	0.002 U	-
4-Chloroaniline	mg/L	NC	0.015	0.146	0.0056 U	0.0021 U	0.0022 UJ
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.0056 U	0.0038 U	0.0039 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.0056 U	0.0027 U	-
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.0056 U	0.004 U	0.0041 U
Chrysene	mg/L	NC	0.009	0.0921	0.0056 U	0.0038 U	0.0039 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.00056 UJ	0.00016 U	0.00017 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.0056 U	0.0037 U	0.0037 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.011 U	0.0071 U	0.0073 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.0056 U	0.0028 U	-
Diethyl phthalate	mg/L	NC	5	29.2	0.0056 U	0.0039 U	0.004 U
Dimethyl phthalate	mg/L	NC	37	365	0.0056 U	0.0033 U	0.0034 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.0056 U	0.0026 U	-
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.0056 U	0.0028 U	0.0029 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.017 U	0.0053 U	-
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.017 UJ	0.0049 U	-
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.0011 U	0.00044 U	0.00045 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-9	MW-9	MW-9	MW-9
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-111209-ACH-02	GW-017338-030110-ACH-001	GW-017338-051810-ACH-03	GW-017338-051810-ACH-04
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	11/12/2009	3/1/2010	5/18/2010	5/18/2010
<i>Units</i>	a	b	c				(Duplicate)
<i>Semi-volatile Organic Compounds</i>							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.0011 U	0.0006 U	0.00061 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.0056 U	0.0019 U	0.002 U
Fluoranthene	mg/L	NC	0.15	1.46	0.0056 U	0.0027 U	0.0028 U
Fluorene	mg/L	NC	0.024	1.46	0.0056 U	0.0033 U	0.0034 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.00001 U	0.00001 U	0.00001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.0011 U	0.00096 U	0.00098 UJ
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.0056 U	0.0047 U	0.0048 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.00056 U	0.00051 U	0.00052 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.00056 U	0.00012 U	0.00012 U
Isophorone	mg/L	0.071	0.1	0.708	0.0056 U	0.0037 U	0.0037 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.0056 U	0.0032 U	0.0032 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.0056 U	0.0017 U	-
4-Methylphenol	mg/L	NC	0.018	0.183	0.0056 U	0.0016 U	-
Naphthalene	mg/L	0.0007	0.02	0.73	0.0056 U	0.0037 U	0.0038 U
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.011 U	0.0058 U	0.0059 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.011 U	0.0044 U	0.0045 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.011 U	0.0041 U	0.0041 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.00056 U	0.00042 U	0.00043 U
2-Nitrophenol	mg/L	NC	NC	NC	0.0056 U	0.0035 U	-
4-Nitrophenol	mg/L	NC	0.06	NC	0.017 U	0.0024 U	-
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.00056 U	0.00033 U	0.00033 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.0056 U	0.0039 U	0.004 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.0056 U	0.0033 U	0.0033 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.017 U	0.00014 U	-
Phenanthrene	mg/L	NC	0.12	1.1	0.0056 U	0.0036 U	0.0037 U
Phenol	mg/L	NC	4	11	0.0056 UJ	0.00091 U	-
Pyrene	mg/L	NC	0.018	1.1	0.0056 U	0.0044 U	0.0044 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.0056 U	0.0026 U	-
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.0056 U	0.0032 U	-
<i>Metals</i>							
Aluminum	mg/L	NC	0.2	36.5	6.46 J ^b	6.94 ^b	5.41 J ^b
Antimony	mg/L	NC	0.006	0.006	0.01 U	0.01 U	0.0046 U
Arsenic	mg/L	0.0005	0.05	0.01	0.005 U	0.005 U	0.0038 U
Barium	mg/L	0.26	2	2	0.283 ^a	0.297 ^a	0.222
Beryllium	mg/L	NC	0.004	0.004	0.002 U	0.002 U	0.00094 U
Cadmium	mg/L	NC	0.005	0.005	0.005 U	0.005 U	0.00092 U
Calcium	mg/L	NC	NC	NC	53.9	54.7	48.4
Chromium	mg/L	NC	0.1	0.1	0.0098 J	0.0113	0.0083 J
Cobalt	mg/L	NC	0.22	0.73	0.0043 J	0.0059 J	0.0039 J
Copper	mg/L	NC	1.3	1.3	0.0224 J	0.0198 J	0.0171 J
Iron	mg/L	NC	0.3	11	23.1 ^{bc}	25.1 ^{bc}	19 ^{bc}
Lead	mg/L	NC	0.015	0.015	0.005 U	0.0081 U	0.0076
							0.0095

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	MW-9	MW-9	MW-9	MW-9
<i>Sample ID:</i>		Screening	Groundwater	Water	GW-017338-111209-ACH-02	GW-017338-030110-ACH-001	GW-017338-051810-ACH-03	GW-017338-051810-ACH-04
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	11/12/2009	3/1/2010	5/18/2010	5/18/2010
	<i>Units</i>	a	b	c				<i>(Duplicate)</i>
Metals								
Magnesium	mg/L	NC	NC	NC	26.5	27.4	22.7	22.7
Manganese	mg/L	NC	0.05	0.876	0.386^b	0.435^b	0.296^b	0.278^b
Mercury	mg/L	NC	0.002	0.002	0.00036	0.0004	0.00065	0.00072
Nickel	mg/L	NC	0.1	0.73	0.0057 J	0.0071 J	0.0055 J	0.0073 J
Potassium	mg/L	NC	NC	NC	8.96	8.52	7.62	7.61
Selenium	mg/L	NC	0.05	0.05	0.01 U	0.01 U	0.0048 U	0.0048 U
Silver	mg/L	NC	0.1	0.183	0.0011 J	0.0019 J	0.0015 J	0.0011 J
Sodium	mg/L	NC	NC	NC	146	148	126	124
Thallium	mg/L	NC	0.002	0.002	0.01 U	0.01 U	0.0046 U	0.0046 U
Vanadium	mg/L	NC	0.026	0.0365	0.0101 J	0.0118 J	0.0084 J	0.0124 J
Zinc	mg/L	NC	2	11	0.0194 J	0.0232 J	0.0154 J	0.0258 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- - Not analyzed.

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.

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location: Sample ID: Sample Date:	URS Screening Criteria	URS Groundwater Values	Drinking Water Criteria ¹	MW-10 GW-17338-080508-13 8/5/2008	MW-10 GW-017338-022409-010 2/24/2009	MW-10 GW-017338-081809-ACH-06 8/18/2009	MW-10 GW-017338-030210-RAM-009 3/2/2010
Units	a	b	c				
Volatile Organic Compounds							
Acetone	mg/L	NC	0.061	32.9	R	0.01 U	R
Benzene	mg/L	0.0004	0.005	0.005	0.0042 ^a	0.0021 ^a	0.012 ^{abc}
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.001 U	0.001 U	0.0083 ^{abc}
Bromoform	mg/L	0.008	0.1	0.08	0.004 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.005 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.005 U	0.01 U	0.01 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.005 U	0.001 U	0.001 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.002 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.005 U	0.001 U	0.00051 J
Chloroethane	mg/L	NC	0.004	14.6	0.005 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.005 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.005 U	0.001 U	0.001 U
Cyclohexane	mg/L	NC	NC	62.1	0.02	0.018	0.01
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.005 U	0.001 U	0.022
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.005 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.005 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.005 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.005 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.005 U	0.001 U	0.00027 J
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.005 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.005 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.002 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.002 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.005 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.005 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.005 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.005 U	0.001 U	0.001 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.054	0.069	0.49
2-Hexanone	mg/L	NC	0.15	NC	0.005 U	0.01 U	0.01 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.13 ^b	0.095 ^b	0.085 ^b
Methyl acetate	mg/L	NC	0.61	36.5	0.005 U	0.001 U	0.1 ^b
Methyl cyclohexane	mg/L	NC	NC	31.4	0.04	0.031	0.002 U
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.0005 J	0.0005 J	0.02
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.005 U	0.01 U	0.00028 J
Methylene chloride	mg/L	0.004	0.005	0.005	0.003 U	0.001 U	0.001 U
Styrene	mg/L	NC	0.1	0.1	0.005 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.75	1	1	0.057	0.031	0.27
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.005 U	0.001 U	0.041
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.005 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.003 U	0.001 U	0.001 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	<i>MW-10</i>	<i>MW-10</i>	<i>MW-10</i>	<i>MW-10</i>
<i>Sample ID:</i>		Screening	Groundwater	Water	<i>GW-17338-080508-13</i>	<i>GW-017338-022409-010</i>	<i>GW-017338-081809-ACH-06</i>	<i>GW-017338-030210-RAM-009</i>
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	<i>8/5/2008</i>	<i>2/24/2009</i>	<i>8/18/2009</i>	<i>3/2/2010</i>
	<i>Units</i>	<i>a</i>	<i>b</i>	<i>c</i>				
<i>Volatile Organic Compounds</i>								
Trichloroethene	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.005 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.005 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.005 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	1.2	10	10	0.3	0.32	1.3 ^a	0.92
<i>Semi-volatile Organic Compounds</i>								
Acenaphthene	mg/L	NC	0.037	2.19	0.01 U	0.01 U	0.011 U	0.004 U
Acenaphthylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.011 U	0.0042 U
Acetophenone	mg/L	NC	0.000004	NC	0.01 U	0.01 U	0.011 U	0.0045 U
Anthracene	mg/L	NC	0.18	11	0.01 U	0.01 U	0.011 U	0.0037 U
Atrazine	mg/L	0.0003	0.003	0.003	0.01 U	0.01 U	0.011 U	0.005 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.01 UJ	0.01 UJ	0.011 U	0.0014 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.0011 U	0.000021 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.001 U	0.001 U	0.0011 U	0.000032 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.0011 U	0.000042 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.011 U	0.0029 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.000921	0.001 U	0.001 U	0.0011 U	0.00032 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.01 U	0.01 U	0.011 U	0.0057 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.01 U	0.01 U	0.011 U	0.0037 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.001 U	0.001 U	0.0011 U	0.00043 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.01 U	0.01 U	0.011 U	0.0025 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.011 U	0.0041 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.01 U	0.01 U	0.011 U	0.0029 U
Caprolactam	mg/L	NC	1.8	18.3	0.01 U	0.01 U	0.011 U	0.00053 U
Carbazole	mg/L	NC	0.003	0.0336	0.01 U	0.01 U	0.011 U	0.0032 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.011 U	0.0021 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.01 U	0.01 U	0.011 U	0.0022 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.01 U	0.01 U	0.011 U	0.0039 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.01 U	0.01 U	0.011 U	0.0028 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.011 U	0.0041 U
Chrysene	mg/L	NC	0.009	0.0921	0.01 U	0.01 U	0.011 U	0.004 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.001 U	0.001 U	0.0011 U	0.00017 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.01 U	0.01 U	0.011 U	0.0038 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.02 U	0.021 U	0.021 U	0.0073 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.01 U	0.01 U	0.011 U	0.0029 U
Diethyl phthalate	mg/L	NC	5	29.2	0.01 U	0.01 U	0.011 U	0.004 U
Dimethyl phthalate	mg/L	NC	37	365	0.01 U	0.01 U	0.011 U	0.0034 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.0005 J	0.01 U	0.011 U	0.0048 J
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.01 U	0.01 U	0.011 U	0.0029 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.031 U	0.032 U	0.032 U	0.0055 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.031 U	0.032 U	0.032 UJ	0.0051 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.002 U	0.0021 U	0.0021 U	0.00045 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	<i>MW-10</i>	<i>MW-10</i>	<i>MW-10</i>	<i>MW-10</i>
<i>Sample ID:</i>	Screening	Groundwater	Water	<i>GW-17338-080508-13</i>	<i>GW-017338-022409-010</i>	<i>GW-017338-081809-ACH-06</i>	<i>GW-017338-030210-RAM-009</i>
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	<i>8/5/2008</i>	<i>2/24/2009</i>	<i>8/18/2009</i>	<i>3/2/2010</i>
<i>Units</i>	a	b	c				
<i>Semi-volatile Organic Compounds</i>							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.002 U	0.0021 U	0.00062 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.01 U	0.01 U	0.002 U
Fluoranthene	mg/L	NC	0.15	1.46	0.01 U	0.01 U	0.0028 U
Fluorene	mg/L	NC	0.024	1.46	0.01 U	0.01 U	0.0034 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.001 U	0.0011 U	0.000011 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.002 U	0.0021 U	0.00099 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.01 U	0.01 U	0.0048 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.001 U	0.0011 U	0.00053 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.00013 U
Isophorone	mg/L	0.071	0.1	0.708	0.01 U	0.01 U	0.0038 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.0016 J	0.0031 J	0.0037 J
2-Methylphenol	mg/L	NC	0.18	1.83	0.01 U	0.01 U	0.0017 U
4-Methylphenol	mg/L	NC	0.018	0.183	0.01 U	0.01 U	0.0017 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.0033 J ^a	0.0034 J ^a	0.0039 U
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.02 U	0.021 U	0.006 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.02 U	0.021 U	0.0046 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.02 U	0.021 U	0.0042 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.001 U	0.001 U	0.00043 U
2-Nitrophenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.0036 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.031 U	0.032 U	0.0024 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.001 U	0.001 U	0.00034 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.01 U	0.01 U	0.0041 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.01 U	0.01 U	0.0034 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.031 U	0.032 U	0.00015 U
Phenanthrene	mg/L	NC	0.12	1.1	0.01 U	0.01 U	0.0037 U
Phenol	mg/L	NC	4	11	0.01 U	0.01 U	0.00094 U
Pyrene	mg/L	NC	0.018	1.1	0.01 U	0.01 U	0.0045 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.01 U	0.01 U	0.0026 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.01 U	0.01 U	0.0033 U
<i>Metals</i>							
Aluminum	mg/L	NC	0.2	36.5	1.33 ^b	1.76 ^b	5.92 ^b
Antimony	mg/L	NC	0.006	0.006	0.0084 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.0064 ^a	0.0042 U	0.005 U
Barium	mg/L	0.26	2	2	0.452 ^a	0.428 ^a	0.431 ^a
Beryllium	mg/L	NC	0.004	0.004	0.00067 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.005 U	0.004 U	0.005 U
Calcium	mg/L	NC	NC	NC	39.5	39.3	35.4
Chromium	mg/L	NC	0.1	0.1	0.018 U	0.0026 J	0.0084 J
Cobalt	mg/L	NC	0.22	0.73	0.1 U	0.0054 J	0.0092 J
Copper	mg/L	NC	1.3	1.3	0.0036 J	0.028	0.0327
Iron	mg/L	NC	0.3	11	26.1 ^{bc}	27.3 ^{bc}	26.5 ^{bc}
Lead	mg/L	NC	0.015	0.015	0.0042 J	0.003 U	0.005 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	<i>MW-10</i>	<i>MW-10</i>	<i>MW-10</i>	<i>MW-10</i>
<i>Sample ID:</i>	Screening	Groundwater	Water	<i>GW-17338-080508-13</i>	<i>GW-017338-022409-010</i>	<i>GW-017338-081809-ACH-06</i>	<i>GW-017338-030210-RAM-009</i>
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	<i>8/5/2008</i>	<i>2/24/2009</i>	<i>8/18/2009</i>	<i>3/2/2010</i>
<i>Units</i>	a	b	c				
<i>Metals</i>							
Magnesium	mg/L	NC	NC	32	31.8	28.4	32
Manganese	mg/L	NC	0.05	0.876	1.4^{bc}	1.4^{bc}	1.57^{bc}
Mercury	mg/L	NC	0.002	0.002	0.0002 U	0.0002 U	0.0005
Nickel	mg/L	NC	0.1	0.73	0.065 U	0.0027 J	0.0065 J
Potassium	mg/L	NC	NC	NC	5.29	4.53 J	4.3 J
Selenium	mg/L	NC	0.05	0.05	0.0057 U	0.005 U	0.01 U
Silver	mg/L	NC	0.1	0.183	0.0086 U	0.01 U	0.01 U
Sodium	mg/L	NC	NC	NC	80.3	73.1	70.8
Thallium	mg/L	NC	0.002	0.002	0.0097 U	0.0095 U	0.01 U
Vanadium	mg/L	NC	0.026	0.0365	0.0024 J	0.05 U	0.0118 J
Zinc	mg/L	NC	2	11	0.03 U	0.0059 J	0.0197 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

Sample Location:	URS	URS	Drinking	MW-11	MW-11	MW-11	MW-11	
Sample ID:	Screening	Groundwater	Water	GW-17338-080508-08	GW-017338-022509-018	GW-017338-081909-ACH-13	GW-017338-030310-ACH-020	
Sample Date:	Criteria	Values	Criteria ¹	8/5/2008	2/25/2009	8/19/2009	3/3/2010	
Units	a	b	c					
Volatile Organic Compounds								
Acetone	mg/L	NC	0.061	32.9	0.039 J	0.1 U	0.024 J	0.01 J
Benzene	mg/L	0.0004	0.005	0.005	0.33 ^{abc}	0.43 ^{abc}	0.26 ^{abc}	0.33 ^{abc}
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.005 U	0.01 U	0.002 U	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.02 U	0.01 U	0.002 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.025 U	0.01 U	0.002 UJ	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.0096 J	0.1 U	0.0072 J	0.0057 J
Carbon disulfide	mg/L	NC	0.1	3.65	0.025 U	0.01 U	0.002 U	0.001 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.01 U	0.01 U	0.002 U	0.001 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.025 U	0.01 U	0.002 U	0.00065 J
Chloroethane	mg/L	NC	0.004	14.6	0.025 U	0.01 U	0.002 U	0.001 UJ
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.025 U	0.01 U	0.002 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.025 U	0.01 U	0.002 U	0.001 U
Cyclohexane	mg/L	NC	NC	62.1	0.0047 J	0.01 U	0.00085 J	0.0054
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.025 U	0.01 U	0.002 U	0.001 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.025 U	0.01 U	0.002 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.025 U	0.01 U	0.002 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.025 U	0.01 U	0.002 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.025 U	0.01 U	0.002 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.025 U	0.01 U	0.002 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.025 U	0.01 U	0.002 U	0.001 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.025 U	0.01 U	0.002 U	0.001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.01 U	0.01 U	0.002 U	0.001 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.01 U	0.01 U	0.002 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.0009 J	0.01 U	0.001 J	0.001 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.025 U	0.01 U	0.002 U	0.001 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.005 U	0.01 U	0.002 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.025 U	0.01 U	0.002 U	0.001 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.025 U	0.01 U	0.002 U	0.001 U
Ethylbenzene	mg/L	NC	0.7	0.7	3.1 ^{bc}	3.6 ^{bc}	1.5 ^{bc}	2.2 ^{bc}
2-Hexanone	mg/L	NC	0.15	NC	0.025 U	0.1 U	0.02 U	0.01 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.0049 J	0.0056 J	0.004	0.0072
Methyl acetate	mg/L	NC	0.61	36.5	0.025 U	0.01 U	0.004 U	0.002 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.0018 J	0.01 U	0.00042 J	0.0011
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.53 ^{bc}	0.45 ^{bc}	0.44 ^{bc}	0.32 ^b
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.025 U	0.1 U	0.0016 J	0.0012 J
Methylene chloride	mg/L	0.004	0.005	0.005	0.015 U	0.01 U	0.002 U	0.001 U
Styrene	mg/L	NC	0.1	0.1	0.025 U	0.01 U	0.002 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.005 U	0.01 U	0.002 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.005 U	0.01 U	0.002 U	0.001 U
Toluene	mg/L	0.75	1	1	0.69	0.59	0.2	1.2 ^{abc}
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.025 U	0.01 U	0.002 U	0.001 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.025 U	0.01 U	0.002 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.015 U	0.01 U	0.002 U	0.001 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	<i>MW-11</i>	<i>MW-11</i>	<i>MW-11</i>	<i>MW-11</i>
<i>Sample ID:</i>		Screening	Groundwater	Water	<i>GW-17338-080508-08</i>	<i>GW-017338-022509-018</i>	<i>GW-017338-081909-ACH-13</i>	<i>GW-017338-030310-ACH-020</i>
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	<i>8/5/2008</i>	<i>2/25/2009</i>	<i>8/19/2009</i>	<i>3/3/2010</i>
	<i>Units</i>	<i>a</i>	<i>b</i>	<i>c</i>				
<i>Volatile Organic Compounds</i>								
Trichloroethene	mg/L	0.002	0.005	0.005	0.005 U	0.01 U	0.002 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.025 U	0.01 U	0.002 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.025 U	0.01 U	0.002 U	0.001 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.025 U	0.01 U	0.002 U	0.001 U
Xylenes (total)	mg/L	1.2	10	10	7 ^a	7.5 ^a	4.9 ^a	5.4 ^a
<i>Semi-volatile Organic Compounds</i>								
Acenaphthene	mg/L	NC	0.037	2.19	0.021 U	0.052 U	0.01 U	0.0038 U
Acenaphthylene	mg/L	NC	NC	1.1	0.021 U	0.052 U	0.01 U	0.004 U
Acetophenone	mg/L	NC	0.000004	NC	0.0021 J ^b	0.052 U	0.01 U	0.0043 U
Anthracene	mg/L	NC	0.18	11	0.021 U	0.052 U	0.01 U	0.0036 U
Atrazine	mg/L	0.0003	0.003	0.003	0.021 U	0.052 U	0.01 U	0.0048 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.021 UJ	0.052 UJ	0.01 U	0.0013 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.0021 U	0.0052 U	0.001 U	0.00002 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.0021 U	0.0052 U	0.001 U	0.00003 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.0021 U	0.0052 U	0.001 U	0.00004 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.021 U	0.052 U	0.01 U	0.0027 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.0021 U	0.0052 U	0.001 U	0.0003 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.021 U	0.052 U	0.01 U	0.0054 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.021 U	0.052 U	0.01 U	0.0035 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.0021 U	0.0052 U	0.001 U	0.00041 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.021 U	0.052 U	0.01 U	0.0024 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.021 U	0.052 U	0.01 U	0.0039 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.021 U	0.052 U	0.01 U	0.0028 U
Caprolactam	mg/L	NC	1.8	18.3	0.021 U	0.052 U	0.01 U	0.0005 U
Carbazole	mg/L	NC	0.003	0.0336	0.021 U	0.052 U	0.01 U	0.0031 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.021 U	0.052 U	0.01 U	0.002 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.021 U	0.052 U	0.01 U	0.0021 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.021 U	0.052 U	0.01 U	0.0038 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.021 U	0.052 U	0.01 U	0.0026 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.021 U	0.052 U	0.01 U	0.0039 U
Chrysene	mg/L	NC	0.009	0.0921	0.021 U	0.052 U	0.01 U	0.0038 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.0021 U	0.0052 U	0.001 U	0.00016 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.021 U	0.052 U	0.01 U	0.0036 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.042 U	0.1 U	0.02 U	0.007 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.021 U	0.052 U	0.01 U	0.0028 U
Diethyl phthalate	mg/L	NC	5	29.2	0.021 U	0.052 U	0.01 U	0.0038 U
Dimethyl phthalate	mg/L	NC	37	365	0.021 U	0.052 U	0.01 U	0.0033 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.022	0.036 J	0.028	0.03
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.021 U	0.052 U	0.01 U	0.0028 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.063 U	0.15 UJ	0.03 U	0.0052 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.063 U	0.15 UJ	0.03 UJ	0.0048 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.0042 U	0.01 U	0.002 U	0.00043 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

Sample Location:		URS	URS	Drinking	MW-11	MW-11	MW-11	MW-11
Sample ID:		Screening	Groundwater	Water	GW-17338-080508-08	GW-017338-022509-018	GW-017338-081909-ACH-13	GW-017338-030310-ACH-020
Sample Date:		Criteria	Values	Criteria ¹	8/5/2008	2/25/2009	8/19/2009	3/3/2010
	Units	a	b	c				
Semi-volatile Organic Compounds								
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.0042 U	0.01 U	0.002 U	0.00059 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.021 U	0.052 U	0.01 U	0.0019 U
Fluoranthene	mg/L	NC	0.15	1.46	0.021 U	0.052 U	0.01 U	0.0026 U
Fluorene	mg/L	NC	0.024	1.46	0.021 U	0.052 U	0.01 U	0.0033 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.0021 U	0.0052 U	0.001 U	0.00001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.0042 U	0.01 U	0.002 U	0.00094 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.021 U	0.052 U	0.01 U	0.0046 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.0021 U	0.0052 U	0.001 U	0.0005 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.0021 U	0.0052 U	0.001 U	0.00012 U
Isophorone	mg/L	0.071	0.1	0.708	0.021 U	0.052 U	0.01 U	0.0036 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.021 U	0.052 U	0.01 U	0.0031 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.021 U	0.052 U	0.01 U	0.0025 J
4-Methylphenol	mg/L	NC	0.018	0.183	0.0066 J	0.0084 J	0.01 U	0.0083 J
Naphthalene	mg/L	0.0007	0.02	0.73	0.0024 J ^a	0.0021 J ^a	0.015 U	0.0037 U
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.042 U	0.1 U	0.02 U	0.0057 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.042 U	0.1 U	0.02 U	0.0043 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.042 U	0.1 U	0.02 U	0.004 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.0021 U	0.0052 U	0.001 U	0.00041 U
2-Nitrophenol	mg/L	NC	NC	NC	0.021 U	0.052 U	0.01 U	0.0034 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.063 U	0.15 U	0.03 U	0.0023 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.0021 U	0.0052 U	0.001 U	0.00032 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.021 U	0.052 U	0.01 U	0.0039 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.021 U	0.052 U	0.01 U	0.0032 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.063 U	0.15 UJ	0.03 U	0.00014 U
Phenanthrene	mg/L	NC	0.12	1.1	0.021 U	0.052 U	0.01 U	0.0036 U
Phenol	mg/L	NC	4	11	0.021 U	0.052 U	0.01 U	0.00089 U
Pyrene	mg/L	NC	0.018	1.1	0.021 U	0.052 U	0.01 U	0.0043 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.021 U	0.052 U	0.01 U	0.0025 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.021 U	0.052 U	0.01 U	0.0032 U
Metals								
Aluminum	mg/L	NC	0.2	36.5	4.54 ^b	1.89 ^b	5.51 ^b	0.459 ^b
Antimony	mg/L	NC	0.006	0.006	0.0084 U	0.01 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.0478a ^c	0.0471 ^{ac}	0.0465 ^{ac}	0.0347 ^{ac}
Barium	mg/L	0.26	2	2	0.35 ^a	0.377 ^a	0.385 ^a	0.422 ^a
Beryllium	mg/L	NC	0.004	0.004	0.00067 U	0.002 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.005 U	0.004 U	0.005 U	0.005 U
Calcium	mg/L	NC	NC	NC	71.5	76.2	78.4	73.6
Chromium	mg/L	NC	0.1	0.1	0.0061 J	0.0028 J	0.0071 J	0.01 U
Cobalt	mg/L	NC	0.22	0.73	0.128	0.156	0.137	0.112
Copper	mg/L	NC	1.3	1.3	0.0054 J	0.0257	0.0317	0.025 U
Iron	mg/L	NC	0.3	11	100 ^{bc}	117 ^{bc}	107 ^{bc}	97.7 ^{bc}
Lead	mg/L	NC	0.015	0.015	0.0206 ^{bc}	0.0029 J	0.005 U	0.0035 J

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location:</i>	URS	URS	Drinking	<i>MW-11</i>	<i>MW-11</i>	<i>MW-11</i>	<i>MW-11</i>
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-17338-080508-08	GW-017338-022509-018	GW-017338-081909-ACH-13	GW-017338-030310-ACH-020
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	8/5/2008	2/25/2009	8/19/2009	3/3/2010
<i>Units</i>	a	b	c				
Metals							
Magnesium	mg/L	NC	NC	55.5	60.1	61.7	61.6
Manganese	mg/L	NC	0.05	0.876	0.968^{bc}	1.2^{bc}	0.931^{bc}
Mercury	mg/L	NC	0.002	0.002	0.0002 U	0.0002 U	0.00056
Nickel	mg/L	NC	0.1	0.73	0.0072 J	0.0046 J	0.0088 J
Potassium	mg/L	NC	NC	NC	4.9 J	4.47 J	4.27 J
Selenium	mg/L	NC	0.05	0.05	0.0057 U	0.005 U	0.01 U
Silver	mg/L	NC	0.1	0.183	0.0086 U	0.01 U	0.01 U
Sodium	mg/L	NC	NC	NC	93.2	93.5	98.2
Thallium	mg/L	NC	0.002	0.002	0.0097 U	0.0095 U	0.01 U
Vanadium	mg/L	NC	0.026	0.0365	0.0106 J	0.0054 J	0.0128 J
Zinc	mg/L	NC	2	11	0.0113 J	0.0067 J	0.0163 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-11R	MW-11R	MW-11R	MW-11R
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-17338-080408-01	GW-017338-022409-003	GW-017338-081709-ACH-03	GW-017338-030110-ACH-002
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	8/4/2008	2/24/2009	8/17/2009	3/1/2010
<i>Units</i>	a	b	c				
<i>Volatile Organic Compounds</i>							
Acetone	mg/L	NC	0.061	32.9	R	0.01 U	R
Benzene	mg/L	0.0004	0.005	0.005	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.004 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.005 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.005 U	0.01 U	0.01 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.005 U	0.001 U	0.001 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.002 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.005 U	0.001 U	0.001 U
Chloroethane	mg/L	NC	0.004	14.6	0.005 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.0039 J ^a	0.0038 ^a	0.0053 ^a
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.005 U	0.001 U	0.001 U
Cyclohexane	mg/L	NC	NC	62.1	0.005 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.005 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.005 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.005 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.005 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.005 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.005 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.005 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.005 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.002 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.002 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.005 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.005 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.005 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.005 U	0.001 U	0.001 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.004 U	0.001 U	0.001 U
2-Hexanone	mg/L	NC	0.15	NC	0.005 U	0.01 U	0.01 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.005 U	0.001 U	0.001 U
Methyl acetate	mg/L	NC	0.61	36.5	0.005 U	0.001 U	0.002 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.005 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.005 U	0.001 U	0.001 U
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.005 U	0.01 U	R
Methylene chloride	mg/L	0.004	0.005	0.005	0.003 U	0.001 U	0.001 U
Styrene	mg/L	NC	0.1	0.1	0.005 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.001 U	0.0004 J	0.00031 J
Toluene	mg/L	0.75	1	1	0.005 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.005 U	0.001 U	0.001 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.005 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.003 U	0.001 U	0.001 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	MW-11R	MW-11R	MW-11R	MW-11R
<i>Sample ID:</i>		Screening	Groundwater	Water	GW-17338-080408-01	GW-017338-022409-003	GW-017338-081709-ACH-03	GW-017338-030110-ACH-002
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	8/4/2008	2/24/2009	8/17/2009	3/1/2010
	<i>Units</i>	a	b	c				
<i>Volatile Organic Compounds</i>								
Trichloroethene	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.005 U	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.005 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.005 U	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	1.2	10	10	0.005 U	0.003 U	0.003 U	0.003 U
<i>Semi-volatile Organic Compounds</i>								
Acenaphthene	mg/L	NC	0.037	2.19	0.01 U	0.01 U	0.011 U	0.0038 U
Acenaphthylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.011 U	0.0041 U
Acetophenone	mg/L	NC	0.000004	NC	0.01 U	0.01 U	0.011 U	0.0044 U
Anthracene	mg/L	NC	0.18	11	0.01 U	0.01 U	0.011 U	0.0036 U
Atrazine	mg/L	0.0003	0.003	0.003	0.01 U	0.01 U	0.011 U	0.0049 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.01 UJ	0.01 UJ	0.011 U	0.0014 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.0011 U	0.00002 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.001 U	0.001 U	0.0011 U	0.000031 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.0011 U	0.000041 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.011 U	0.0028 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.000921	0.001 U	0.001 U	0.0011 U	0.00031 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.01 U	0.01 U	0.011 U	0.0055 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.01 U	0.01 U	0.011 U	0.0035 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.001 U	0.001 U	0.0011 U	0.00042 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.01 U	0.01 U	0.011 U	0.0024 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.011 U	0.004 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.01 U	0.01 U	0.011 U	0.0028 U
Caprolactam	mg/L	NC	1.8	18.3	0.01 U	0.01 U	0.011 U	0.00051 U
Carbazole	mg/L	NC	0.003	0.0336	0.01 U	0.01 U	0.011 U	0.0031 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.011 U	0.002 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.01 U	0.01 U	0.011 U	0.0021 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.01 U	0.01 U	0.011 U	0.0038 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.01 U	0.01 U	0.011 U	0.0027 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.011 U	0.004 U
Chrysene	mg/L	NC	0.009	0.0921	0.01 U	0.01 U	0.011 U	0.0038 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.001 U	0.001 U	0.0011 U	0.00016 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.01 U	0.01 U	0.011 U	0.0037 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.02 U	0.02 U	0.021 U	0.0071 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.01 U	0.01 U	0.011 U	0.0028 U
Diethyl phthalate	mg/L	NC	5	29.2	0.01 U	0.01 U	0.011 U	0.0039 U
Dimethyl phthalate	mg/L	NC	37	365	0.01 U	0.01 U	0.011 U	0.0033 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.01 U	0.01 U	0.011 U	0.0026 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.01 U	0.01 U	0.011 U	0.0028 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.03 U	0.031 U	0.032 U	0.0053 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.03 U	0.031 U	0.032 UJ	0.0049 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.002 U	0.002 U	0.0021 U	0.00044 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	MW-11R	MW-11R	MW-11R	MW-11R
<i>Sample ID:</i>		Screening	Groundwater	Water	GW-17338-080408-01	GW-017338-022409-003	GW-017338-081709-ACH-03	GW-017338-030110-ACH-002
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	8/4/2008	2/24/2009	8/17/2009	3/1/2010
	<i>Units</i>	a	b	c				
<i>Semi-volatile Organic Compounds</i>								
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.002 U	0.002 U	0.0021 U	0.0006 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.01 U	0.01 U	0.011 U	0.0019 U
Fluoranthene	mg/L	NC	0.15	1.46	0.01 U	0.01 U	0.011 U	0.0027 U
Fluorene	mg/L	NC	0.024	1.46	0.01 U	0.01 U	0.011 U	0.0033 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.001 U	0.001 U	0.0011 U	0.00001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.002 U	0.002 U	0.0021 U	0.00096 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.01 U	0.01 U	0.011 U	0.0047 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.001 U	0.001 U	0.0011 U	0.00051 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.0011 U	0.00012 U
Isophorone	mg/L	0.071	0.1	0.708	0.01 U	0.01 U	0.011 U	0.0037 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.01 U	0.01 U	0.011 U	0.0032 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.01 U	0.01 U	0.011 U	0.0017 U
4-Methylphenol	mg/L	NC	0.018	0.183	0.01 U	0.01 U	0.011 U	0.0016 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.01 U	0.01 U	0.011 U	0.0037 U
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.02 U	0.02 U	0.021 U	0.0058 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.02 U	0.02 U	0.021 U	0.0044 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.02 U	0.02 U	0.021 U	0.0041 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.001 U	0.001 U	0.0011 U	0.00042 U
2-Nitrophenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.011 U	0.0035 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.03 U	0.031 U	0.032 U	0.0024 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.001 U	0.001 U	0.0011 U	0.00033 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.01 U	0.01 U	0.011 U	0.0039 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.01 U	0.01 U	0.011 U	0.0033 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.03 U	0.031 U	0.032 U	0.00014 U
Phenanthrene	mg/L	NC	0.12	1.1	0.01 U	0.01 U	0.011 U	0.0036 U
Phenol	mg/L	NC	4	11	0.01 U	0.01 U	0.011 U	0.00091 U
Pyrene	mg/L	NC	0.018	1.1	0.01 U	0.01 U	0.011 U	0.0044 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.01 U	0.01 U	0.011 U	0.0026 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.01 U	0.01 U	0.011 U	0.0032 U
<i>Metals</i>								
Aluminum	mg/L	NC	0.2	36.5	0.349^b	1.64^b	2.71^b	1.48^b
Antimony	mg/L	NC	0.006	0.006	0.0084 U	0.01 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.0059 U	0.0042 U	0.005 U	0.005 U
Barium	mg/L	0.26	2	2	0.294 ^a	0.175 J	0.207	0.292 ^a
Beryllium	mg/L	NC	0.004	0.004	0.00067 U	0.002 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.005 U	0.004 U	0.005 U	0.005 U
Calcium	mg/L	NC	NC	NC	15.7	15.6	14.6	29.1
Chromium	mg/L	NC	0.1	0.1	0.0028 J	0.0028 J	0.0036 J	0.01 U
Cobalt	mg/L	NC	0.22	0.73	0.1 U	0.008 J	0.0086 J	0.0255 J
Copper	mg/L	NC	1.3	1.3	0.021 U	0.024 J	0.025 U	0.025 U
Iron	mg/L	NC	0.3	11	2.04^b	7.45^b	9.21^b	6.37^b
Lead	mg/L	NC	0.015	0.015	0.0024 U	0.003 U	0.005 U	0.005 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location:</i>		URS	URS	Drinking	MW-11R	MW-11R	MW-11R	MW-11R
<i>Sample ID:</i>		Screening	Groundwater	Water	GW-17338-080408-01	GW-017338-022409-003	GW-017338-081709-ACH-03	GW-017338-030110-ACH-002
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	8/4/2008	2/24/2009	8/17/2009	3/1/2010
	<i>Units</i>	a	b	c				
Metals								
Magnesium	mg/L	NC	NC	NC	12.6	10.5	10.6	19.1
Manganese	mg/L	NC	0.05	0.876	0.34^b	0.157^b	0.167^b	0.368^b
Mercury	mg/L	NC	0.002	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	NC	0.1	0.73	0.065 U	0.0025 J	0.0036 J	0.04 U
Potassium	mg/L	NC	NC	NC	2.65 J	2.27 J	2.45 J	3.82 J
Selenium	mg/L	NC	0.05	0.05	0.0057 U	0.005 U	0.01 U	0.01 U
Silver	mg/L	NC	0.1	0.183	0.0086 U	0.0016 J	0.0015 J	0.0011 J
Sodium	mg/L	NC	NC	NC	80.1	59.7	62.3	81.2
Thallium	mg/L	NC	0.002	0.002	0.0097 U	0.0095 U	0.01 U	0.01 U
Vanadium	mg/L	NC	0.026	0.0365	0.016 U	0.05 U	0.0044 J	0.0028 J
Zinc	mg/L	NC	2	11	0.0079 J	0.0112 J	0.0097 J	0.0096 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- - Not analyzed.

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.

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:	URS	URS	Drinking	MW-12	MW-12	MW-12	MW-12
Sample ID:	Screening	Groundwater	Water	GW-17338-080408-06	GW-017338-022509-014	GW-017338-081809-ACH-08	GW-017338-030310-RAM-017
Sample Date:	Criteria	Values	Criteria ¹	8/4/2008	2/25/2009	8/18/2009	3/3/2010
Units	a	b	c				
Volatile Organic Compounds							
Acetone	mg/L	NC	0.061	32.9	R	0.02 U	R
Benzene	mg/L	0.0004	0.005	0.005	0.4 ^{abc}	0.32 ^{abc}	0.27 ^{abc}
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.001 U	0.002 U	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.004 U	0.002 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.005 U	0.002 U	0.001 UJ
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.005 U	0.02 U	R
Carbon disulfide	mg/L	NC	0.1	3.65	0.005 U	0.002 U	0.001 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.002 U	0.002 U	0.001 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.005 U	0.002 U	0.001 U
Chloroethane	mg/L	NC	0.004	14.6	0.005 U	0.002 U	0.001 UJ
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.005 U	0.002 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.005 U	0.002 U	0.001 U
Cyclohexane	mg/L	NC	NC	62.1	0.016	0.026	0.0067
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.005 U	0.002 U	0.001 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.005 U	0.002 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.005 U	0.002 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.005 U	0.002 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.005 U	0.002 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.005 U	0.002 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.005 U	0.002 U	0.001 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.005 U	0.002 U	0.001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.0008 J ^a	0.002 U	0.001 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.002 U	0.002 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.0006 J	0.002 U	0.00025 J
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.005 U	0.002 U	0.001 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.001 U	0.002 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.005 U	0.002 U	0.001 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.005 U	0.002 U	0.001 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.25	0.052	0.015
2-Hexanone	mg/L	NC	0.15	NC	0.005 U	0.02 U	0.01 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.12 ^b	0.11 ^b	0.079 ^b
Methyl acetate	mg/L	NC	0.61	36.5	0.005 U	0.002 U	0.002 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.033	0.049	0.012
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.056 ^b	0.037 ^b	0.046 ^b
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.005 U	0.02 U	0.01 U
Methylene chloride	mg/L	0.004	0.005	0.005	0.003 U	0.002 U	0.001 U
Styrene	mg/L	NC	0.1	0.1	0.005 U	0.002 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.001 U	0.002 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.001 U	0.002 U	0.001 U
Toluene	mg/L	0.75	1	1	0.012	0.0009 J	0.053
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.005 U	0.002 U	0.001 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.005 U	0.002 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.003 U	0.002 U	0.001 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location: Sample ID: Sample Date:	URS Screening Criteria	URS Groundwater Values	Drinking Water Criteria ¹	MW-12 GW-17338-080408-06 8/4/2008	MW-12 GW-017338-022509-014 2/25/2009	MW-12 GW-017338-081809-ACH-08 8/18/2009	MW-12 GW-017338-030310-RAM-017 3/3/2010
Units	a	b	c				
Volatile Organic Compounds							
Trichloroethene	mg/L	0.002	0.005	0.005	0.001 U	0.002 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.005 U	0.002 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.005 U	0.002 U	0.001 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.0025 J ^{abc}	0.002 U	0.0008 J ^a
Xylenes (total)	mg/L	1.2	10	10	1	0.33	0.19
Semi-volatile Organic Compounds							
Acenaphthene	mg/L	NC	0.037	2.19	0.01 U	0.01 U	0.0038 U
Acenaphthylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.004 U
Acetophenone	mg/L	NC	0.000004	NC	0.0016 J ^b	0.0019 J ^b	0.0043 U
Anthracene	mg/L	NC	0.18	11	0.01 U	0.01 U	0.0036 U
Atrazine	mg/L	0.0003	0.003	0.003	0.01 U	0.01 U	0.0048 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.01 UJ	0.01 UJ	0.0013 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.00002 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.001 U	0.001 U	0.00003 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.00004 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.0027 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.001 U	0.001 U	0.0003 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.01 U	0.01 U	0.0054 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.01 U	0.01 U	0.0035 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.001 U	0.001 U	0.00041 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.01 U	0.01 U	0.0024 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.0039 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.01 U	0.01 U	0.0028 U
Caprolactam	mg/L	NC	1.8	18.3	0.01 U	0.01 U	0.0005 U
Carbazole	mg/L	NC	0.003	0.0336	0.01 U	0.01 U	0.0031 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.002 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.01 U	0.01 U	0.0021 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.01 U	0.01 U	0.0038 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.01 U	0.01 U	0.0026 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.0039 U
Chrysene	mg/L	NC	0.009	0.0921	0.01 U	0.01 U	0.0038 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.001 U	0.001 U	0.00016 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.01 U	0.01 U	0.0036 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.02 U	0.02 U	0.007 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.01 U	0.01 U	0.0028 U
Diethyl phthalate	mg/L	NC	5	29.2	0.01 U	0.01 U	0.0038 U
Dimethyl phthalate	mg/L	NC	37	365	0.01 U	0.01 U	0.0033 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.0025 J	0.0027 J	0.0025 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.01 U	0.01 U	0.0028 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.03 U	0.03 UJ	0.0052 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.03 U	0.03 UJ	0.0048 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.002 U	0.002 U	0.00043 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-12	MW-12	MW-12	MW-12
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-17338-080408-06	GW-017338-022509-014	GW-017338-081809-ACH-08	GW-017338-030310-RAM-017
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	8/4/2008	2/25/2009	8/18/2009	3/3/2010
<i>Units</i>	a	b	c				
<i>Semi-volatile Organic Compounds</i>							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.002 U	0.002 U	0.00059 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.01 U	0.01 U	0.0019 U
Fluoranthene	mg/L	NC	0.15	1.46	0.01 U	0.01 U	0.0026 U
Fluorene	mg/L	NC	0.024	1.46	0.01 U	0.01 U	0.0033 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.001 U	0.001 U	0.00001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.002 U	0.002 U	0.00094 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.01 U	0.01 U	0.0046 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.001 U	0.001 U	0.0005 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.00012 U
Isophorone	mg/L	0.071	0.1	0.708	0.01 U	0.01 U	0.0036 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.0014 J	0.0027 J	0.0031 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.01 U	0.01 U	0.0017 U
4-Methylphenol	mg/L	NC	0.018	0.183	0.01 U	0.01 U	0.0016 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.052^{ab}	0.077^{ab}	0.033^{ab}
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.02 U	0.02 U	0.0057 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.02 U	0.02 U	0.0043 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.02 U	0.02 U	0.004 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.001 U	0.001 U	0.00041 U
2-Nitrophenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.0034 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.03 U	0.03 U	0.0023 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.001 U	0.001 U	0.00032 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.01 U	0.01 U	0.0039 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.01 U	0.01 U	0.0032 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.03 U	0.03 U	0.00014 U
Phenanthrene	mg/L	NC	0.12	1.1	0.01 U	0.01 U	0.0036 U
Phenol	mg/L	NC	4	11	0.01 U	0.01 U	0.0017 J
Pyrene	mg/L	NC	0.018	1.1	0.01 U	0.01 U	0.0043 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.01 U	0.01 U	0.0025 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.01 U	0.01 U	0.0032 U
<i>Metals</i>							
Aluminum	mg/L	NC	0.2	36.5	2.52^b	3.21^b	14.5^b
Antimony	mg/L	NC	0.006	0.006	0.0084 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.0087 ^a	0.0096 ^a	0.0103^{ac}
Barium	mg/L	0.26	2	2	0.145 J	0.191 J	0.197 J
Beryllium	mg/L	NC	0.004	0.004	0.00067 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.005 U	0.004 U	0.005 U
Calcium	mg/L	NC	NC	NC	31.2	33.1	32.2
Chromium	mg/L	NC	0.1	0.1	0.0049 J	0.0073 J	0.0271
Cobalt	mg/L	NC	0.22	0.73	0.1 U	0.0022 J	0.0041 J
Copper	mg/L	NC	1.3	1.3	0.0055 J	0.0348	0.0481
Iron	mg/L	NC	0.3	11	55.8^{bc}	55^{bc}	60^{bc}
Lead	mg/L	NC	0.015	0.015	0.0179^{bc}	0.0156^{bc}	0.0514^{bc}

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location:</i>		URS	URS	Drinking	MW-12	MW-12	MW-12	MW-12
<i>Sample ID:</i>		Screening	Groundwater	Water	GW-17338-080408-06	GW-017338-022509-014	GW-017338-081809-ACH-08	GW-017338-030310-RAM-017
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	8/4/2008	2/25/2009	8/18/2009	3/3/2010
	<i>Units</i>	a	b	c				
Metals								
Magnesium	mg/L	NC	NC	NC	32.8	34.1	37.2	30
Manganese	mg/L	NC	0.05	0.876	0.406^b	0.337^b	0.39^b	0.352^b
Mercury	mg/L	NC	0.002	0.002	0.0002 U	0.0002 U	0.00054	0.0002 U
Nickel	mg/L	NC	0.1	0.73	0.0042 J	0.0069 J	0.0167 J	0.04 U
Potassium	mg/L	NC	NC	NC	2.57 J	2.5 J	3.05 J	2.03 J
Selenium	mg/L	NC	0.05	0.05	0.0057 U	0.005 U	0.01 U	0.01 U
Silver	mg/L	NC	0.1	0.183	0.0086 U	0.01 U	0.0015 J	0.00099 J
Sodium	mg/L	NC	NC	NC	40.6	44	36.2	35.2
Thallium	mg/L	NC	0.002	0.002	0.0097 U	0.0095 U	0.01 U	0.01 U
Vanadium	mg/L	NC	0.026	0.0365	0.0061 J	0.0065 J	0.0386 J^{bc}	0.0033 J
Zinc	mg/L	NC	2	11	0.0119 J	0.0279 J	0.0945	0.0112 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- Not analyzed.

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.

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:		URS	URS	Drinking	MW-13	MW-13	MW-13	MW-13
Sample ID:		Screening	Groundwater	Water	GW-17338-080408-04	GW-017338-022509-017	GW-017338-081909-ACH-12	GW-017338-030310-RAM-021
Sample Date:		Criteria	Values	Criteria ¹	8/4/2008	2/25/2009	8/19/2009	3/3/2010
	Units	a	b	c				
Volatile Organic Compounds								
Acetone	mg/L	NC	0.061	32.9	R	0.02 U	R	R
Benzene	mg/L	0.0004	0.005	0.005	0.014 ^{abc}	0.019 ^{abc}	0.012 ^{abc}	0.015 ^{abc}
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.01 U	0.002 U	0.005 U	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.04 U	0.002 U	0.005 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.05 U	0.002 U	0.005 UJ	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.05 U	0.02 U	R	0.01 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.05 U	0.002 U	0.005 U	0.001 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.02 U	0.002 U	0.005 U	0.001 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.05 U	0.0043	0.005 U	0.00087 J
Chloroethane	mg/L	NC	0.004	14.6	0.05 U	0.002 U	0.005 U	0.001 UJ
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.05 U	0.002 U	0.005 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.05 U	0.002 U	0.005 U	0.001 U
Cyclohexane	mg/L	NC	NC	62.1	0.013 J	0.018	0.0069	0.016
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.05 U	0.002 U	0.005 U	0.001 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.05 U	0.002 U	0.005 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.05 U	0.002 U	0.005 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.05 U	0.002 U	0.005 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.05 U	0.002 U	0.005 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.05 U	0.002 U	0.005 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.05 U	0.002 U	0.005 U	0.001 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.05 U	0.002 U	0.005 U	0.001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.02 U	0.002 U	0.005 U	0.001 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.02 U	0.002 U	0.005 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.05 U	0.002 U	0.005 U	0.001 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.05 U	0.002 U	0.005 U	0.001 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.01 U	0.002 U	0.005 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.05 U	0.002 U	0.005 U	0.001 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.05 U	0.002 U	0.005 U	0.001 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.55	0.66	0.55	0.62
2-Hexanone	mg/L	NC	0.15	NC	0.05 U	0.02 U	0.05 U	0.01 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.009 J	0.012	0.0082	0.0099
Methyl acetate	mg/L	NC	0.61	36.5	0.05 U	0.002 U	0.01 U	0.002 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.095	0.14	0.054	0.11
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.017 J	0.02	0.025 ^b	0.018
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.05 U	0.02 U	0.05 U	R
Methylene chloride	mg/L	0.004	0.005	0.005	0.03 U	0.002 U	0.005 U	0.001 U
Styrene	mg/L	NC	0.1	0.1	0.05 U	0.002 U	0.005 U	0.00081 J
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.01 U	0.002 U	0.005 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.01 U	0.002 U	0.005 U	0.001 U
Toluene	mg/L	0.75	1	1	7.5 ^{abc}	5.6 ^{abc}	4.8 ^{abc}	5 ^{abc}
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.05 U	0.002 U	0.005 U	0.001 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.05 U	0.002 U	0.005 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.03 U	0.002 U	0.005 U	0.001 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location: Sample ID: Sample Date:	URS Screening Criteria	URS Groundwater Values	Drinking Water Criteria ¹	MW-13 GW-17338-080408-04 8/4/2008	MW-13 GW-017338-022509-017 2/25/2009	MW-13 GW-017338-081909-ACH-12 8/19/2009	MW-13 GW-017338-030310-RAM-021 3/3/2010
Units	a	b	c				
Volatile Organic Compounds							
Trichloroethene	mg/L	0.002	0.005	0.005	0.01 U	0.002 U	0.005 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.05 U	0.002 U	0.005 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.05 U	0.002 U	0.005 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.05 U	0.002 U	0.005 U
Xylenes (total)	mg/L	1.2	10	10	3.2 ^a	3.6 ^a	3.1 ^a
Semi-volatile Organic Compounds							
Acenaphthene	mg/L	NC	0.037	2.19	0.1 U	0.2 U	0.0038 U
Acenaphthylene	mg/L	NC	NC	1.1	0.1 U	0.2 U	0.004 U
Acetophenone	mg/L	NC	0.000004	NC	0.11 ^b	0.46 ^b	0.18 ^b
Anthracene	mg/L	NC	0.18	11	0.1 U	0.2 U	0.0036 U
Atrazine	mg/L	0.0003	0.003	0.003	0.1 U	0.2 U	0.0048 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.1 UJ	0.2 UJ	0.0013 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.01 U	0.02 U	0.0004 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.01 U	0.02 U	0.0006 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.01 U	0.02 U	0.0008 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.1 U	0.2 U	0.0027 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.01 U	0.02 U	0.0003 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.1 U	0.2 U	0.0054 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.1 U	0.2 U	0.0035 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.01 U	0.02 U	0.00041 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.1 U	0.2 U	0.0024 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.1 U	0.2 U	0.0039 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.1 U	0.2 U	0.0028 U
Caprolactam	mg/L	NC	1.8	18.3	0.1 U	0.2 U	0.0005 U
Carbazole	mg/L	NC	0.003	0.0336	0.1 U	0.2 U	0.0031 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.1 U	0.2 U	0.002 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.1 U	0.2 U	0.0021 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.1 U	0.2 U	0.0038 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.1 U	0.2 U	0.0026 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.1 U	0.2 U	0.0039 U
Chrysene	mg/L	NC	0.009	0.0921	0.1 U	0.2 U	0.0038 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.01 U	0.02 U	0.00016 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.1 U	0.2 U	0.0036 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.2 U	0.4 U	0.007 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.1 U	0.2 U	0.0028 U
Diethyl phthalate	mg/L	NC	5	29.2	0.1 U	0.2 U	0.0038 U
Dimethyl phthalate	mg/L	NC	37	365	0.1 U	0.2 U	0.0033 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.1 U	0.2 U	0.015
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.1 U	0.2 U	0.0028 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.31 U	0.61 UJ	0.0052 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.31 U	0.61 UJ	0.0048 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.02 U	0.04 U	0.00043 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location: Sample ID: Sample Date:		URS Screening Criteria	URS Groundwater Values	Drinking Water Criteria ¹	MW-13 GW-17338-080408-04 8/4/2008	MW-13 GW-017338-022509-017 2/25/2009	MW-13 GW-017338-081909-ACH-12 8/19/2009	MW-13 GW-017338-030310-RAM-021 3/3/2010
	Units	a	b	c				
Semi-volatile Organic Compounds								
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.02 U	0.04 U	0.02 U	0.00059 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.1 U	0.2 U	0.1 UJ	0.0019 U
Fluoranthene	mg/L	NC	0.15	1.46	0.1 U	0.2 U	0.1 U	0.0026 U
Fluorene	mg/L	NC	0.024	1.46	0.1 U	0.2 U	0.1 U	0.0033 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.01 U	0.02 U	0.01 U	0.00002 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.02 U	0.04 U	0.02 U	0.00094 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.1 U	0.2 U	0.1 UJ	0.0046 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.01 U	0.02 U	0.01 U	0.0005 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.01 U	0.02 U	0.0037 J ^{bc}	0.00012 U
Isophorone	mg/L	0.071	0.1	0.708	0.1 U	0.2 U	0.1 U	0.0036 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.037 J ^b	0.16 J ^b	0.061 J ^b	0.064 ^b
2-Methylphenol	mg/L	NC	0.18	1.83	0.1 U	0.2 U	0.1 U	0.007 J
4-Methylphenol	mg/L	NC	0.018	0.183	0.017 J	0.013 J	0.1 U	0.023 ^b
Naphthalene	mg/L	0.0007	0.02	0.73	1.8 ^{abc}	3.2 ^{abc}	1.9 ^{abc}	1.7 ^{abc}
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.2 U	0.4 U	0.2 U	0.0057 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.2 U	0.4 U	0.2 U	0.0043 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.2 U	0.4 U	0.2 U	0.004 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.01 U	0.02 U	0.01 U	0.00041 U
2-Nitrophenol	mg/L	NC	NC	NC	0.1 U	0.2 U	0.1 U	0.0034 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.31 U	0.61 U	0.31 U	0.0023 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.01 U	0.02 U	0.01 U	0.00032 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.1 U	0.2 U	0.1 U	0.0039 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.1 U	0.2 U	0.1 U	0.0032 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.31 U	0.61 UJ	0.31 UJ	0.00028 U
Phenanthrene	mg/L	NC	0.12	1.1	0.1 U	0.2 U	0.1 U	0.0036 U
Phenol	mg/L	NC	4	11	0.1 U	0.2 U	0.1 U	0.00089 U
Pyrene	mg/L	NC	0.018	1.1	0.1 U	0.2 U	0.1 U	0.0043 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.1 U	0.2 U	0.1 U	0.0025 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.1 U	0.2 U	0.1 U	0.0032 U
Metals								
Aluminum	mg/L	NC	0.2	36.5	1.55 ^b	29.4 ^b	11.2 ^b	8.74 ^b
Antimony	mg/L	NC	0.006	0.006	0.0084 U	0.01 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.0265 ^{ac}	0.0301 ^{ac}	0.0309 ^{ac}	0.0243 ^{ac}
Barium	mg/L	0.26	2	2	0.183 J	0.297 ^a	0.187 J	0.2 J
Beryllium	mg/L	NC	0.004	0.004	0.00067 U	0.0027 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.005 U	0.004 U	0.005 U	0.005 U
Calcium	mg/L	NC	NC	NC	35	33.1	27.3	27.3
Chromium	mg/L	NC	0.1	0.1	0.018 U	0.0457	0.0165	0.0118
Cobalt	mg/L	NC	0.22	0.73	0.1 U	0.0176 J	0.0081 J	0.0061 J
Copper	mg/L	NC	1.3	1.3	0.0057 J	0.0402	0.0296	0.0179 J
Iron	mg/L	NC	0.3	11	45 ^{bc}	117 ^{bc}	69.3 ^{bc}	54.5 ^{bc}
Lead	mg/L	NC	0.015	0.015	0.0081	0.014	0.005 U	0.0093

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location:</i>		URS	URS	Drinking	MW-13	MW-13	MW-13	MW-13
<i>Sample ID:</i>		Screening	Groundwater	Water	GW-17338-080408-04	GW-017338-022509-017	GW-017338-081909-ACH-12	GW-017338-030310-RAM-021
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	8/4/2008	2/25/2009	8/19/2009	3/3/2010
	<i>Units</i>	a	b	c				
Metals								
Magnesium	mg/L	NC	NC	NC	22.2	23.8	18.4	18.7
Manganese	mg/L	NC	0.05	0.876	0.532^b	1^{bc}	0.8^b	0.561^b
Mercury	mg/L	NC	0.002	0.002	0.0002 U	0.0002 U	0.00024	0.0002 U
Nickel	mg/L	NC	0.1	0.73	0.065 U	0.0237 J	0.0096 J	0.0065 J
Potassium	mg/L	NC	NC	NC	4.9 J	5.71	3.92 J	4.34 J
Selenium	mg/L	NC	0.05	0.05	0.0057 U	0.005 U	0.01 U	0.01 U
Silver	mg/L	NC	0.1	0.183	0.0086 U	0.01 U	0.002 J	0.0016 J
Sodium	mg/L	NC	NC	NC	68.1	99.5	76.7	80
Thallium	mg/L	NC	0.002	0.002	0.0097 U	0.0095 U	0.01 U	0.01 U
Vanadium	mg/L	NC	0.026	0.0365	0.0021 J	0.0661^{bc}	0.0241 J	0.0171 J
Zinc	mg/L	NC	2	11	0.03 U	0.0646	0.0256 J	0.0197 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- Not analyzed.

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.

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location: Sample ID: Sample Date:		URS Screening Criteria	URS Groundwater Values	Drinking Water Criteria ¹	MW-14 GW-17338-080508-15 8/5/2008	MW-15 GW-017338-022409-004 2/24/2009	MW-15 GW-017338-030210-RAM-011 3/2/2010	MW-16 GW-017338-022409-006 2/24/2009
	Units	a	b	c				
Volatile Organic Compounds								
Acetone	mg/L	NC	0.061	32.9	R	0.02 U	R	0.01 U
Benzene	mg/L	0.0004	0.005	0.005	0.002 U	0.012 ^{abc}	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.002 U	0.002 U	0.001 U	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.008 U	0.002 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.01 U	0.002 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.01 U	0.02 U	0.01 U	0.01 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.01 U	0.002 U	0.001 U	0.001 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.004 U	0.002 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.01 U	0.29 ^{abc}	0.001 U	0.001 U
Chloroethane	mg/L	NC	0.004	14.6	0.01 U	0.002 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.01 U	0.002 U	0.00022 J ^a	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.01 U	0.002 U	0.001 U	0.001 U
Cyclohexane	mg/L	NC	NC	62.1	0.01 U	0.002 U	0.00037 J	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.01 U	0.002 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.01 U	0.002 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.01 U	0.002 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.01 U	0.089 ^a	0.00019 J	0.001 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.01 U	0.0074 ^a	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.01 U	0.12 ^{abc}	0.00027 J	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.01 U	0.002 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.01 U	0.002 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.004 U	0.002 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.004 U	0.002 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.01 U	0.002 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.01 U	0.002 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.002 U	0.002 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.01 U	0.002 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.01 U	0.002 U	0.001 U	0.001 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.017	0.002 U	0.0074	0.014
2-Hexanone	mg/L	NC	0.15	NC	0.01 U	0.02 U	0.01 U	0.01 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.01 U	0.002 U	0.0014	0.066
Methyl acetate	mg/L	NC	0.61	36.5	0.01 U	0.002 U	0.002 U	0.001 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.01 U	0.002 U	0.00048 J	0.0003 J
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.01 U	0.002 U	0.001 U	0.0004 J
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.01 U	0.02 U	R	0.01 U
Methylene chloride	mg/L	0.004	0.005	0.005	0.006 U	0.002 U	0.001 U	0.001 U
Styrene	mg/L	NC	0.1	0.1	0.01 U	0.002 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.002 U	0.002 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.002 U	0.0008 J	0.00066 J	0.001 U
Toluene	mg/L	0.75	1	1	0.12	0.002 U	0.001	0.0005 J
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.01 U	0.022	0.001 U	0.001 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.01 U	0.002 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.006 U	0.002 U	0.001 U	0.001 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-14	MW-15	MW-15	MW-16
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-17338-080508-15	GW-017338-022409-004	GW-017338-030210-RAM-011	GW-017338-022409-006
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	8/5/2008	2/24/2009	3/2/2010	2/24/2009
<i>Units</i>	a	b	c				
<i>Volatile Organic Compounds</i>							
Trichloroethene	mg/L	0.002	0.005	0.005	0.002 U	0.002 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.01 U	0.002 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.01 U	0.002 U	0.001 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.01 U	0.002 U	0.001 U
Xylenes (total)	mg/L	1.2	10	10	0.023	0.006 U	0.022
							0.0093
<i>Semi-volatile Organic Compounds</i>							
Acenaphthene	mg/L	NC	0.037	2.19	0.01 U	0.01 U	0.0038 U
Acenaphthylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.0041 U
Acetophenone	mg/L	NC	0.000004	NC	0.01 U	0.01 U	0.0044 U
Anthracene	mg/L	NC	0.18	11	0.01 U	0.01 U	0.0036 U
Atrazine	mg/L	0.0003	0.003	0.003	0.01 U	0.01 U	0.0049 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.01 UJ	0.01 UJ	0.0014 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.00002 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.001 U	0.001 U	0.000031 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.001 U	0.001 U	0.000041 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.01 U	0.01 U	0.0028 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.001 U	0.001 U	0.00031 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.01 U	0.01 U	0.0055 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.01 U	0.01 U	0.0035 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.001 U	0.001 U	0.00042 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.01 U	0.01 U	0.0024 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.004 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.01 U	0.01 U	0.0028 U
Caprolactam	mg/L	NC	1.8	18.3	0.01 U	0.01 U	0.00051 U
Carbazole	mg/L	NC	0.003	0.0336	0.01 U	0.01 U	0.0031 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.01 U	0.01 U	0.002 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.01 U	0.01 U	0.0021 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.01 U	0.01 U	0.0038 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.01 U	0.01 U	0.0027 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.01 U	0.004 U
Chrysene	mg/L	NC	0.009	0.0921	0.01 U	0.01 U	0.0038 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.001 U	0.001 U	0.00016 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.01 U	0.01 U	0.0037 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.021 U	0.021 U	0.0071 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.01 U	0.01 U	0.0028 U
Diethyl phthalate	mg/L	NC	5	29.2	0.01 U	0.01 U	0.0039 U
Dimethyl phthalate	mg/L	NC	37	365	0.01 U	0.01 U	0.0033 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.01 U	0.01 U	0.0026 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.01 U	0.01 U	0.0028 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.031 U	0.032 U	0.0053 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.031 U	0.032 U	0.0049 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.0021 U	0.0021 U	0.00044 U
							0.002 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location: Sample ID: Sample Date:	URS Screening Criteria	URS Groundwater Values	Drinking Water Criteria ¹	MW-14 GW-17338-080508-15 8/5/2008	MW-15 GW-017338-022409-004 2/24/2009	MW-15 GW-017338-030210-RAM-011 3/2/2010	MW-16 GW-017338-022409-006 2/24/2009
Units	a	b	c				
Semi-volatile Organic Compounds							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.0021 U	0.0006 U	0.002 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.01 U	0.0019 U	0.01 U
Fluoranthene	mg/L	NC	0.15	1.46	0.01 U	0.0027 U	0.0011 J
Fluorene	mg/L	NC	0.024	1.46	0.01 U	0.0033 U	0.01 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.001 U	0.00001 U	0.001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.0021 U	0.00096 U	0.002 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.01 U	0.0047 U	0.01 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.001 U	0.00051 U	0.001 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.001 U	0.00012 U	0.001 U
Isophorone	mg/L	0.071	0.1	0.708	0.01 U	0.0037 U	0.01 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.01 U	0.0032 U	0.01 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.01 U	0.0017 U	0.01 U
4-Methylphenol	mg/L	NC	0.018	0.183	0.01 U	0.0016 U	0.01 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.01 U	0.0037 U	0.044 ^{ab}
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.021 U	0.0058 U	0.02 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.021 U	0.0044 U	0.02 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.021 U	0.0041 U	0.02 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.001 U	0.00042 U	0.001 U
2-Nitrophenol	mg/L	NC	NC	NC	0.01 U	0.0035 U	0.01 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.031 U	0.0024 U	0.03 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.001 U	0.00033 U	0.001 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.01 U	0.0039 U	0.01 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.01 U	0.0033 U	0.01 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.031 U	0.00014 U	0.03 U
Phenanthrene	mg/L	NC	0.12	1.1	0.01 U	0.0036 U	0.01 U
Phenol	mg/L	NC	4	11	0.01 U	0.00091 U	0.01 U
Pyrene	mg/L	NC	0.018	1.1	0.01 U	0.0044 U	0.0006 J
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.01 U	0.0026 U	0.01 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.01 U	0.0032 U	0.01 U
Metals							
Aluminum	mg/L	NC	0.2	36.5	1.41 ^b	0.714 ^b	4.54 ^b
Antimony	mg/L	NC	0.006	0.006	0.0084 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.0059 U	0.0042 U	0.0042 U
Barium	mg/L	0.26	2	2	0.223	0.256	0.286 ^a
Beryllium	mg/L	NC	0.004	0.004	0.00067 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.005 U	0.004 U	0.004 U
Calcium	mg/L	NC	NC	NC	70.5	57.4	40.8
Chromium	mg/L	NC	0.1	0.1	0.003 J	0.01 U	0.0185
Cobalt	mg/L	NC	0.22	0.73	0.1 U	0.0031 J	0.0093 J
Copper	mg/L	NC	1.3	1.3	0.0038 J	0.025 U	0.0254
Iron	mg/L	NC	0.3	11	1.27 ^b	0.913 ^b	
Lead	mg/L	NC	0.015	0.015	0.0024 U	0.003 U	
						23.5 ^{bc}	16.6 ^{bc}
						0.0153 ^{bc}	0.0049 J

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location:</i>		URS	URS	Drinking	MW-14	MW-15	MW-15	MW-16
<i>Sample ID:</i>		Screening	Groundwater	Water	GW-17338-080508-15	GW-017338-022409-004	GW-017338-030210-RAM-011	GW-017338-022409-006
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	8/5/2008	2/24/2009	3/2/2010	2/24/2009
	<i>Units</i>	a	b	c				
Metals								
Magnesium	mg/L	NC	NC	NC	43.3	29.3	21.2	20
Manganese	mg/L	NC	0.05	0.876	0.0147 J	0.0528^b	0.0787^b	0.351^b
Mercury	mg/L	NC	0.002	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	NC	0.1	0.73	0.065 U	0.0029 J	0.0229 J	0.0035 J
Potassium	mg/L	NC	NC	NC	9.78	9.03	8.18	10.3
Selenium	mg/L	NC	0.05	0.05	0.0057 U	0.005 U	0.01 U	0.005 U
Silver	mg/L	NC	0.1	0.183	0.0016 J	0.01 U	0.0051 J	0.01 U
Sodium	mg/L	NC	NC	NC	402	130	143	111
Thallium	mg/L	NC	0.002	0.002	0.0097 U	0.0095 U	0.01 U	0.0095 U
Vanadium	mg/L	NC	0.026	0.0365	0.0029 J	0.05 U	0.0301 J^b	0.05 U
Zinc	mg/L	NC	2	11	0.0095 J	0.0072 J	0.0306	0.0094 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

Sample Location:		URS	URS	Drinking	MW-16	MW-17	MW-17	MW-18
Sample ID:		Screening	Groundwater	Water	GW-017338-030210-ACH-013	GW-017338-022409-007	GW-017338-030310-RAM-015	GW-017338-022409-008
Sample Date:		Criteria	Values	Criteria ¹	3/2/2010	2/24/2009	3/3/2010	2/24/2009
	Units	a	b	c				
Volatile Organic Compounds								
Acetone	mg/L	NC	0.061	32.9	R	0.01 U	R	0.01 U
Benzene	mg/L	0.0004	0.005	0.005	0.00051 J ^a	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.01 U	0.01 U	0.01 U	0.01 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.001 U	0.001 U	0.001 U	0.001 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.001 U	0.001 U	0.001 U	0.001 U
Chloroethane	mg/L	NC	0.004	14.6	0.001 UJ	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.001 U	0.001 U	0.001 U	0.0002 J ^a
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.001 U	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	NC	NC	62.1	0.00069 J	0.001 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.001 U	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.27	0.001 U	0.001 J	0.001 U
2-Hexanone	mg/L	NC	0.15	NC	0.01 U	0.01 U	0.01 U	0.01 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.56 ^b	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	NC	0.61	36.5	0.002 U	0.001 U	0.002 U	0.001 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.0016	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.001 U	0.0004 J	0.001 U	0.001 U
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	R	0.01 U	R	0.01 U
Methylene chloride	mg/L	0.004	0.005	0.005	0.001 U	0.001 U	0.001 U	0.001 U
Styrene	mg/L	NC	0.1	0.1	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.001 U	0.001 U	0.001 U	0.0004 J
Toluene	mg/L	0.75	1	1	0.01	0.0004 J	0.00047 J	0.0007 J
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.001 U	0.001 U	0.001 U	0.001 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.001 U	0.001 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-16	MW-17	MW-17	MW-18
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-030210-ACH-013	GW-017338-022409-007	GW-017338-030310-RAM-015	GW-017338-022409-008
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	3/2/2010	2/24/2009	3/3/2010	2/24/2009
<i>Units</i>	a	b	c				
<i>Volatile Organic Compounds</i>							
Trichloroethene	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	1.2	10	10	0.17	0.0002 J	0.0002 J
<i>Semi-volatile Organic Compounds</i>							
Acenaphthene	mg/L	NC	0.037	2.19	0.0038 U	0.01 U	0.0038 U
Acenaphthylene	mg/L	NC	NC	1.1	0.0041 U	0.01 U	0.0041 U
Acetophenone	mg/L	NC	0.000004	NC	0.015 ^b	0.01 U	0.0044 U
Anthracene	mg/L	NC	0.18	11	0.0036 U	0.01 U	0.0036 U
Atrazine	mg/L	0.0003	0.003	0.003	0.0049 U	0.01 U	0.0049 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.0014 UJ	0.01 UJ	0.0014 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.000052	0.001 U	0.00002 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.000031 U	0.001 U	0.000031 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.000041 U	0.001 U	0.000041 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.0028 U	0.01 U	0.0028 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.00031 U	0.001 U	0.00031 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.0055 U	0.01 U	0.0055 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.0035 U	0.01 U	0.0035 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.00042 U	0.001 U	0.00042 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.0024 U	0.01 U	0.0024 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.004 U	0.01 U	0.004 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.0028 U	0.01 U	0.0028 U
Caprolactam	mg/L	NC	1.8	18.3	0.00051 U	0.01 U	0.00051 U
Carbazole	mg/L	NC	0.003	0.0336	0.0031 U	0.01 U	0.0031 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.002 U	0.01 U	0.002 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.0021 U	0.01 U	0.0021 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.0038 U	0.01 U	0.0038 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.0027 U	0.01 U	0.0027 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.004 U	0.01 U	0.004 U
Chrysene	mg/L	NC	0.009	0.0921	0.0038 U	0.01 U	0.0038 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.00016 U	0.001 U	0.00016 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.0037 U	0.01 U	0.0037 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.0071 U	0.02 U	0.0071 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.0028 U	0.01 U	0.0028 U
Diethyl phthalate	mg/L	NC	5	29.2	0.0039 U	0.01 U	0.0039 U
Dimethyl phthalate	mg/L	NC	37	365	0.0033 U	0.01 U	0.0033 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.0026 U	0.01 U	0.0026 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.0028 U	0.01 U	0.0028 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.0053 U	0.03 U	0.0053 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.0049 U	0.03 U	0.0049 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.00044 U	0.002 U	0.00044 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

Sample Location:		URS	URS	Drinking	MW-16	MW-17	MW-17	MW-18
Sample ID:		Screening	Groundwater	Water	GW-017338-030210-ACH-013	GW-017338-022409-007	GW-017338-030310-RAM-015	GW-017338-022409-008
Sample Date:		Criteria	Values	Criteria ¹	3/2/2010	2/24/2009	3/3/2010	2/24/2009
	Units	a	b	c				
Semi-volatile Organic Compounds								
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.0006 U	0.002 U	0.0006 U	0.002 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.0019 U	0.01 U	0.0019 U	0.01 U
Fluoranthene	mg/L	NC	0.15	1.46	0.0034 J	0.01 U	0.0027 U	0.01 U
Fluorene	mg/L	NC	0.024	1.46	0.0033 U	0.01 U	0.0033 U	0.01 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.00001 U	0.001 U	0.00001 U	0.001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.00096 U	0.002 U	0.00096 U	0.002 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.0047 U	0.01 U	0.0047 U	0.01 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.00051 U	0.001 U	0.00051 U	0.001 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.00012 U	0.001 U	0.00012 U	0.001 U
Isophorone	mg/L	0.071	0.1	0.708	0.0037 U	0.01 U	0.0037 U	0.01 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.0032 U	0.01 U	0.0032 U	0.01 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.0017 U	0.01 U	0.0017 U	0.01 U
4-Methylphenol	mg/L	NC	0.018	0.183	0.0016 U	0.01 U	0.0016 U	0.01 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.34 ^{ab}	0.01 U	0.0037 U	0.01 U
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.0058 U	0.02 U	0.0058 U	0.02 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.0044 U	0.02 U	0.0044 U	0.02 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.0041 U	0.02 U	0.0041 U	0.02 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.00042 U	0.001 U	0.00042 U	0.001 U
2-Nitrophenol	mg/L	NC	NC	NC	0.0035 U	0.01 U	0.0035 U	0.01 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.0024 U	0.03 U	0.0024 U	0.031 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.00033 U	0.001 U	0.00033 U	0.001 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.0039 U	0.01 U	0.0039 U	0.01 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.0033 U	0.01 U	0.0033 U	0.01 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.00014 U	0.03 U	0.00014 U	0.031 U
Phenanthrene	mg/L	NC	0.12	1.1	0.0036 U	0.01 U	0.0036 U	0.01 U
Phenol	mg/L	NC	4	11	0.00091 U	0.01 U	0.00091 U	0.01 U
Pyrene	mg/L	NC	0.018	1.1	0.0044 U	0.01 U	0.0044 U	0.01 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.0026 U	0.01 U	0.0026 U	0.01 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.0032 U	0.01 U	0.0032 U	0.01 U
Metals								
Aluminum	mg/L	NC	0.2	36.5	1.56 ^b	5.28 ^b	1.56 ^b	2.44 ^b
Antimony	mg/L	NC	0.006	0.006	0.01 U	0.01 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.005 U	0.0042 U	0.005 U	0.0042 U
Barium	mg/L	0.26	2	2	0.484 ^a	0.131 J	0.159 J	0.0638 J
Beryllium	mg/L	NC	0.004	0.004	0.002 U	0.002 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.005 U	0.004 U	0.005 U	0.004 U
Calcium	mg/L	NC	NC	NC	96.1	25.6	35.6	15.6
Chromium	mg/L	NC	0.1	0.1	0.01 U	0.0091 J	0.01 U	0.0036 J
Cobalt	mg/L	NC	0.22	0.73	0.05 U	0.0036 J	0.05 U	0.0031 J
Copper	mg/L	NC	1.3	1.3	0.025 U	0.0268	0.025 U	0.0253
Iron	mg/L	NC	0.3	11	11.4 ^{bc}	16 ^{bc}	3.56 ^b	1.47 ^b
Lead	mg/L	NC	0.015	0.015	0.005 U	0.003 U	0.0043 J	0.003 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	<i>MW-16</i>	<i>MW-17</i>	<i>MW-17</i>	<i>MW-18</i>
<i>Sample ID:</i>		Screening	Groundwater	Water	<i>GW-017338-030210-ACH-013</i>	<i>GW-017338-022409-007</i>	<i>GW-017338-030310-RAM-015</i>	<i>GW-017338-022409-008</i>
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	<i>3/2/2010</i>	<i>2/24/2009</i>	<i>3/3/2010</i>	<i>2/24/2009</i>
	<i>Units</i>	a	b	c				
<i>Metals</i>								
Magnesium	mg/L	NC	NC	NC	16.3	13.2	18.6	12.2
Manganese	mg/L	NC	0.05	0.876	0.628^b	0.0727^b	0.0183	0.342^b
Mercury	mg/L	NC	0.002	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	NC	0.1	0.73	0.04 U	0.0062 J	0.04 U	0.0026 J
Potassium	mg/L	NC	NC	NC	23.8	4.38 J	4.44 J	1.85 J
Selenium	mg/L	NC	0.05	0.05	0.01 U	0.005 U	0.01 U	0.005 U
Silver	mg/L	NC	0.1	0.183	0.0019 J	0.01 U	0.0011 J	0.01 U
Sodium	mg/L	NC	NC	NC	219	25.1	33.2	64
Thallium	mg/L	NC	0.002	0.002	0.01 U	0.0095 U	0.01 U	0.0095 U
Vanadium	mg/L	NC	0.026	0.0365	0.0027 J	0.0105 J	0.003 J	0.0055 J
Zinc	mg/L	NC	2	11	0.0078 J	0.0173 J	0.0093 J	0.0061 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- - Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

Sample Location:		URS	URS	Drinking	MW-18	MW-19	MW-19	MW-19
Sample ID:		Screening	Groundwater	Water	GW-017338-030310-ACH-014	GW-17338-080508-16	GW-17338-112008-05	GW-017338-022309-002
Sample Date:		Criteria	Values	Criteria ¹	3/3/2010	8/5/2008	11/20/2008	2/23/2009
	Units	a	b	c				
Volatile Organic Compounds								
Acetone	mg/L	NC	0.061	32.9	R	R	0.005 U	0.01 U
Benzene	mg/L	0.0004	0.005	0.005	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.001 U	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.001 U	0.004 U	0.004 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.001 U	0.005 U	0.005 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.01 U	0.005 U	0.005 U	0.01 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.001 U	0.005 U	0.005 U	0.001 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.001 U	0.002 U	0.002 U	0.001 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.001 U	0.0008 J	0.005 U	0.0003 J
Chloroethane	mg/L	NC	0.004	14.6	0.001 U	0.005 U	0.005 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.00054 J ^a	0.005 U	0.005 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.001 U	0.005 U	0.005 U	0.001 U
Cyclohexane	mg/L	NC	NC	62.1	0.001 U	0.005 U	-	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.001 U	0.005 U	-	0.001 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.001 U	0.005 U	0.005 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.001 U	0.005 U	-	0.001 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.001 U	0.005 U	-	0.0002 J
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.001 U	0.005 U	-	0.001 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.001 U	0.0004 J	-	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.001 U	0.005 U	-	0.001 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.001 U	0.005 U	0.005 U	0.001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.001 U	0.002 U	0.002 U	0.001 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.001 U	0.002 U	0.002 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.001 U	0.005 U	0.005 U	0.0003 J
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.001 U	0.005 U	0.005 U	0.001 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.005 U	0.005 U	0.001 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.005 U	0.005 U	0.001 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.0011	0.023	0.004 U	0.0002 J
2-Hexanone	mg/L	NC	0.15	NC	0.01 U	0.005 U	0.005 U	0.01 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.00047 J	0.005 U	-	0.001 U
Methyl acetate	mg/L	NC	0.61	36.5	0.002 U	0.005 U	-	0.001 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.001 U	0.005 U	-	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.001 U	0.005 U	-	0.001 U
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	R	0.005 U	0.005 U	0.01 U
Methylene chloride	mg/L	0.004	0.005	0.005	0.001 U	0.003 U	0.003 U	0.001 U
Styrene	mg/L	NC	0.1	0.1	0.001 U	0.005 U	0.005 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.75	1	1	0.0024	0.1	0.005 U	0.0008 J
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.001 U	0.005 U	-	0.001 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.001 U	0.005 U	0.005 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.001 U	0.003 U	0.003 U	0.001 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	<i>MW-18</i>	<i>MW-19</i>	<i>MW-19</i>	<i>MW-19</i>
<i>Sample ID:</i>		Screening	Groundwater	Water	<i>GW-017338-030310-ACH-014</i>	<i>GW-17338-080508-16</i>	<i>GW-17338-112008-05</i>	<i>GW-017338-022309-002</i>
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	<i>3/3/2010</i>	<i>8/5/2008</i>	<i>11/20/2008</i>	<i>2/23/2009</i>
	<i>Units</i>	<i>a</i>	<i>b</i>	<i>c</i>				
<i>Volatile Organic Compounds</i>								
Trichloroethene	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.001 U	0.005 U	-	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.001 U	0.005 U	-	0.001 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.001 U	0.005 U	0.005 U	0.001 U
Xylenes (total)	mg/L	1.2	10	10	0.002 J	0.041	0.005 U	0.0003 J
<i>Semi-volatile Organic Compounds</i>								
Acenaphthene	mg/L	NC	0.037	2.19	0.0038 U	0.01 U	0.01 U	0.01 U
Acenaphthylene	mg/L	NC	NC	1.1	0.0041 U	0.01 U	0.01 U	0.01 U
Acetophenone	mg/L	NC	0.000004	NC	0.0044 U	0.01 U	0.01 U	0.01 U
Anthracene	mg/L	NC	0.18	11	0.0036 U	0.01 U	0.01 U	0.01 U
Atrazine	mg/L	0.0003	0.003	0.003	0.0049 U	0.01 U	0.01 U	0.01 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.0014 UJ	0.01 UJ	0.01 UJ	0.01 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.00002 U	0.001 U	0.001 U	0.001 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.000031 U	0.001 U	0.001 U	0.001 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.000041 U	0.001 U	0.001 U	0.001 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.0028 U	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.00031 U	0.001 U	0.001 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.0055 U	0.01 U	0.01 U	0.01 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.0035 U	0.01 U	0.01 U	0.01 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.00042 U	0.001 U	0.001 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.0024 U	0.01 U	0.01 U	0.01 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.004 U	0.01 U	0.01 U	0.01 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.0028 U	0.01 U	0.01 U	0.01 U
Caprolactam	mg/L	NC	1.8	18.3	0.00051 U	0.01 U	0.01 U	0.01 U
Carbazole	mg/L	NC	0.003	0.0336	0.0031 U	0.01 U	0.01 U	0.01 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.002 U	0.01 U	0.01 U	0.01 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.0021 U	0.01 U	0.01 U	0.01 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.0038 U	0.01 U	0.01 U	0.01 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.0027 U	0.01 U	0.01 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.004 U	0.01 U	0.01 U	0.01 U
Chrysene	mg/L	NC	0.009	0.0921	0.0038 U	0.01 U	0.01 U	0.01 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.00016 U	0.001 U	0.001 U	0.001 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.0037 U	0.01 U	0.01 U	0.01 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.0071 U	0.02 U	0.02 U	0.02 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.0028 U	0.01 U	0.01 U	0.01 U
Diethyl phthalate	mg/L	NC	5	29.2	0.0039 U	0.01 U	0.01 U	0.01 U
Dimethyl phthalate	mg/L	NC	37	365	0.0033 U	0.01 U	0.01 U	0.01 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.0026 U	0.01 U	0.01 U	0.01 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.0028 U	0.01 U	0.01 U	0.01 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.0053 U	0.031 U	0.03 U	0.03 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.0049 U	0.031 U	0.03 U	0.03 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.00044 U	0.002 U	0.002 U	0.002 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	<i>MW-18</i>	<i>MW-19</i>	<i>MW-19</i>	<i>MW-19</i>
<i>Sample ID:</i>		Screening	Groundwater	Water	<i>GW-017338-030310-ACH-014</i>	<i>GW-17338-080508-16</i>	<i>GW-17338-112008-05</i>	<i>GW-017338-022309-002</i>
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	<i>3/3/2010</i>	<i>8/5/2008</i>	<i>11/20/2008</i>	<i>2/23/2009</i>
	<i>Units</i>	a	b	c				
<i>Semi-volatile Organic Compounds</i>								
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.0006 U	0.002 U	0.002 U	0.002 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.0019 U	0.01 U	0.01 U	0.01 U
Fluoranthene	mg/L	NC	0.15	1.46	0.0027 U	0.01 U	0.01 U	0.01 U
Fluorene	mg/L	NC	0.024	1.46	0.0033 U	0.01 U	0.01 U	0.01 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.00001 U	0.001 U	0.001 U	0.001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.00096 U	0.002 U	0.002 U	0.002 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.0047 U	0.01 U	0.01 U	0.01 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.00051 U	0.001 U	0.001 U	0.001 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.00012 U	0.001 U	0.001 U	0.001 U
Isophorone	mg/L	0.071	0.1	0.708	0.0037 U	0.01 U	0.01 U	0.01 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.0032 U	0.01 U	0.01 U	0.01 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.0017 U	0.01 U	0.01 U	0.01 U
4-Methylphenol	mg/L	NC	0.018	0.183	0.0016 U	0.01 U	-	0.01 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.0037 U	0.01 U	0.01 U	0.01 U
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.0058 U	0.02 U	0.02 U	0.02 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.0044 U	0.02 U	0.02 U	0.02 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.0041 U	0.02 U	0.02 U	0.02 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.00042 U	0.001 U	0.001 U	0.001 U
2-Nitrophenol	mg/L	NC	NC	NC	0.0035 U	0.01 U	0.01 U	0.01 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.0024 U	0.031 U	0.03 U	0.03 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.00033 U	0.001 U	0.001 U	0.001 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.0039 U	0.01 U	0.01 U	0.01 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.0033 U	0.01 U	0.01 U	0.01 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.00014 U	0.031 U	0.03 U	0.03 U
Phenanthrene	mg/L	NC	0.12	1.1	0.0036 U	0.01 U	0.01 U	0.01 U
Phenol	mg/L	NC	4	11	0.00091 U	0.01 U	0.01 U	0.01 U
Pyrene	mg/L	NC	0.018	1.1	0.0044 U	0.01 U	0.01 U	0.01 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.0026 U	0.01 U	0.01 U	0.01 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.0032 U	0.01 U	0.01 U	0.01 U
<i>Metals</i>								
Aluminum	mg/L	NC	0.2	36.5	1 ^b	7.48 ^b	1.62 ^b	7.33 ^b
Antimony	mg/L	NC	0.006	0.006	0.01 U	0.0084 U	0.01 U	0.0058 J
Arsenic	mg/L	0.0005	0.05	0.01	0.005 U	0.0071 ^a	0.0048 J ^a	0.0035 J ^a
Barium	mg/L	0.26	2	2	0.0577 J	0.295 ^a	0.221	0.506 ^a
Beryllium	mg/L	NC	0.004	0.004	0.002 U	0.00067 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.005 U	0.005 U	0.004 U	0.004 U
Calcium	mg/L	NC	NC	NC	15.4	42.9	40.9	81.8
Chromium	mg/L	NC	0.1	0.1	0.01 U	0.0088 J	0.0017 J	0.0103
Cobalt	mg/L	NC	0.22	0.73	0.05 U	0.0047 J	0.0023 J	0.0053 J
Copper	mg/L	NC	1.3	1.3	0.0206 J	0.0069 J	0.025 U	0.0287
Iron	mg/L	NC	0.3	11	1.46 ^b	11 ^b	6.85 ^b	12.7 ^{bc}
Lead	mg/L	NC	0.015	0.015	0.005 U	0.0054	0.0035 J	0.0029 J

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location:</i>		URS	URS	Drinking	<i>MW-18</i>	<i>MW-19</i>	<i>MW-19</i>	<i>MW-19</i>
<i>Sample ID:</i>		Screening	Groundwater	Water	<i>GW-017338-030310-ACH-014</i>	<i>GW-17338-080508-16</i>	<i>GW-17338-112008-05</i>	<i>GW-017338-022309-002</i>
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	<i>3/3/2010</i>	<i>8/5/2008</i>	<i>11/20/2008</i>	<i>2/23/2009</i>
	<i>Units</i>	a	b	c				
Metals								
Magnesium	mg/L	NC	NC	NC	13	12.1	11.8	22.7
Manganese	mg/L	NC	0.05	0.876	0.329^b	0.545^b	0.496^b	0.776^b
Mercury	mg/L	NC	0.002	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	NC	0.1	0.73	0.04 U	0.0047 J	0.04 U	0.0067 J
Potassium	mg/L	NC	NC	NC	1.64 J	6.64	4.95 J	8.04
Selenium	mg/L	NC	0.05	0.05	0.01 U	0.0057 U	0.005 U	0.005 U
Silver	mg/L	NC	0.1	0.183	0.01 U	0.0023 J	0.01 U	0.0045 J
Sodium	mg/L	NC	NC	NC	58.7	107	80.6	272
Thallium	mg/L	NC	0.002	0.002	0.01 U	0.0097 U	0.0095 U	0.0095 U
Vanadium	mg/L	NC	0.026	0.0365	0.008 J	0.0153 J	0.05 U	0.013 J
Zinc	mg/L	NC	2	11	0.0062 J	0.0171 J	0.03 U	0.0248 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- - Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	<i>MW-19</i>	<i>MW-19</i>	<i>MW-19</i>	<i>MW-19</i>
<i>Sample ID:</i>	Screening	Groundwater	Water	<i>GW-017338-050809-ACH-002</i>	<i>GW-017338-081709-ACH-002</i>	<i>GW-017338-111209-ACH-05</i>	<i>GW-017338-030110-ACH-004</i>
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	<i>5/8/2009</i>	<i>8/17/2009</i>	<i>11/12/2009</i>	<i>3/1/2010</i>
<i>Units</i>	a	b	c				
<i>Volatile Organic Compounds</i>							
Acetone	mg/L	NC	0.061	32.9	0.01 UJ	R	R
Benzene	mg/L	0.0004	0.005	0.005	0.001 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.001 U	0.001 U	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.001 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.001 U	0.001 UJ	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.01 U	R	0.01 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.001 U	0.00029 J	0.001 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.001 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.001 U	0.001 U	0.00018 J
Chloroethane	mg/L	NC	0.004	14.6	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.001 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.001 U	0.001 U	0.001 U
Cyclohexane	mg/L	NC	NC	62.1	0.001 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.001 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.001 U	0.00054 J	0.00024 J
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.001 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.001 U	0.001 U	0.001 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.001 U	0.001 U	0.001 U
2-Hexanone	mg/L	NC	0.15	NC	0.01 U	0.01 U	0.01 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.001 U	0.001 U	0.001 U
Methyl acetate	mg/L	NC	0.61	36.5	0.002 U	0.002 U	0.002 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.001 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.001 U	0.001 U	0.001 U
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.01 U	0.01 U	R
Methylene chloride	mg/L	0.004	0.005	0.005	0.001 U	0.001 U	0.001 U
Styrene	mg/L	NC	0.1	0.1	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.001 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.001 U	0.001 U	0.001 U
Toluene	mg/L	0.75	1	1	0.001 U	0.001 U	0.00031 J
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.001 U	0.001 U	0.001 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.001 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.001 U	0.001 U	0.001 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location:</i>	URS	URS	Drinking	MW-19	MW-19	MW-19	MW-19
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-050809-ACH-002	GW-017338-081709-ACH-002	GW-017338-111209-ACH-05	GW-017338-030110-ACH-004
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	5/8/2009	8/17/2009	11/12/2009	3/1/2010
<i>Units</i>	a	b	c				
<i>Volatile Organic Compounds</i>							
Trichloroethene	mg/L	0.002	0.005	0.005	0.00057 J	0.00038 J	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.001 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.001 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.001 U	0.001 U	0.001 U
Xylenes (total)	mg/L	1.2	10	10	0.003 U	0.003 U	0.003 U
<i>Semi-volatile Organic Compounds</i>							
Acenaphthene	mg/L	NC	0.037	2.19	0.01 U	0.011 U	0.0038 U
Acenaphthylene	mg/L	NC	NC	1.1	0.01 U	0.011 U	0.0041 U
Acetophenone	mg/L	NC	0.000004	NC	0.01 U	0.011 U	0.0044 U
Anthracene	mg/L	NC	0.18	11	0.01 U	0.011 U	0.0036 U
Atrazine	mg/L	0.0003	0.003	0.003	0.01 U	0.011 U	0.0049 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.01 U	0.011 U	0.0014 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.001 U	0.0011 U	0.00002 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.001 U	0.0011 U	0.000031 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.001 U	0.0011 U	0.000041 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.01 U	0.011 U	0.0028 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.001 U	0.0011 U	0.00031 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.01 U	0.011 U	0.0055 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.01 U	0.011 U	0.0035 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.001 U	0.0011 U	0.00042 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.01 UJ	0.011 U	0.0024 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.011 U	0.004 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.01 U	0.011 U	0.0028 U
Caprolactam	mg/L	NC	1.8	18.3	0.01 U	0.011 U	0.00051 U
Carbazole	mg/L	NC	0.003	0.0336	0.01 U	0.011 U	0.0031 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.01 U	0.011 U	0.002 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.01 U	0.011 U	0.0021 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.01 U	0.011 U	0.0038 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.01 U	0.011 U	0.0027 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.011 U	0.004 U
Chrysene	mg/L	NC	0.009	0.0921	0.01 U	0.011 U	0.0038 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.001 U	0.0011 U	0.00016 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.01 U	0.011 U	0.0037 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.02 U	0.021 U	0.0071 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.01 U	0.011 U	0.0028 U
Diethyl phthalate	mg/L	NC	5	29.2	0.01 U	0.011 U	0.0039 U
Dimethyl phthalate	mg/L	NC	37	365	0.01 U	0.011 U	0.0033 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.01 U	0.011 U	0.0026 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.01 U	0.011 U	0.0028 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.03 U	0.032 U	0.0053 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.03 U	0.032 UJ	0.0049 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.002 U	0.0021 U	0.00044 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

Sample Location:	URS	URS	Drinking	MW-19	MW-19	MW-19	MW-19
Sample ID:	Screening	Groundwater	Water	GW-017338-050809-ACH-002	GW-017338-081709-ACH-02	GW-017338-111209-ACH-05	GW-017338-030110-ACH-004
Sample Date:	Criteria	Values	Criteria ¹	5/8/2009	8/17/2009	11/12/2009	3/1/2010
	Units	a	b	c			
Semi-volatile Organic Compounds							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.002 U	0.0021 U	0.0006 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.01 U	0.011 U	0.0019 U
Fluoranthene	mg/L	NC	0.15	1.46	0.01 U	0.011 U	0.0051 U
Fluorene	mg/L	NC	0.024	1.46	0.01 U	0.011 U	0.0051 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.001 U	0.0011 U	0.00051 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.002 U	0.0021 U	0.00096 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.01 U	0.011 U	0.0051 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.001 U	0.0011 U	0.00051 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.001 U	0.0011 U	0.00051 U
Isophorone	mg/L	0.071	0.1	0.708	0.01 U	0.011 U	0.0051 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.01 U	0.011 U	0.0051 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.01 U	0.011 U	0.0051 U
4-Methylphenol	mg/L	NC	0.018	0.183	0.01 U	0.011 U	0.0051 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.01 U	0.011 U	0.0051 U
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.02 U	0.021 U	0.01 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.02 U	0.021 U	0.01 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.02 U	0.021 U	0.01 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.001 U	0.0011 U	0.00051 U
2-Nitrophenol	mg/L	NC	NC	NC	0.01 U	0.011 U	0.0051 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.03 U	0.032 U	0.015 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.001 U	0.0011 U	0.00051 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.01 U	0.011 U	0.0051 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.01 U	0.011 U	0.0051 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.03 U	0.032 U	0.015 U
Phenanthrene	mg/L	NC	0.12	1.1	0.01 U	0.011 U	0.0051 U
Phenol	mg/L	NC	4	11	0.01 U	0.011 U	0.0051 UJ
Pyrene	mg/L	NC	0.018	1.1	0.01 U	0.011 U	0.0051 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.01 U	0.011 U	0.0051 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.01 U	0.011 U	0.0051 U
Metals							
Aluminum	mg/L	NC	0.2	36.5	1.39 ^b	12.5 ^b	2.25 J ^b
Antimony	mg/L	NC	0.006	0.006	0.01 U	0.01 U	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.26	2	2	0.253	0.176 J	0.198 J
Beryllium	mg/L	NC	0.004	0.004	0.002 U	0.002 U	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.005 U	0.005 U	0.005 U
Calcium	mg/L	NC	NC	NC	44.7	32.1	40.5
Chromium	mg/L	NC	0.1	0.1	0.01 U	0.0145	0.01 U
Cobalt	mg/L	NC	0.22	0.73	0.05 U	0.0031 J	0.05 U
Copper	mg/L	NC	1.3	1.3	0.025 U	0.0312	0.025 U
Iron	mg/L	NC	0.3	11	5.68 ^b	8.46 ^b	5.24 ^b
Lead	mg/L	NC	0.015	0.015	0.0033 J	0.0077	0.005 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location:</i>		URS	URS	Drinking	<i>MW-19</i>	<i>MW-19</i>	<i>MW-19</i>	<i>MW-19</i>
<i>Sample ID:</i>		Screening	Groundwater	Water	<i>GW-017338-050809-ACH-002</i>	<i>GW-017338-081709-ACH-02</i>	<i>GW-017338-111209-ACH-05</i>	<i>GW-017338-030110-ACH-004</i>
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	<i>5/8/2009</i>	<i>8/17/2009</i>	<i>11/12/2009</i>	<i>3/1/2010</i>
	<i>Units</i>	a	b	c				
<i>Metals</i>								
Magnesium	mg/L	NC	NC	NC	12.1	8.88	11.5	13.7
Manganese	mg/L	NC	0.05	0.876	0.42^b	0.264^b	0.39^b	0.487^b
Mercury	mg/L	NC	0.002	0.002	0.0002 U	0.00022	0.0002 U	0.0002 U
Nickel	mg/L	NC	0.1	0.73	0.04 U	0.0078 J	0.04 U	0.04 U
Potassium	mg/L	NC	NC	NC	6.31	4.83 J	4.64 J	4.51 J
Selenium	mg/L	NC	0.05	0.05	0.01 U	0.01 U	0.01 U	0.01 U
Silver	mg/L	NC	0.1	0.183	0.0012 J	0.0011 J	0.0013 J	0.01 U
Sodium	mg/L	NC	NC	NC	193	66.6	73.8	108
Thallium	mg/L	NC	0.002	0.002	0.01 U	0.01 U	0.01 U	0.01 U
Vanadium	mg/L	NC	0.026	0.0365	0.05 U	0.0265 J^b	0.0049 J	0.0024 J
Zinc	mg/L	NC	2	11	0.0068 J	0.0303	0.03 U	0.0062 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- - Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	<i>MW-19</i>	<i>MW-20</i>	<i>MW-20</i>	<i>MW-21</i>
<i>Sample ID:</i>	Screening	Groundwater	Water	<i>GW-017338-051810-ACH-05</i>	<i>GW-017338-012110-ACH-004</i>	<i>GW-017338-030210-RAM-005</i>	<i>GW-017338-012110-ACH-002</i>
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	<i>5/18/2010</i>	<i>1/21/2010</i>	<i>3/2/2010</i>	<i>1/21/2010</i>
<i>Units</i>	a	b	c				
<i>Volatile Organic Compounds</i>							
Acetone	mg/L	NC	0.061	32.9	0.0025 U	-	R
Benzene	mg/L	0.0004	0.005	0.005	0.00013 U	-	0.001 U
Bromodichloromethane	mg/L	0.0002	0.1	0.08	0.000093 U	-	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	0.0001 U	-	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	0.00031 U	-	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	0.00082 U	-	0.01 U
Carbon disulfide	mg/L	NC	0.1	3.65	0.00015 U	-	0.001 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	0.00019 U	-	0.001 U
Chlorobenzene	mg/L	0.011	0.1	0.1	0.00016 U	-	0.00016 J
Chloroethane	mg/L	NC	0.004	14.6	0.00045 U	-	0.001 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	0.00015 U	-	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	0.00021 U	-	0.00021 U
Cyclohexane	mg/L	NC	NC	62.1	0.00013 U	-	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	0.00015 U	-	0.001 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	0.00011 U	-	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	0.00009 U	-	0.001 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	0.00016 U	-	0.001 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	0.00022 U	-	0.001 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	0.00015 U	-	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	0.00029 U	-	0.001 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	0.0001 U	-	0.001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	0.00024 U	-	0.001 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	0.00014 U	-	0.001 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	0.00044 J	-	0.001 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	0.00014 U	-	0.001 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	0.00009 U	-	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	0.00011 U	-	0.001 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	0.00012 U	-	0.001 U
Ethylbenzene	mg/L	NC	0.7	0.7	0.00025 U	-	0.001 U
2-Hexanone	mg/L	NC	0.15	NC	0.00055 U	-	0.01 U
Isopropyl benzene	mg/L	NC	0.066	3.65	0.00021 U	-	0.001 U
Methyl acetate	mg/L	NC	0.61	36.5	0.00033 U	-	0.002 U
Methyl cyclohexane	mg/L	NC	NC	31.4	0.00009 U	-	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	0.00027 J	-	0.001 U
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	0.00068 U	-	R
Methylene chloride	mg/L	0.004	0.005	0.005	0.00019 U	-	0.001 U
Styrene	mg/L	NC	0.1	0.1	0.00013 U	-	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	0.00009 U	-	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	0.0002 U	-	0.001 U
Toluene	mg/L	0.75	1	1	0.00009 U	-	0.001 U
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	0.00044 U	-	0.001 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	0.00025 U	-	0.001 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	0.0001 U	-	0.001 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>	URS	URS	Drinking	MW-19	MW-20	MW-20	MW-21
<i>Sample ID:</i>	Screening	Groundwater	Water	GW-017338-051810-ACH-05	GW-017338-012110-ACH-004	GW-017338-030210-RAM-005	GW-017338-012110-ACH-002
<i>Sample Date:</i>	Criteria	Values	Criteria ¹	5/18/2010	1/21/2010	3/2/2010	1/21/2010
<i>Units</i>	a	b	c				
<i>Volatile Organic Compounds</i>							
Trichloroethene	mg/L	0.002	0.005	0.005	0.00044 J	-	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	0.00016 U	-	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	0.00028 U	-	0.001 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	0.00013 U	-	0.001 U
Xylenes (total)	mg/L	1.2	10	10	0.00043 U	-	0.003 U
<i>Semi-volatile Organic Compounds</i>							
Acenaphthene	mg/L	NC	0.037	2.19	0.004 U	0.01 U	0.0038 U
Acenaphthylene	mg/L	NC	NC	1.1	0.0043 U	0.01 U	0.0041 U
Acetophenone	mg/L	NC	0.000004	NC	0.0046 U	0.01 U	0.0044 U
Anthracene	mg/L	NC	0.18	11	0.0038 U	0.01 U	0.0036 U
Atrazine	mg/L	0.0003	0.003	0.003	0.0051 U	0.01 U	0.0049 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.0014 UJ	0.01 UJ	0.0014 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.000021 U	0.001 U	0.00002 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.000032 U	0.001 U	0.000031 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.000043 U	0.001 U	0.000041 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.0029 U	0.01 U	0.0028 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.00032 U	0.001 U	0.00031 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.0058 U	0.01 U	0.0055 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.0037 U	0.01 U	0.0035 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.00044 U	0.001 U	0.00042 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.0026 U	0.01 U	0.0024 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.0042 U	0.01 U	0.004 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.003 U	0.01 U	0.0028 U
Caprolactam	mg/L	NC	1.8	18.3	R	0.01 U	0.00051 U
Carbazole	mg/L	NC	0.003	0.0336	0.0033 U	0.01 U	0.0031 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	-	0.01 U	0.002 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.0022 UJ	0.01 U	0.0021 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.004 U	0.01 U	0.0038 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	-	0.01 U	0.0027 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.0042 U	0.01 U	0.004 U
Chrysene	mg/L	NC	0.009	0.0921	0.004 U	0.01 U	0.0038 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.00017 U	0.001 U	0.00016 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.0038 U	0.01 U	0.0037 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.0074 U	0.02 U	0.0071 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	-	0.01 U	0.0028 U
Diethyl phthalate	mg/L	NC	5	29.2	0.0041 U	0.01 U	0.0039 U
Dimethyl phthalate	mg/L	NC	37	365	0.0035 U	0.01 U	0.0033 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	-	0.01 U	0.0026 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.0029 U	0.01 U	0.0028 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	-	0.03 U	0.0053 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	-	0.03 U	0.0049 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.00046 U	0.002 U	0.00044 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Sample Location:	URS	URS	Drinking	MW-19	MW-20	MW-20	MW-21
Sample ID:	Screening	Groundwater	Water	GW-017338-051810-ACH-05	GW-017338-012110-ACH-004	GW-017338-030210-RAM-005	GW-017338-012110-ACH-002
Sample Date:	Criteria	Values	Criteria ¹	5/18/2010	1/21/2010	3/2/2010	1/21/2010
	Units	a	b	c			
Semi-volatile Organic Compounds							
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.00063 U	0.002 U	0.0006 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.002 U	0.01 U	0.0019 U
Fluoranthene	mg/L	NC	0.15	1.46	0.0028 U	0.01 U	0.0027 U
Fluorene	mg/L	NC	0.024	1.46	0.0035 U	0.01 U	0.0033 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.000011 U	0.001 U	0.00001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.001 UJ	0.002 U	0.00096 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.0049 U	0.01 U	0.0047 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.00053 U	0.001 U	0.00051 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.00013 U	0.001 U	0.00012 U
Isophorone	mg/L	0.071	0.1	0.708	0.0038 U	0.01 U	0.0037 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.0033 U	0.01 U	0.0032 U
2-Methylphenol	mg/L	NC	0.18	1.83	-	0.01 U	0.0017 U
4-Methylphenol	mg/L	NC	0.018	0.183	-	0.01 U	0.0016 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.0039 U	0.01 U	0.0037 U
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.0061 U	0.02 U	0.0058 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.0046 U	0.02 U	0.0044 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.0042 U	0.02 U	0.0041 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.00044 U	0.001 U	0.00042 U
2-Nitrophenol	mg/L	NC	NC	NC	-	0.01 U	0.0035 U
4-Nitrophenol	mg/L	NC	0.06	NC	-	0.03 U	0.0024 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.00034 U	0.001 U	0.00033 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.0041 U	0.01 U	0.0039 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.0034 U	0.01 U	0.0033 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	-	0.03 U	0.00014 U
Phenanthrene	mg/L	NC	0.12	1.1	0.0038 U	0.01 U	0.0036 U
Phenol	mg/L	NC	4	11	-	0.01 U	0.00091 U
Pyrene	mg/L	NC	0.018	1.1	0.0045 U	0.01 U	0.0044 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	-	0.01 U	0.0026 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	-	0.01 U	0.0032 U
Metals							
Aluminum	mg/L	NC	0.2	36.5	4.46 ^b	-	2.24 ^b
Antimony	mg/L	NC	0.006	0.006	0.0046 U	-	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	0.0052 ^a	-	0.005 U
Barium	mg/L	0.26	2	2	0.219	-	0.0893 J
Beryllium	mg/L	NC	0.004	0.004	0.00094 U	-	0.002 U
Cadmium	mg/L	NC	0.005	0.005	0.00092 U	-	0.005 U
Calcium	mg/L	NC	NC	NC	41.7	-	18.9
Chromium	mg/L	NC	0.1	0.1	0.0052 J	-	0.0034 J
Cobalt	mg/L	NC	0.22	0.73	0.0031 J	-	0.05 U
Copper	mg/L	NC	1.3	1.3	0.0133 J	-	0.025 U
Iron	mg/L	NC	0.3	11	8.7 ^b	-	2.7 ^b
Lead	mg/L	NC	0.015	0.015	0.0063	-	0.005 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	<i>MW-19</i>	<i>MW-20</i>	<i>MW-20</i>	<i>MW-21</i>
<i>Sample ID:</i>		Screening	Groundwater	Water	<i>GW-017338-051810-ACH-05</i>	<i>GW-017338-012110-ACH-004</i>	<i>GW-017338-030210-RAM-005</i>	<i>GW-017338-012110-ACH-002</i>
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	<i>5/18/2010</i>	<i>1/21/2010</i>	<i>3/2/2010</i>	<i>1/21/2010</i>
	<i>Units</i>	a	b	c				
<i>Metals</i>								
Magnesium	mg/L	NC	NC	NC	12.4	-	4.9 J	-
Manganese	mg/L	NC	0.05	0.876	0.454^b	-	0.0144 J	-
Mercury	mg/L	NC	0.002	0.002	0.00018 U	-	0.0002 U	-
Nickel	mg/L	NC	0.1	0.73	0.0035 J	-	0.0041 J	-
Potassium	mg/L	NC	NC	NC	4.47 J	-	2.93 J	-
Selenium	mg/L	NC	0.05	0.05	0.0048 U	-	0.01 U	-
Silver	mg/L	NC	0.1	0.183	0.00097 U	-	0.01 U	-
Sodium	mg/L	NC	NC	NC	73.8	-	112	-
Thallium	mg/L	NC	0.002	0.002	0.0046 U	-	0.01 U	-
Vanadium	mg/L	NC	0.026	0.0365	0.0084 J	-	0.0047 J	-
Zinc	mg/L	NC	2	11	0.01 J	-	0.0463	-

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- - Not analyzed.

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.

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	<i>MW-21</i>	<i>MW-21</i>
<i>Sample ID:</i>		Screening	Groundwater	Water	<i>GW-017338-012110-ACH-003</i>	<i>GW-017338-030210-RAM-007</i>
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	<i>1/21/2010</i>	<i>3/2/2010</i>
	<i>Units</i>	a	b	c	<i>(Duplicate)</i>	
<i>Volatile Organic Compounds</i>						
Acetone	mg/L	NC	0.061	32.9	-	R
Benzene	mg/L	0.0004	0.005	0.005	-	0.001 U
Bromodichloromethane	mg/L	0.0002	0.1	0.08	-	0.001 U
Bromoform	mg/L	0.008	0.1	0.08	-	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.009	0.01	0.0511	-	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	NC	0.19	21.9	-	0.01 U
Carbon disulfide	mg/L	NC	0.1	3.65	-	0.001 U
Carbon tetrachloride	mg/L	0.002	0.005	0.005	-	0.001 U
Chlorobenzene	mg/L	0.011	0.1	0.1	-	0.001 U
Chloroethane	mg/L	NC	0.004	14.6	-	0.001 U
Chloroform (Trichloromethane)	mg/L	0.0001	0.1	0.08	-	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.002	0.003	0.949	-	0.001 U
Cyclohexane	mg/L	NC	NC	62.1	-	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00005	0.0002	0.0002	-	0.001 U
Dibromochloromethane	mg/L	NC	0.0001	0.08	-	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.000001	0.00005	0.00005	-	0.001 U
1,2-Dichlorobenzene	mg/L	0.064	0.6	0.6	-	0.001 U
1,3-Dichlorobenzene	mg/L	0.0005	0.6	1.1	-	0.001 U
1,4-Dichlorobenzene	mg/L	0.0004	0.075	0.075	-	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.35	1	7.3	-	0.001 U
1,1-Dichloroethane	mg/L	NC	0.081	3.65	-	0.001 U
1,2-Dichloroethane	mg/L	0.0001	0.005	0.005	-	0.001 U
1,1-Dichloroethene	mg/L	0.00004	0.007	0.007	-	0.001 U
cis-1,2-Dichloroethene	mg/L	0.061	0.07	0.07	-	0.001 U
trans-1,2-Dichloroethene	mg/L	NC	0.1	0.1	-	0.001 U
1,2-Dichloropropane	mg/L	0.0002	0.005	0.005	-	0.001 U
cis-1,3-Dichloropropene	mg/L	NC	NC	NC	-	0.001 U
trans-1,3-Dichloropropene	mg/L	NC	NC	NC	-	0.001 U
Ethylbenzene	mg/L	NC	0.7	0.7	-	0.001 U
2-Hexanone	mg/L	NC	0.15	NC	-	0.01 U
Isopropyl benzene	mg/L	NC	0.066	3.65	-	0.001 U
Methyl acetate	mg/L	NC	0.61	36.5	-	0.002 U
Methyl cyclohexane	mg/L	NC	NC	31.4	-	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	NC	0.02	0.374	-	0.001 U
4-Methyl-2-pentanone (MIBK)	mg/L	NC	0.014	2.92	-	R
Methylene chloride	mg/L	0.004	0.005	0.005	-	0.001 U
Styrene	mg/L	NC	0.1	0.1	-	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	NC	0.00005	0.00336	-	0.001 U
Tetrachloroethene	mg/L	0.001	0.005	0.005	-	0.001 U
Toluene	mg/L	0.75	1	1	-	0.001 U
1,2,4-Trichlorobenzene	mg/L	NC	0.07	0.07	-	0.001 U
1,1,1-Trichloroethane	mg/L	NC	0.2	0.2	-	0.001 U
1,1,2-Trichloroethane	mg/L	0.0002	0.005	0.005	-	0.001 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	<i>MW-21</i>	<i>MW-21</i>
<i>Sample ID:</i>		Screening	Groundwater	Water	<i>GW-017338-012110-ACH-003</i>	<i>GW-017338-030210-RAM-007</i>
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	<i>1/21/2010</i>	<i>3/2/2010</i>
	<i>Units</i>	<i>a</i>	<i>b</i>	<i>c</i>	<i>(Duplicate)</i>	
<i>Volatile Organic Compounds</i>						
Trichloroethene	mg/L	0.002	0.005	0.005	-	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	1.3	2	11	-	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	NC	5.9	1100	-	0.001 U
Vinyl chloride	mg/L	0.00002	0.002	0.002	-	0.001 U
Xylenes (total)	mg/L	1.2	10	10	-	0.003 U
<i>Semi-volatile Organic Compounds</i>						
Acenaphthene	mg/L	NC	0.037	2.19	0.01 U	0.0039 U
Acenaphthylene	mg/L	NC	NC	1.1	0.01 U	0.0042 U
Acetophenone	mg/L	NC	0.000004	NC	0.01 U	0.0045 U
Anthracene	mg/L	NC	0.18	11	0.01 U	0.0037 U
Atrazine	mg/L	0.0003	0.003	0.003	0.01 U	0.005 U
Benzaldehyde	mg/L	NC	0.37	3.65	0.01 UJ	0.0014 UJ
Benzo(a)anthracene	mg/L	NC	0.00009	0.000921	0.001 U	0.000021 U
Benzo(a)pyrene	mg/L	0.00001	0.0002	0.0002	0.001 U	0.000031 U
Benzo(b)fluoranthene	mg/L	NC	0.00009	0.000921	0.001 U	0.000042 U
Benzo(g,h,i)perylene	mg/L	NC	NC	1.1	0.01 U	0.0028 U
Benzo(k)fluoranthene	mg/L	NC	0.0009	0.00921	0.001 U	0.00031 U
Biphenyl (1,1-Biphenyl)	mg/L	NC	0.03	1.83	0.01 U	0.0056 U
bis(2-Chloroethoxy)methane	mg/L	NC	NC	NC	0.01 U	0.0036 U
bis(2-Chloroethyl)ether	mg/L	NC	0.00001	0.000611	0.001 U	0.00043 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005	0.006	0.006	0.01 U	0.0025 U
4-Bromophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.0041 U
Butyl benzylphthalate (BBP)	mg/L	NC	0.73	7.3	0.01 U	0.0029 U
Caprolactam	mg/L	NC	1.8	18.3	0.01 U	0.00052 U
Carbazole	mg/L	NC	0.003	0.0336	0.01 U	0.0032 U
4-Chloro-3-methylphenol	mg/L	NC	NC	NC	0.01 U	0.0021 U
4-Chloroaniline	mg/L	NC	0.015	0.146	0.01 U	0.0022 U
2-Chloronaphthalene	mg/L	NC	0.049	2.92	0.01 U	0.0039 U
2-Chlorophenol	mg/L	0.03	0.04	0.183	0.01 U	0.0027 U
4-Chlorophenyl phenyl ether	mg/L	NC	NC	NC	0.01 U	0.0041 U
Chrysene	mg/L	NC	0.009	0.0921	0.01 U	0.0039 U
Dibenz(a,h)anthracene	mg/L	NC	0.00001	0.000921	0.001 U	0.00017 U
Dibenzofuran	mg/L	NC	0.002	0.073	0.01 U	0.0037 U
3,3'-Dichlorobenzidine	mg/L	NC	0.0002	0.00149	0.02 U	0.0073 U
2,4-Dichlorophenol	mg/L	NC	0.02	0.11	0.01 U	0.0029 U
Diethyl phthalate	mg/L	NC	5	29.2	0.01 U	0.004 U
Dimethyl phthalate	mg/L	NC	37	365	0.01 U	0.0034 U
2,4-Dimethylphenol	mg/L	NC	0.073	0.73	0.01 U	0.0026 U
Di-n-butylphthalate (DBP)	mg/L	NC	0.37	3.7	0.01 U	0.0029 U
4,6-Dinitro-2-methylphenol	mg/L	NC	0.0004	0.00365	0.03 U	0.0054 U
2,4-Dinitrophenol	mg/L	NC	0.007	0.073	0.03 U	0.005 U
2,4-Dinitrotoluene	mg/L	NC	0.007	0.073	0.002 U	0.00045 U

TABLE 3.1

**ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

<i>Sample Location:</i>		URS	URS	Drinking	<i>MW-21</i>	<i>MW-21</i>
<i>Sample ID:</i>		Screening	Groundwater	Water	<i>GW-017338-012110-ACH-003</i>	<i>GW-017338-030210-RAM-007</i>
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	<i>1/21/2010</i>	<i>3/2/2010</i>
	<i>Units</i>	a	b	c	<i>(Duplicate)</i>	
<i>Semi-volatile Organic Compounds</i>						
2,6-Dinitrotoluene	mg/L	NC	0.004	0.0365	0.002 U	0.00061 U
Di-n-octyl phthalate (DnOP)	mg/L	NC	0.073	1.46	0.01 U	0.002 U
Fluoranthene	mg/L	NC	0.15	1.46	0.01 U	0.0028 U
Fluorene	mg/L	NC	0.024	1.46	0.01 U	0.0034 U
Hexachlorobenzene	mg/L	0.00004	0.001	0.001	0.001 U	0.00001 U
Hexachlorobutadiene	mg/L	0.0009	0.001	0.00862	0.002 U	0.00098 U
Hexachlorocyclopentadiene	mg/L	0.026	0.05	0.05	0.01 U	0.0048 U
Hexachloroethane	mg/L	NC	0.001	0.0365	0.001 U	0.00052 U
Indeno(1,2,3-cd)pyrene	mg/L	NC	0.00009	0.000921	0.001 U	0.00012 U
Isophorone	mg/L	0.071	0.1	0.708	0.01 U	0.0037 U
2-Methylnaphthalene	mg/L	NC	0.012	0.73	0.01 U	0.0032 U
2-Methylphenol	mg/L	NC	0.18	1.83	0.01 U	0.0017 U
4-Methylphenol	mg/L	NC	0.018	0.183	0.01 U	0.0016 U
Naphthalene	mg/L	0.0007	0.02	0.73	0.01 U	0.0038 U
2-Nitroaniline	mg/L	NC	0.0002	0.11	0.02 U	0.0059 U
3-Nitroaniline	mg/L	NC	NC	0.011	0.02 U	0.0045 U
4-Nitroaniline	mg/L	NC	NC	0.032	0.02 U	0.0041 U
Nitrobenzene	mg/L	NC	0.0004	0.0183	0.001 U	0.00043 U
2-Nitrophenol	mg/L	NC	NC	NC	0.01 U	0.0035 U
4-Nitrophenol	mg/L	NC	0.06	NC	0.03 U	0.0024 U
N-Nitrosodi-n-propylamine	mg/L	NC	0.00001	0.000096	0.001 U	0.00033 U
N-Nitrosodiphenylamine	mg/L	NC	0.014	0.137	0.01 U	0.004 U
2,2'-Oxybis(1-chloropropane)	mg/L	NC	NC	0.0096	0.01 U	0.0033 U
Pentachlorophenol	mg/L	0.0006	0.001	0.001	0.03 U	0.00015 U
Phenanthrene	mg/L	NC	0.12	1.1	0.01 U	0.0037 U
Phenol	mg/L	NC	4	11	0.01 U	0.00093 U
Pyrene	mg/L	NC	0.018	1.1	0.01 U	0.0044 U
2,4,5-Trichlorophenol	mg/L	NC	0.37	3.65	0.01 U	0.0026 U
2,4,6-Trichlorophenol	mg/L	NC	0.006	0.00365	0.01 U	0.0033 U
<i>Metals</i>						
Aluminum	mg/L	NC	0.2	36.5	-	1.12^b
Antimony	mg/L	NC	0.006	0.006	-	0.01 U
Arsenic	mg/L	0.0005	0.05	0.01	-	0.005 U
Barium	mg/L	0.26	2	2	-	0.0851 J
Beryllium	mg/L	NC	0.004	0.004	-	0.002 U
Cadmium	mg/L	NC	0.005	0.005	-	0.005 U
Calcium	mg/L	NC	NC	NC	-	10.8
Chromium	mg/L	NC	0.1	0.1	-	0.01 U
Cobalt	mg/L	NC	0.22	0.73	-	0.0036 J
Copper	mg/L	NC	1.3	1.3	-	0.025 U
Iron	mg/L	NC	0.3	11	-	0.85^b
Lead	mg/L	NC	0.015	0.015	-	0.005 U

TABLE 3.1

ANALYTICAL RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>Sample Location:</i>		URS	URS	Drinking	<i>MW-21</i>	<i>MW-21</i>
<i>Sample ID:</i>		Screening	Groundwater	Water	<i>GW-017338-012110-ACH-003</i>	<i>GW-017338-030210-RAM-007</i>
<i>Sample Date:</i>		Criteria	Values	Criteria ¹	<i>1/21/2010</i>	<i>3/2/2010</i>
	<i>Units</i>	<i>a</i>	<i>b</i>	<i>c</i>	<i>(Duplicate)</i>	
<i>Metals</i>						
Magnesium	mg/L	NC	NC	NC	-	7.01
Manganese	mg/L	NC	0.05	0.876	-	0.169^b
Mercury	mg/L	NC	0.002	0.002	-	0.0002 U
Nickel	mg/L	NC	0.1	0.73	-	0.0078 J
Potassium	mg/L	NC	NC	NC	-	0.774 J
Selenium	mg/L	NC	0.05	0.05	-	0.01 U
Silver	mg/L	NC	0.1	0.183	-	0.01 U
Sodium	mg/L	NC	NC	NC	-	14.9
Thallium	mg/L	NC	0.002	0.002	-	0.01 U
Vanadium	mg/L	NC	0.026	0.0365	-	0.0023 J
Zinc	mg/L	NC	2	11	-	0.0287 J

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

-- - Not analyzed.

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.

TABLE 3.2

LIMITED ACTION REMEDY PRESENTATION PARAMETERS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

<i>VOCs</i>	<i>SVOCs</i>	<i>Metals</i>
Acetone	Diben(a,h)anthracene	Antimony
Benzene	Indeno(1,2,3-cd)pyrene	Arsenic
Chlorobenzene	4-Methylphenol	Iron
1,4-Dichlorobenzene	Naphthalene	Lead
Ethylbenzene		Manganese
Methyl Tert Butyl Ether		Vanadium
Toluene		
Xylene (total)		

TABLE 3.3

**RI/FS CONSTITUENTS OF CONCERN
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE**

	<i>Drinking Water Criteria</i> ¹	<i>No. of Samples</i>	<i>No. of Detections</i>	<i>No. of Exceeding</i>	<i>Max. Value Detected</i>
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
Iron	11	51	50	34	264
Iron (Dissolved)	11	42	33	22	245
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:

The number of samples, detections, exceedances and the maximum value detected represent those contemplated at the time the risk assessment was conducted.

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.

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 4.1

TREND TEST RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Location	Parameters	Number of Samples	Percentage of Samples		Minimum	Maximum	Mann-Kendall Trend Test		
			ND				S	P	Conclusion
MW-2	Acetone	1	100%		0.01 U	0.01 U	--	--	Insufficient data
	Benzene	4	25%		0.001 U	1%	-2	0.75	No trend identified
	Chlorobenzene	4	75%		0.001 U	0.0059 U	--	--	>50% ND
	1,4-Dichlorobenzene	4	75%		0.00027 J	0.005 U	--	--	>50% ND
	Ethylbenzene	4	50%		0%	0.012 U	2	0.75	No trend identified
	Methyl tert butyl ether (MTBE)	4	0%		0%	0.0042 J	-4	0.334	No trend identified
	Toluene	4	50%		0.0008 J	0.014 U	3	0.542	No trend identified
	Vinyl chloride	4	100%		0.001 U	0.005 U	--	--	100% ND
	Xylene (total)	4	25%		0.0003 J	0.028 U	0	1	No trend identified
	Dibenz(a,h)anthracene	4	100%		0.00016 U	0.001 U	--	--	100% ND
	Indeno(1,2,3-cd)pyrene	4	100%		0.00012 U	0.001 U	--	--	100% ND
	4-Methylphenol	4	100%		0.0016 U	0.01 U	--	--	100% ND
	Naphthalene	4	75%		0.0005 J	0.01 U	--	--	>50% ND
	Arsenic	4	0%		1%	2%	-2	0.75	No trend identified
	Iron	4	0%		5560%	9050%	-4	0.334	No trend identified
	Lead	4	75%		0.003 U	1%	--	--	>50% ND
	Manganese	4	0%		87%	135%	-4	0.334	No trend identified
	Vanadium	4	100%		0.016 U	0.05 U	--	--	100% ND
MW-3	Acetone	4	0%		96 J	220 J	-4	0.334	No trend identified
	Benzene	4	0%		0.58	1	2	0.75	No trend identified
	Chlorobenzene	4	100%		0.05 U	1.2 U	--	--	100% ND
	1,4-Dichlorobenzene	4	100%		0.05 U	1.2 U	--	--	100% ND
	Ethylbenzene	4	0%		10	19	0	1	No trend identified
	Methyl tert butyl ether (MTBE)	4	0%		0.42	0.63	2	0.75	No trend identified
	Toluene	4	0%		150	190	-1	1	No trend identified
	Vinyl chloride	4	100%		0.05 U	1.2 U	--	--	100% ND
	Xylene (total)	4	0%		17	32	0	1	No trend identified
	Dibenz(a,h)anthracene	4	100%		0.00016 U	0.005 U	--	--	100% ND
	Indeno(1,2,3-cd)pyrene	4	100%		0.00012 U	0.005 U	--	--	100% ND
	4-Methylphenol	4	0%		0.24	0.46	0	1	No trend identified
	Naphthalene	4	75%		0.0037 U	0.042 J	--	--	>50% ND
	Arsenic	4	100%		0.005 U	0.021 U	--	--	100% ND
	Iron	4	0%		258	285	0	1	No trend identified
	Lead	4	25%		0.005 U	0.0541	-4	0.334	No trend identified
	Manganese	4	0%		22.1	25.8	0	1	No trend identified
	Vanadium	4	75%		0.0023 J	0.05 U	--	--	>50% ND
MW-3D	Acetone	1	100%		0.01 U	0.01 U	--	--	Insufficient data
	Benzene	4	25%		0.0004 J	0.0042	-4	0.334	No trend identified
	Chlorobenzene	4	75%		0.0004	0.001 U	--	--	>50% ND
	1,4-Dichlorobenzene	4	100%		0.001 U	ND(0.005)	--	--	100% ND
	Ethylbenzene	4	0%		0.00026	0.1155	-4	0.334	No trend identified
	Methyl tert butyl ether (MTBE)	4	0%		0.0015	0.0021	-5	0.209	No trend identified
	Toluene	4	25%		0.0003 J	0.5	-2	0.75	No trend identified
	Vinyl chloride	4	100%		0.001 U	ND(0.005)	--	--	100% ND
	Xylene (total)	4	0%		0.0025 J	0.23	-2	0.75	No trend identified
	Dibenz(a,h)anthracene	4	100%		ND(0.000165)	ND(0.001)	--	--	100% ND
	Indeno(1,2,3-cd)pyrene	4	100%		ND(0.000125)	ND(0.001)	--	--	100% ND
	4-Methylphenol	4	100%		ND(0.00165)	ND(0.01)	--	--	100% ND
	Naphthalene	4	100%		ND(0.0038)	ND(0.01)	--	--	100% ND
	Arsenic	4	75%		0.0042 U	0.0048	--	--	>50% ND
	Iron	4	0%		28.7	35	0	1	No trend identified
	Lead	4	50%		0.005 U	0.0075	-5	0.209	No trend identified
	Manganese	4	0%		0.423	0.622	-2	0.75	No trend identified
	Vanadium	4	25%		0.0048	0.05 U	2	0.75	No trend identified

TABLE 4.1

TREND TEST RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Location	Parameters	Number of Samples	Percentage of Samples ND	Minimum	Maximum	Mann-Kendall Trend Test		
						S	P	Conclusion
MW-6	Acetone	1	100%	ND(0.02)	ND(0.02)	--	--	Insufficient data
	Benzene	4	0%	0.0009	0.0056	2	0.75	No trend identified
	Chlorobenzene	4	100%	ND(0.002)	0.005 U	--	--	100% ND
	1,4-Dichlorobenzene	4	100%	ND(0.002)	0.005 U	--	--	100% ND
	Ethylbenzene	4	0%	0.083	1.1	2	0.75	No trend identified
	Methyl tert butyl ether (MTBE)	4	75%	0.0003 J	ND(0.002)	--	--	>50% ND
	Toluene	4	0%	0.14	4	4	0.334	No trend identified
	Vinyl chloride	4	100%	ND(0.002)	0.005 U	--	--	100% ND
	Xylene (total)	4	0%	0.32	2.2	2	0.75	No trend identified
	Dibenz(a,h)anthracene	4	100%	0.00016 U	ND(0.00105)	--	--	100% ND
	Indeno(1,2,3-cd)pyrene	4	100%	0.00012 U	ND(0.00105)	--	--	100% ND
	4-Methylphenol	4	0%	0.001	0.029	4	0.334	No trend identified
	Naphthalene	4	25%	0.0014 J	0.0425	0	1	No trend identified
	Arsenic	4	0%	0.0082	0.0215	2	0.75	No trend identified
	Iron	4	0%	23	31.4	2	0.75	No trend identified
	Lead	4	50%	ND(0.003)	0.0031 J	1	1	No trend identified
	Manganese	4	0%	0.758	0.939	-2	0.75	No trend identified
	Vanadium	4	50%	0.0024 J	ND(0.05)	3	0.542	No trend identified
MW-7	Acetone	1	100%	0.05 U	0.05 U	--	--	Insufficient data
	Benzene	4	25%	ND(0.0022)	0.0046	2	0.75	No trend identified
	Chlorobenzene	4	0%	0.33	1.3	4	0.334	No trend identified
	1,4-Dichlorobenzene	4	0%	0.0017 J	0.009	2	0.75	No trend identified
	Ethylbenzene	4	50%	0.0015	0.092	-1	1	No trend identified
	Methyl tert butyl ether (MTBE)	4	50%	0.00056	0.005 U	5	0.209	No trend identified
	Toluene	4	50%	0.0021	0.67	-1	1	No trend identified
	Vinyl chloride	4	100%	ND(0.001)	0.005 U	--	--	100% ND
	Xylene (total)	4	50%	0.0025 J	0.15	-1	1	No trend identified
	Dibenz(a,h)anthracene	4	100%	0.00016 U	ND(0.0011)	--	--	100% ND
	Indeno(1,2,3-cd)pyrene	4	100%	0.00012 U	ND(0.0011)	--	--	100% ND
	4-Methylphenol	4	100%	0.0016 U	ND(0.011)	--	--	100% ND
	Naphthalene	4	75%	0.0004 J	ND(0.011)	--	--	>50% ND
	Arsenic	4	0%	0.0113	0.0151	0	1	No trend identified
	Iron	4	0%	62.5	84.8	6	0.084	Increasing Trend
	Lead	4	50%	ND(0.005)	0.0133	-5	0.209	No trend identified
	Manganese	4	0%	2.045	2.41	0	1	No trend identified
	Vanadium	4	0%	0.0037 J	0.0117	-2	0.75	No trend identified
MW-8	Acetone	4	100%	0.0025 U	0.01 U	--	--	100% ND
	Benzene	8	0%	0.0012	0.012	10	0.266	No trend identified
	Chlorobenzene	8	0%	0.00165	0.0046 J	-11	0.212	No trend identified
	1,4-Dichlorobenzene	7	86%	0.00028 J	0.005 U	--	--	>50% ND
	Ethylbenzene	8	50%	0.00031 J	0.004 U	14	0.084	No trend identified
	Methyl tert butyl ether (MTBE)	7	0%	0.0031	0.0089	1	1.000	No trend identified
	Toluene	8	50%	0.00009 U	0.005 U	4	0.690	No trend identified
	Vinyl chloride	8	100%	0.00013 U	0.005 U	--	--	100% ND
	Xylene (total)	8	38%	0.0005 J	0.018	13	0.126	No trend identified
	Dibenz(a,h)anthracene	9	100%	0.00016 U	0.0011 U	--	--	100% ND
	Indeno(1,2,3-cd)pyrene	9	100%	0.00012 U	0.0011 U	--	--	100% ND
	4-Methylphenol	7	100%	0.0016 U	0.011 U	--	--	100% ND
	Naphthalene	9	11%	0.01 U	0.22	20	0.048	Increasing Trend
	Arsenic	8	88%	0.0038 U	0.00415	--	--	>50% ND
	Iron	8	0%	62	87.5	2	0.902	No trend identified
	Lead	8	63%	0.003 U	0.0137	--	--	>50% ND
	Manganese	8	0%	1.665	2.07	3	0.803	No trend identified
	Vanadium	8	63%	0.00305	0.05 U	--	--	>50% ND

TABLE 4.1

TREND TEST RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Location	Parameters	Number of Samples	Percentage of Samples ND	Minimum	Maximum	Mann-Kendall Trend Test		
						S	P	Conclusion
MW-9	Acetone	4	100%	ND(0.0025)	0.01 U	--	--	100% ND
	Benzene	8	100%	ND(0.00013)	0.001 U	--	--	100% ND
	Chlorobenzene	8	100%	ND(0.00016)	0.005 U	--	--	100% ND
	1,4-Dichlorobenzene	7	100%	ND(0.00015)	0.005 U	--	--	100% ND
	Ethylbenzene	8	100%	ND(0.00025)	0.004 U	--	--	100% ND
	Methyl tert butyl ether (MTBE)	7	57%	0.00018 J	0.001 U	--	--	>50% ND
	Toluene	8	88%	ND(0.00009)	0.005 U	--	--	>50% ND
	Vinyl chloride	8	100%	ND(0.00013)	0.005 U	--	--	100% ND
	Xylene (total)	8	100%	ND(0.00043)	0.005 U	--	--	100% ND
	Dibenz(a,h)anthracene	8	100%	0.00016 U	0.001 U	--	--	100% ND
	Indeno(1,2,3-cd)pyrene	8	100%	0.00012 U	0.001 U	--	--	100% ND
	4-Methylphenol	6	100%	0.0016 U	0.01 U	--	--	100% ND
	Naphthalene	8	100%	0.0037 U	0.01 U	--	--	100% ND
	Arsenic	8	100%	ND(0.0038)	0.0059 U	--	--	100% ND
	Iron	8	0%	3.94	25.1	16	0.063	No trend identified
	Lead	8	75%	0.0024 U	0.00855	--	--	>50% ND
	Manganese	8	0%	0.287	0.682	-24	0.004	Decreasing Trend
	Vanadium	8	50%	0.0017 J	ND(0.05)	12	0.144	No trend identified
MW-10	Acetone	1	100%	0.01 U	0.01 U	--	--	Insufficient data
	Benzene	4	0%	0.0021	0.012	2	0.750	No trend identified
	Chlorobenzene	4	75%	0.001 U	0.005 U	--	--	>50% ND
	1,4-Dichlorobenzene	4	75%	0.00027 J	0.005 U	--	--	>50% ND
	Ethylbenzene	4	0%	0.054	0.49	4	0.334	No trend identified
	Methyl tert butyl ether (MTBE)	4	25%	0.00028 J	0.0005 J	-5	0.209	No trend identified
	Toluene	4	0%	0.031	0.27	0	1.000	No trend identified
	Vinyl chloride	4	100%	0.001 U	0.005 U	--	--	100% ND
	Xylene (total)	4	0%	0.3	1.3	4	0.334	No trend identified
	Dibenz(a,h)anthracene	4	100%	0.00017 U	0.0011 U	--	--	100% ND
	Indeno(1,2,3-cd)pyrene	4	100%	0.00013 U	0.0011 U	--	--	100% ND
	4-Methylphenol	4	100%	0.0017 U	0.011 U	--	--	100% ND
	Naphthalene	4	50%	0.0039 U	0.011 U	-3	0.542	No trend identified
	Arsenic	4	75%	0.0042 U	0.0064	--	--	>50% ND
	Iron	4	0%	26	27.3	-2	0.750	No trend identified
	Lead	4	75%	0.003 U	0.0042 J	--	--	>50% ND
	Manganese	4	0%	1.32	1.57	1	1.000	No trend identified
	Vanadium	4	25%	0.0024 J	0.05 U	2	0.750	No trend identified
MW-11	Acetone	4	25%	0.01 J	0.1 U	-2	0.750	No trend identified
	Benzene	4	0%	0.26	0.43	-1	1.000	No trend identified
	Chlorobenzene	4	75%	0.00065 J	0.025 U	--	--	>50% ND
	1,4-Dichlorobenzene	4	100%	0.001 U	0.025 U	--	--	100% ND
	Ethylbenzene	4	0%	1.5	3.6	-2	0.750	No trend identified
	Methyl tert butyl ether (MTBE)	4	0%	0.32	0.53	-6	0.084	Decreasing Trend
	Toluene	4	0%	0.2	1.2	0	1.000	No trend identified
	Vinyl chloride	4	100%	0.001 U	0.025 U	--	--	100% ND
	Xylene (total)	4	0%	4.9	7.5	-2	0.750	No trend identified
	Dibenz(a,h)anthracene	4	100%	0.00016 U	0.0052 U	--	--	100% ND
	Indeno(1,2,3-cd)pyrene	4	100%	0.00012 U	0.0052 U	--	--	100% ND
	4-Methylphenol	4	25%	0.01 U	0.0084 J	0	1.000	No trend identified
	Naphthalene	4	50%	0.0037 U	0.015 U	-5	0.209	No trend identified
	Arsenic	4	0%	0.0347	0.0478	-6	0.084	Decreasing Trend
	Iron	4	0%	97.7	117	-2	0.750	No trend identified
	Lead	4	25%	0.005 U	0.0206	-2	0.750	No trend identified
	Manganese	4	0%	0.869	1.2	-4	0.334	No trend identified
	Vanadium	4	0%	0.0027 J	0.0128 J	-2	0.750	No trend identified

TABLE 4.1

TREND TEST RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Location	Parameters	Number of Samples	Percentage of Samples ND	Minimum	Maximum	Mann-Kendall Trend Test		
						S	P	Conclusion
MW-11R	Acetone	1	100%	0.01 U	0.01 U	--	--	Insufficient data
	Benzene	4	100%	0.001 U	0.001 U	--	--	100% ND
	Chlorobenzene	4	100%	0.001 U	0.005 U	--	--	100% ND
	1,4-Dichlorobenzene	4	100%	0.001 U	0.005 U	--	--	100% ND
	Ethylbenzene	4	100%	0.001 U	0.004 U	--	--	100% ND
	Methyl tert butyl ether (MTBE)	4	100%	0.001 U	0.005 U	--	--	100% ND
	Toluene	4	100%	0.001 U	0.005 U	--	--	100% ND
	Vinyl chloride	4	100%	0.001 U	0.005 U	--	--	100% ND
	Xylene (total)	4	100%	0.003 U	0.005 U	--	--	100% ND
	Dibenz(a,h)anthracene	4	100%	0.00016 U	0.0011 U	--	--	100% ND
	Indeno(1,2,3-cd)pyrene	4	100%	0.00012 U	0.0011 U	--	--	100% ND
	4-Methylphenol	4	100%	0.0016 U	0.011 U	--	--	100% ND
	Naphthalene	4	100%	0.0037 U	0.011 U	--	--	100% ND
	Arsenic	4	100%	0.0042 U	0.0059 U	--	--	100% ND
	Iron	4	0%	2.04	9.21	2	0.750	No trend identified
	Lead	4	100%	0.0024 U	0.005 U	--	--	100% ND
MW-12	Manganese	4	0%	0.157	0.368	2	0.750	No trend identified
	Vanadium	4	50%	0.0028 J	0.05 U	3	0.542	No trend identified
	Acetone	1	100%	0.02 U	0.02 U	--	--	Insufficient data
	Benzene	4	0%	0.27	0.4	-4	0.334	No trend identified
	Chlorobenzene	4	100%	0.001 U	0.005 U	--	--	100% ND
	1,4-Dichlorobenzene	4	100%	0.001 U	0.005 U	--	--	100% ND
	Ethylbenzene	4	0%	0.015	0.25	-6	0.084	Decreasing Trend
	Methyl tert butyl ether (MTBE)	4	0%	0.035	0.056	-4	0.334	No trend identified
	Toluene	4	0%	0.0009 J	0.053	0	1.000	No trend identified
	Vinyl chloride	4	50%	0.001 U	0.0025 J	-3	0.542	No trend identified
	Xylene (total)	4	0%	0.11	1	-6	0.084	Decreasing Trend
	Dibenz(a,h)anthracene	4	100%	0.00016 U	0.001 U	--	--	100% ND
	Indeno(1,2,3-cd)pyrene	4	100%	0.00012 U	0.001 U	--	--	100% ND
	4-Methylphenol	4	100%	0.0016 U	0.01 U	--	--	100% ND
	Naphthalene	4	0%	0.019	0.077	-4	0.334	No trend identified
	Arsenic	4	0%	0.0046 J	0.0103	0	1.000	No trend identified
MW-13	Iron	4	0%	43	60	-2	0.750	No trend identified
	Lead	4	0%	0.0113	0.0514	-2	0.750	No trend identified
	Manganese	4	0%	0.337	0.406	-2	0.750	No trend identified
	Vanadium	4	0%	0.0033 J	0.0386 J	0	1.000	No trend identified
	Acetone	1	100%	0.02 U	0.02 U	--	--	Insufficient data
	Benzene	4	0%	0.012	0.019	0	1.000	No trend identified
	Chlorobenzene	4	50%	0.00087 J	0.05 U	1	1.000	No trend identified
	1,4-Dichlorobenzene	4	100%	0.001 U	0.05 U	--	--	100% ND
	Ethylbenzene	4	0%	0.55	0.66	1	1.000	No trend identified
	Methyl tert butyl ether (MTBE)	4	0%	0.017 J	0.025	2	0.750	No trend identified
	Toluene	4	0%	4.8	7.5	-4	0.334	No trend identified
	Vinyl chloride	4	100%	0.001 U	0.05 U	--	--	100% ND
	Xylene (total)	4	0%	3	3.6	-4	0.334	No trend identified
	Dibenz(a,h)anthracene	4	75%	0.00016 U	0.02 U	--	--	>50% ND
	Indeno(1,2,3-cd)pyrene	4	75%	0.00012 U	0.02 U	--	--	>50% ND
	4-Methylphenol	4	25%	0.013 J	0.1 U	0	1.000	No trend identified
MW-13	Naphthalene	4	0%	1.7	3.2	-2	0.750	No trend identified
	Arsenic	4	0%	0.0243	0.0309	0	1.000	No trend identified
	Iron	4	0%	45	117	0	1.000	No trend identified
	Lead	4	25%	0.005 U	0.014	0	1.000	No trend identified
	Manganese	4	0%	0.532	1	0	1.000	No trend identified
	Vanadium	4	0%	0.0021 J	0.0661	0	1.000	No trend identified

TABLE 4.1

TREND TEST RESULTS
GROUNDWATER MONITORING REPORT
OU-2 BULK PRODUCT TANK AREA
FORMER GM WILMINGTON ASSEMBLY PLANT
WILMINGTON, DELAWARE

Location	Parameters	Number of Samples	Percentage of Samples ND	Minimum	Maximum	Mann-Kendall Trend Test		
						S	P	Conclusion
MW-19	Acetone	4	100%	0.0025 U	0.01 U	--	--	100% ND
	Benzene	8	100%	0.00013 U	0.001 U	--	--	100% ND
	Chlorobenzene	8	63%	0.00016 U	0.005 U	--	--	>50% ND
	1,4-Dichlorobenzene	7	86%	0.00015 U	0.001 U	--	--	>50% ND
	Ethylbenzene	8	75%	0.00025 U	0.023	--	--	>50% ND
	Methyl tert butyl ether (MTBE)	7	86%	0.00027 J	0.005 U	--	--	>50% ND
	Toluene	8	63%	0.00009 U	0.1	--	--	>50% ND
	Vinyl chloride	8	100%	0.00013 U	0.005 U	--	--	100% ND
	Xylene (total)	8	75%	0.00043 U	0.041	--	--	>50% ND
	Dibenz(a,h)anthracene	8	100%	0.00016 U	0.0011 U	--	--	100% ND
	Indeno(1,2,3-cd)pyrene	8	100%	0.00012 U	0.0011 U	--	--	100% ND
	4-Methylphenol	6	100%	0.0016 U	0.011 U	--	--	100% ND
	Naphthalene	8	100%	0.0037 U	0.011 U	--	--	100% ND
	Arsenic	8	50%	0.005 U	0.0071	-10	0.232	No trend identified
	Iron	8	0%	5.24	12.7	-6	0.536	No trend identified
	Lead	8	25%	0.005 U	0.0077	-5	0.618	No trend identified
	Manganese	8	0%	0.264	0.776	-10	0.266	No trend identified
	Vanadium	8	25%	0.0024 J	0.0265 J	-1	1.000	No trend identified

Notes:

ND -- Non-detect (concentrations are below levels detectable in the laboratory analysis).

N -- Number of samples.

S -- Mann-Kendall test statistic (sum of the signs of all possible pair-wise data comparisons).

P -- Probability of significance. For 95 percent confidence, a P-value equal to or below 0.05 is required.

APPENDIX A

LABORATORY ANALYTICAL REPORTS

APPENDIX B

DATA VALIDATION MEMORANDA



MEMORANDUM

TO: Greg Carli
FROM: Susan C. Scrocchi/bjw/7 ^{SCS}
C.C.: Golnoush Bolourani
REF. NO.: 17307-091009
DATE: November 14, 2008
E-Mail and Hard Copy if Requested
RE: **Data Quality Assessment and Validation**
OU-2 Bulk Product Tank Area - Groundwater Samples
Wilmington, Delaware

The following details a quality assessment and validation of the analytical data resulting from the August 2008, collection of groundwater 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 Test America Laboratory in Edison, New Jersey (TA), in accordance with the methodologies presented in Table 2.

The Quality Control (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 any detected concentrations of volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), and metals observed below the laboratory's practical quantitation limit (PQL)/report limit (RL) but above the laboratory's method detection limit (MDL) with a flag. 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.

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 acetone was less than 0.05. All associated sample results were non-detect and rejected due to poor analyte sensitivity; and
- ii) the benzaldehyde 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 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. 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.

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.

All MS/MSD or MS/Dup recoveries were acceptable indicating good analytical accuracy and precision.

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, one field duplicate sample set, 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.

Most field blank results were non-detect with the exception of low level concentrations of methylene chloride. All associated sample results were non-detect and would not have been impacted.

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.

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 with the exception of low level concentrations of methylene chloride. All associated sample results were non-detect and would not have been impacted. .

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 4. 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 the acetone 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
AUGUST 2008

Sample I.D.	Location I.D.	Collection Date (mm/dd/yy)	Collection Time (hr:min)	<u>Analysis/Parameters</u>			Comments
				TCL VOCs plus TICs	TCL SVOCs plus TICs	TAL Metals	
GW-17338-080408-01	MW-11R	08/04/08	11:10	X	X	X	
GW-17338-080408-02	MW-8	08/04/08	11:15	X	X	X	
GW-17338-080408-03	MW-9	08/04/08	12:25	X	X	X	
GW-17338-080408-04	MW-13	08/04/08	12:30	X	X	X	
GW-17338-080408-05	MW-2	08/04/08	14:10	X	X	X	
GW-17338-080408-06	MW-12	08/04/08	14:15	X	X	X	
Trip Blank	trip blank	08/04/08	-	X			
GW-17338-080508-07	MW-3	08/05/08	8:50	X	X	X	
GW-17338-080508-08	MW-11	08/05/08	9:20	X	X	X	
GW-17338-080508-09	MW-3D	08/05/08	10:00	X	X	X	
GW-17338-080508-10	MW-3D	08/05/08	10:05	X	X	X	Field duplicate of GW-17338-080508-09
GW-17338-080508-011	MW-6	08/05/08	10:30	X	X	X	
GW-17338-080508-12	MW-7	08/05/08	11:00	X	X	X	
GW-17338-080508-013	MW-10	08/05/08	12:10	X	X	X	
W-17338-080508-14	Equipment Blank	08/05/08	11:30	X	X	X	
GW-17338-080508-15	MW-14	08/05/08	12:30	X	X	X	
GW-17338-080508-16	MW-19	08/05/08	13:45	X	X	X	
Trip Blank	trip blank	08/05/08	-	X			

Notes:

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 ASSEMBLY PLANT
WILMINGTON, DELAWARE
AUGUST 2008

<i>Parameter</i>	<i>Method</i> ¹
TCL VOCs plus TICs	SW-846 8260B
TCL SVOCs plus TICs	SW-846 8270C
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.

VOCs Volatile Organic Compounds.

TABLE 3
 QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INITIAL CALIBRATION RESULTS
 OU-2 AREA INVESTIGATION
 GENERAL MOTORS ASSEMBLY PLANT
 WILMINGTON, DELAWARE
 AUGUST 2008

<i>Parameter</i>	<i>Compound</i>	<i>Calibration Date</i>	<i>R²</i>	<i>RF</i>	<i>Associated Sample ID</i>	<i>Qualified Sample Results</i>	<i>Units</i>
VOCs	Acetone	8/6/08	>0.99	0.028	GW-17338-080408-01	R	-
					GW-17338-080408-02	R	-
					GW-17338-080408-03	R	-
					GW-17338-080408-05	R	-
					GW-17338-080508-13	R	-
					GW-17338-080508-14	R	-
					GW-17338-080508-15	R	-
					GW-17338-080508-16	R	-
VOCs	Acetone	8/14/08	>0.99	0.028	GW-17338-080408-04	R	-
					GW-17338-080408-06	R	-
					GW-17338-080508-07	220000 J	µg/L
					GW-17338-080508-08	39 J	µg/L
					GW-17338-080508-09	R	-
					GW-17338-080508-10	R	-
					GW-17338-080508-11	R	-
					GW-17338-080508-12	R	-
SVOCs	Benzaldehyde	8/10/08	38	>0.05	GW-17338-080408-01	10 UJ	µg/L
					GW-17338-080408-02	10 UJ	µg/L
					GW-17338-080408-03	10 UJ	µg/L
					GW-17338-080408-04	100 UJ	µg/L
					GW-17338-080408-05	10 UJ	µg/L
					GW-17338-080408-06	10 UJ	µg/L
					GW-17338-080508-09	10 UJ	µg/L
					GW-17338-080508-10	10 UJ	µg/L
					GW-17338-080508-11	10 UJ	µg/L
					GW-17338-080508-12	10 UJ	µg/L
					GW-17338-080508-13	10 UJ	µg/L
					GW-17338-080508-14	10 UJ	µg/L

TABLE 3
 QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INITIAL CALIBRATION RESULTS
 OU-2 AREA INVESTIGATION
 GENERAL MOTORS ASSEMBLY PLANT
 WILMINGTON, DELAWARE
 AUGUST 2008

Parameter	Compound	Calibration Date	R ²	RF	Associated Sample ID	Qualified Sample Results	Units
SVOCs	Benzaldehyde	8/10/08	38	>0.05	GW-17338-080508-15 GW-17338-080508-16	10 UJ 10 UJ	µg/L µg/L
SVOCs	Benzaldehyde	8/12/08	40	>0.05	GW-17338-080508-07 GW-17338-080508-08	20 UJ 21 UJ	µg/L µg/L

Notes:
 J Estimated.
 R Rejected.
 SVOCs Semi-Volatile Organic Compounds.
 UJ Not detected, estimated reporting limit.
 VOCs Volatile Organic Compounds.

TABLE 4

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
AUGUST 2008

<i>Sample Location</i>	<i>Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>	<i>Semi-Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>
GW-17338-080408-05	Diisopropyl ether n-Propylbenzene Unknowns	6.7 J 6.9 J 30 J	1-Methylethyl-benzene	8.4 J
GW-17338-080508-07	None		1H-Inden-1-one, 2,3-dihydro- 2-Ethyl-ethanoic acid 4-methyl-2-pentanol 4-Methyl-2-Pentanone (Methyl Isobutyl Ketone) Benzeneacetic acid n-Hexanoic Acid Unknowns	69 J 400 J 120 J 230 J 250 J 290 J 18300 J
GW-17338-080508-09	Diisopropyl ether Indane	13 J 7.4 J	Ethane, 1,1'-oxybis(2-ethoxy-) Unknowns	17 J 130 J
GW-17338-080508-10	Diisopropyl ether Indane	12 J 6.6 J	Unknowns	150 J
GW-17338-080508-11	n-Propylbenzene Unknowns	210 J 100 J	6-Phenyl-1,3,5-Triazine-2,4-Diamine Bisphenol A Indane Unknowns	12 J 250 J 100 J 300 J
GW-17338-080508-12	None		Unknowns	86 J
GW-17338-080408-02	Indane Unknowns	82 J 66 J	2-Hexanol Bisphenol A Butyl ester, hexadecanoic acid Octadecanoic acid-butyl ester Unknowns	31 J 160 J 15 J 12 J 46 J

TABLE 4
TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
AUGUST 2008

<i>Sample Location</i>	<i>Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>	<i>Semi-Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>
GW-17338-080508-13	Diisopropyl ether Indane n-Propylbenzene Unknowns	45 J 23 J 65 J 48 J	Unknowns	60 J
GW-17338-080508-08	None		2-Butoxy-Ethanol 2-Ethyl-hexanoic acid 2-Ethyl-hexanoic acid 2-Methyl-propanoic acid Butoxyethoxy-ethanol Octanoic acid Unknowns	380 J 82 J 27 J 37 J 1200 J 290 J 13000 J
GW-17338-080408-06	Diisopropyl ether Indane n-Propylbenzene Unknown	38 J 46 J 74 J 46 J	Unknowns	1500 J
GW-17338-080408-04	Indane Unknowns	570 J 4400 J	Unknowns	4200 J
GW-17338-080508-15	None		None	
GW-17338-080508-16	None		None	

Note:

J Estimated.



MEMORANDUM

TO: Greg Carli REF. NO.: 17307-091009

FROM: Kathleen Willy/bjw/8 *KS* DATE: January 13, 2009

C.C.: Golnoush Bolourani E-Mail and Hard Copy if Requested

RE: **Data Quality Assessment and Validation
OU-2 Bulk Product Tank Area - Groundwater Samples
Wilmington, Delaware
November 2008**

The following details a quality assessment and validation of the analytical data resulting from the November 2008, collection of groundwater 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 Test America Laboratory in Edison, New Jersey (TA), in accordance with the methodologies presented in Table 2.

The Quality Control (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 any detected concentrations of volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), and metals observed below the laboratory's practical quantitation limit (PQL)/report limit (RL) but above the laboratory's method detection limit (MDL) with a flag. 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.

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.

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. 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 exception of some VOC and SVOCs which exhibited variability in instrument response. Associated sample results have been qualified as estimated (see Table 3).

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 with the exception of beryllium and chrysene. Associated sample results with concentrations similar to that found in the method blank were qualified as non-detect (see Table 4). Sample results that were either non-detect or significantly greater than the concentration found in the blank would not have been impacted.

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.

Site specific analyses were performed as specified in Table 1 and all MS/MSD or MS/Dup recoveries were acceptable indicating good analytical accuracy and precision.

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, one field duplicate sample set, 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.

Field blank results were non-detect with the exception of low level concentrations of zinc. Associated sample results with concentrations similar to that found in the rinse blank were qualified as non-detect (see Table 5). Sample results that were either non-detect or significantly greater than the concentration found in the blank would not have been impacted.

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.

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.

TABLE 1
SAMPLE COLLECTION AND ANALYSIS SUMMARY
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2008

Sample I.D.	Location I.D.	Collection Date (mm/dd/yy)	Collection Time (hr:min)	<u>Analysis/Parameters</u>			Comments
				TCL VOCs plus TICs	TCL SVOCs plus TICs	TAL Metals	
GW-17338-112008-01	MW-8	11/20/08	9:45	X	X	X	Field duplicate of sample GW-17338-112008-03
RB-17338-112008-02	Rinse Blank	11/20/08	9:00	X	X	X	
GW-17338-112008-03	MW-9	11/20/08	11:00	X	X	X	
GW-17338-112008-04	MW-9	11/20/08	11:05	X	X	X	
GW-17338-112008-05	MW-19	11/20/08	12:15	X	X	X	
Trip Blank	trip blank	11/20/08	-	X			

Notes:

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 ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2008

<i>Parameter</i>	<i>Method</i> ¹
TCL VOCs plus TICs	SW-846 8260B
TCL SVOCs plus TICs	SW-846 8270C
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.
VOCs Volatile Organic Compounds.

TABLE 3
QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2008

<i>Parameter</i>	<i>Calibration Date</i>	<i>Compound</i>	<i>%D</i>	<i>Associated Sample ID</i>	<i>Qualified Sample Results</i>	<i>Units</i>
VOCs	11/24/08	Acetone	48	GW-17338-112008-01 GW-17338-112008-03 GW-17338-112008-04 GW-17338-112008-05	5 U 5 U 5 U 5 U	µg/L µg/L µg/L µg/L
VOCs	11/24/08	Bromoform	68	GW-17338-112008-01 GW-17338-112008-03 GW-17338-112008-04 GW-17338-112008-05	4 U 4 U 4 U 4 U	µg/L µg/L µg/L µg/L
VOCs	11/24/08	4-Methyl-2-pentanone	67	GW-17338-112008-01 GW-17338-112008-03 GW-17338-112008-04 GW-17338-112008-05	5 U 5 U 5 U 5 U	µg/L µg/L µg/L µg/L
VOCs	11/24/08	Styrene	66	GW-17338-112008-01 GW-17338-112008-03 GW-17338-112008-04 GW-17338-112008-05	5 U 5 U 5 U 5 U	µg/L µg/L µg/L µg/L
SVOCs	11/26/08	Benzaldehyde	41	GW-17338-112008-01 GW-17338-112008-03 GW-17338-112008-04 GW-17338-112008-05	10 U 10 U 10 U 10 U	µg/L µg/L µg/L µg/L

Notes:

%D Percent Difference.
SVOCs Semi-Volatile Organic Compounds.
U Not detected.
VOCs Volatile Organic Compounds.

TABLE 4
 QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE METHOD BLANKS
 OU-2 AREA INVESTIGATION
 GENERAL MOTORS ASSEMBLY PLANT
 WILMINGTON, DELAWARE
 NOVEMBER 2008

<i>Parameter</i>	<i>Analysis Date</i>	<i>Analyte</i>	<i>Blank Result</i>	<i>Sample ID</i>	<i>Qualified Sample Result</i>	<i>Units</i>
Metals	11/26/08	Beryllium	0.602	GW-17338-112008-03	2 U	µg/L
				GW-17338-112008-04	2 U	µg/L
				GW-17338-112008-05	2 U	µg/L
SVOCs	11/24/08	Chrysene	0.8]	GW-17338-112008-01	10 U	µg/L
				GW-17338-112008-03	10 U	µg/L
				GW-17338-112008-04	10 U	µg/L
				GW-17338-112008-05	10 U	µg/L

Notes:

- J Estimated.
 SVOCs Semi-Volatile Organic Compounds.
 U Not detected.

TABLE 5
QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE RINSE BLANKS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2008

<i>Parameter</i>	<i>Rinse Blank Date</i>	<i>Analyte</i>	<i>Blank Result</i>	<i>Sample ID</i>	<i>Qualified Sample Result</i>	<i>Units</i>
Metals	11/20/08	Zinc	6.8	GW-17338-112008-03	30 U	ug/L
				GW-17338-112008-04	30 U	ug/L
				GW-17338-112008-05	30 U	ug/L

Note:
U Not detected.

TABLE 6
TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2008

<i>Sample Location</i>	<i>Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>	<i>Semi-Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>
MW8	2,3-Dihydro-methyl-1H-Indene Isomer	156J	Diethylbenzene Isomer	18J
	Diethylbenzene Isomer	24J	Bisphenol A	150J
	Tetrahydromethylnaphthalene Isomer	11J	Ethyl Dimethyl Benzene Isomer	74J
	Indane	150J	C9H10 aromatic	62J
	Naphthalene	63J	Tetramethylbenzene Isomer	43J
	Ethyl Dimethyl Benzene Isomer	130J	Unknown	120J
	C7H14 Cycloalkane	19J	-	-
	C8H16 Cycloalkane	13J	-	-
	Tetramethylbenzene Isomer	100J	-	-

Notes:

- Not applicable.
J Estimated.



**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.: 17307-091009

FROM: Kathleen Willy/bjw/9 *KW* DATE: April 9 2009

C.C.: Golnoush Bolourani E-Mail and Hard Copy if Requested

RE: **Data Quality Assessment and Validation**
OU-2 Bulk Product Tank Area - Groundwater Samples
Wilmington, Delaware

The following details a quality assessment and validation of the analytical data resulting from the February 2009, collection of groundwater 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 Test America Laboratory in Edison, New Jersey (TA), in accordance with the methodologies presented in Table 2.

The Quality Control (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 any detected concentrations of volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), and metals observed below the laboratory's practical quantitation limit (PQL)/report limit (RL) but above the laboratory's method detection limit (MDL) with a flag. 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.

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 exception of benzaldehyde. Associated sample results have been qualified as estimated (see 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. 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 exception of

benzaldehyde which exhibited variability in instrument response. Associated sample results have been 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 (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 with the exception of beryllium. Associated sample results with concentrations similar to that found in the method blank were qualified as non-detect (see Table 5). Sample results that were either non-detect or significantly greater than the concentration found in the blank would not have been impacted.

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.

Site specific analyses were performed as specified in Table 1 and all MS/MSD or MS/Dup recoveries were acceptable indicating good analytical accuracy and precision with the exception of a high recovery of 1,2,4-trichlorobenzene. The associated positive sample result was qualified as estimated (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 with the exception of a high recovery for acenaphthene. Associated positive sample results were qualified as estimated (see Table 7). Associated sample results that were non-detect 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 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, one field duplicate sample set, 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.

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. 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.

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, two trip blanks were 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 with the exception of methylene chloride. All associated sample results for methylene chloride were non-detect and no qualification of data was necessary.

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.

TABLE 1
SAMPLE COLLECTION AND ANALYSIS SUMMARY
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
FEBRUARY 2009

Sample I.D.	Location I.D.	Collection Date (mm/dd/yy)	Collection Time (hr:min)	<i>Analysis/Parameters</i>				Comments
				TCL VOCs plus TICs	TCL SVOCs plus TICs	TAL Metals		
GW-017338-022309-001	MW-9	02/23/09	15:00	X	X	X		
GW-017338-022309-002	MW-19	02/23/09	14:50	X	X	X		
GW-017338-022409-003	MW-11R	02/24/09	9:30	X	X	X		
GW-017338-022409-004	MW-15	02/24/09	9:40	X	X	X		MS/MSD
GW-017338-022409-005	MW-3D	02/24/09	10:40	X	X	X		
GW-017338-022409-006	MW-16	02/24/09	11:20	X	X	X		
GW-017338-022409-007	MW-17	02/24/09	11:40	X	X	X		
GW-017338-022409-008	MW-18	02/24/09	12:20	X	X	X		
GW-017338-022409-009	MW-8	02/24/09	13:00	X	X	X		
GW-017338-022409-010	MW-10	02/24/09	13:40	X	X	X		
GW-017338-022409-011	MW-6	02/24/09	14:15	X	X	X		
GW-017338-022409-012	MW-6	02/24/09	14:20	X	X	X		Field duplicate of sample GW-017338-022409-011
EB-017338-022409-013	Rinse Blank	02/24/09	14:20	X	X	X		Rinse Blank
TB-017338-022409-001	trip blank	02/19/09	-	X				Trip Blank
GW-017338-022509-014	MW-12	02/25/09	9:35	X	X	X		
GW-017338-022509-015	MW-7	02/25/09	9:30	X	X	X		
GW-017338-022509-016	MW-2	02/25/09	11:00	X	X	X		
GW-017338-022509-017	MW-13	02/25/09	10:45	X	X	X		
GW-017338-022509-018	MW-11	02/25/09	11:55	X	X	X		
GW-017338-022509-019	MW-3	02/25/09	11:45	X	X	X		
TB-017338- 022509-002	trip blank	02/19/09	-	X				Trip Blank

Notes:

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 ASSEMBLY PLANT
WILMINGTON, DELAWARE
FEBRUARY 2009

<i>Parameter</i>	<i>Method</i> ¹
TCL VOCs plus TICs	SW-846 8260B
TCL SVOCs plus TICs	SW-846 8270C
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.

VOCs Volatile Organic Compounds.

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INITIAL CALIBRATION RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
FEBRUARY 2009

<i>Parameter</i>	<i>Compound</i>	<i>Calibration Date</i>	<i>RSD</i>	<i>RRF</i>	<i>Associated Sample ID</i>	<i>Qualified Sample Results</i>	<i>Units</i>
SVOCs	Benzaldehyde	02/26/09	60	0.51	GW-017338-022309-001	10 UJ	µg/L
					GW-017338-022309-002	10 UJ	µg/L
					GW-017338-022409-003	10 UJ	µg/L
					GW-017338-022409-004	10 UJ	µg/L
					GW-017338-022409-005	10 UJ	µg/L
					GW-017338-022409-006	10 UJ	µg/L
					GW-017338-022409-007	10 UJ	µg/L
					GW-017338-022409-008	10 UJ	µg/L
					GW-017338-022409-009	10 UJ	µg/L
					GW-017338-022409-010	10 UJ	µg/L
					GW-017338-022409-011	10 UJ	µg/L
					GW-017338-022409-012	11 UJ	µg/L
					GW-017338-022509-014	10 UJ	µg/L
					GW-017338-022509-015	10 UJ	µg/L
					GW-017338-022509-016	10 UJ	µg/L
					GW-017338-022509-017	200 UJ	µg/L
					GW-017338-022509-018	52 UJ	µg/L
					GW-017338-022509-019	50 UJ	µg/L

Notes:

- RRF Relative Response Factor.
- RSD Relative Standard Deviation.
- SVOCs Semi-Volatile Organic Compounds.
- UJ Not detected, estimated reporting limit.

TABLE 4
QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
FEBRUARY 2009

Parameter	Calibration Date	Compound	%D	Associated Sample ID	Qualified Sample Results	Units
SVOCs	03/01/09	Benzaldehyde	27	GW-017338-022309-001	10 UJ	µg/L
				GW-017338-022309-002	10 UJ	µg/L
				GW-017338-022409-003	10 UJ	µg/L
				GW-017338-022409-004	10 UJ	µg/L
				GW-017338-022409-005	10 UJ	µg/L
				GW-017338-022409-006	10 UJ	µg/L
				GW-017338-022409-007	10 UJ	µg/L
				GW-017338-022409-008	10 UJ	µg/L
				GW-017338-022409-009	10 UJ	µg/L
				GW-017338-022409-010	10 UJ	µg/L
SVOCs	03/01/09	Benzaldehyde	69	GW-017338-022409-011	10 UJ	µg/L
				GW-017338-022409-012	11 UJ	µg/L
				GW-017338-022509-014	10 UJ	µg/L
				GW-017338-022509-015	10 UJ	µg/L
				GW-017338-022509-016	10 UJ	µg/L
SVOCs	03/01/09	Benzaldehyde	57	GW-017338-022509-017	200 UJ	µg/L
				GW-017338-022509-018	52 UJ	µg/L
				GW-017338-022509-019	50 UJ	µg/L

Notes:

- %D Percent Difference.
- SVOCs Semi-Volatile Organic Compounds.
- UJ Not detected, estimated reporting limit.
- VOCs Volatile Organic Compounds.

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE METHOD BLANKS
 OU-2 AREA INVESTIGATION
 GENERAL MOTORS ASSEMBLY PLANT
 WILMINGTON, DELAWARE
 FEBRUARY 2009

<i>Parameter</i>	<i>Analysis Date</i>	<i>Analyte</i>	<i>Blank Result</i>	<i>Sample ID</i>	<i>Qualified Sample Result</i>	<i>Units</i>
Metals	02/27/09	Beryllium	0.4	GW-017338-022309-001	2 U	µg/L
				GW-017338-022309-002	2 U	µg/L
				GW-017338-022409-003	2 U	µg/L
				GW-017338-022409-004	2 U	µg/L
				GW-017338-022409-005	2 U	µg/L
				GW-017338-022409-007	2 U	µg/L
				GW-017338-022409-008	2 U	µg/L
				GW-017338-022409-010	2 U	µg/L
				GW-017338-022409-011	2 U	µg/L
				GW-017338-022409-012	2 U	µg/L
				GW-017338-022509-014	2 U	µg/L
				GW-017338-022509-015	2 U	µg/L
				GW-017338-022509-016	2 U	µg/L
				GW-017338-022509-017	2.7 U	µg/L
				GW-017338-022509-019	2 U	µg/L
			0.9			
			0.4			

Notes:

U Not detected.

TABLE 6
QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
FEBRUARY 2009

<i>Parameter</i>	<i>Associated Sample ID</i>	<i>Analyte</i>	<i>MS</i>		<i>MSD</i>		<i>Control Limits</i>		<i>Qualified Sample Result</i>	<i>Units</i>
			<i>Recovery (percent)</i>	<i>RPD</i>	<i>Recovery (percent)</i>	<i>RPD</i>	<i>Recovery (percent)</i>	<i>RPD (percent)</i>		
SVOCs	GW-017338-022409-004	1,2,4-Trichlorobenzene	120	0	120	0	51 - 104	28	14 J	µg/L

Notes:

- J Estimated.
- MS Matrix Spike.
- MSD Matrix Spike Duplicate.
- RPD Relative Percent Difference.
- SVOCs Semi-Volatile Organic Compounds.

TABLE 7
 QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE RESULTS
 OU-2 AREA INVESTIGATION
 GENERAL MOTORS ASSEMBLY PLANT
 WILMINGTON, DELAWARE
 FEBRUARY 2009

<i>Parameter</i>	<i>Compound</i>	<i>Percent Recovery</i>	<i>Control Limits (percent)</i>	<i>Associated Sample ID</i>	<i>Qualified Sample Results</i>	<i>Units</i>
SVOCs	Acenaphthene	120	66 - 117	GW-017338-022409-006	0.5 *	µg/L
				GW-017338-022409-009	0.8 *	µg/L
				GW-017338-022409-011	0.9 *	µg/L
				GW-017338-022409-012	0.9 *	µg/L

Notes

- * Value previously qualified as estimated by the laboratory.
- SVOCs Semi-Volatile Organic Compounds.

TABLE 8
TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
FEBRUARY 2009

<i>Sample Location</i>	<i>Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>	<i>Semi-Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>
MW15	None	None	Unknown	117J
MW3D	Diisopropyl ether Indane	13J 5.2J	1,1'-oxybix(2-ethoxy-)ethane A Unknown	21J 61J
MW16	n-Propylbenzene	40J	None	None
	Unknown	447J	n-Propylbenzene	22J
	None	None	Bisphenol A	150J
			Unknown	372J
MW8	Indane	130J	Bisphenol A	140J
	None	None	Unknown	360J
	Unknown	453J	None	None
MW10	n-Propylbenzene	48J	None	None
	Diisopropyl ether	32J	n-Propylbenzene	29J
	Unknown	120J	1,1'-oxybix(2-ethoxy-)ethane A	8.6J
	None	None	Unknown	341J
MW6	Unknown	1735J	n-Propylbenzene	160J
	None	None	Bisphenol A	220J
	None	None	6-Phenyl-1,3,5-triazine-2,4-diamine	35J
	None	None	Unknown	1230J
MW12	None	None	n-Propylbenzene	52J
	Unknown	391J	Unknown	1607J

TABLE 8
TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
FEBRUARY 2009

Sample Location	Volatile Organics	Estimated Concentration (µg/L)	Semi-Volatile Organics	Estimated Concentration (µg/L)
MW7	None	None	Unknown	152J
MW2	n-Propylbenzene Unknown	6.6J 17J	Unknown None	16J None
MW13	Unknown None	12053J None	None Unknown	None 13700J
MW11	None None None None None None	None None None None None None	Ethylbenzene Butanoic acid Toluene Pentanoic acid Diethylene glycol monobutyl ether Unknown	1800J 120J 300J 270J 940J 14200J
MW3	None None None None	None None None None	Benzenecetic acid Butanoic acid Hexanoic Acid Unknown	320J 940J 800J 15142J

Notes:
J Estimated.



MEMORANDUM

TO: Greg Carli REF. NO.: 17307-091009

FROM: Kathleen Willy/bjw/6 *vw* DATE: July 2, 2009

C.C.: Golnoush Bolourani E-Mail and Hard Copy if Requested

RE: **Data Quality Assessment and Validation
OU-2 Bulk Product Tank Area - Groundwater Samples
Wilmington, Delaware**

INTRODUCTION

The following details a quality assessment and validation of the analytical data resulting from the May 2009, collection of groundwater 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 Test America Laboratory in Edison, New Jersey (TA), in accordance with the methodologies presented in Table 2. Analytical results summaries are presented in Table 3.

The Quality Control (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
- 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 any detected concentrations of volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), and metals observed below the laboratory's practical quantitation limit (PQL)/report limit (RL) but above the laboratory's method detection limit (MDL) with a flag. 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.

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.

Calibration standards were analyzed at the required frequency and the results met the above criteria for linearity and sensitivity.

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. 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.

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 acetone and bis(2-ethylhexyl)phthalate which exhibited variability in instrument response. Associated sample results have been 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 (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.

Site specific analyses were performed as specified in Table 1 and all MS/MSD or MS/Dup recoveries were acceptable indicating good analytical accuracy and precision.

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 a low recovery for acetone and bis(2-ethylhexyl)phthalate. Associated sample results were qualified as estimated (see Table 5).

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.

- 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, one field duplicate sample set, 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.

Field blank results were non-detect for the compounds of interest with the exception of vanadium. Associated sample results with concentrations similar to that found in the field blank were qualified as non-detect (see Table 6). Sample results that were either non-detect or significantly greater than the concentration found in the field blank would not have been impacted.

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.

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, one 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.

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.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 2009

Analysis/Parameters

<i>Sample I.D.</i>	<i>Location I.D.</i>	<i>Collection Date (mm/dd/yy)</i>	<i>Collection Time (hr:min)</i>	<i>TCL VOCs</i>	<i>TCL SVOCs</i>	<i>TAL Metals</i>	<i>Comments</i>
GW-017338-050809-ACH-001	MW-9	05/08/09	10:20	X	X	X	MS/MSD
GW-017338-050809-ACH-002	MW-19	05/08/09	11:40	X	X	X	
GW-017338-050809-ACH-003	MW-8	05/08/09	12:45	X	X	X	
GW-017338-050809-ACH-004	MW-8	05/08/09	12:50	X	X	X	Field duplicate of sample GW-017338-050809-ACH-003
EB-017338-050809-ACH-005	Equipment Blank	05/08/09	13:15	X	X	X	Equipment Blank
TB-017338-050809-ACH-001	Trip Blank	05/08/09	---	X			Trip Blank

Notes:

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 ASSEMBLY PLANT
WILMINGTON, DELAWARE
MAY 2009

<i>Parameter</i>	<i>Method</i> ¹
TCL VOCs	SW-846 8260B
TCL SVOCs	SW-846 8270C
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.
VOCs - Volatile Organic Compounds.
Volatile Organic Compounds.

TABLE 3
ANALYTICAL RESULTS SUMMARY
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
'MAY 2009

<i>Sample Location:</i>		MW8	MW8	MW9	MW19
<i>Sample ID:</i>		GW-017338-050809-ACH-003	GW-017338-050809-ACH-004	GW-017338-050809-ACH-001	GW-017338-050809-ACH-002
<i>Sample Date:</i>		5/8/2009	5/8/2009 (Duplicate)	5/8/2009	5/8/2009
<i>Parameters:</i>	<i>Units</i>				
<i>Volatile Organic Compounds</i>					
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	10 U	10 U	10 U	10 U
Acetone	µg/L	10 UJ	10 UJ	10 UJ	10 UJ
Benzene	µg/L	1.9	2.1	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl Bromide)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	1.6	1.7	1.0 U	1.0 U
Chloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl Chloride)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	3.1	2.9	1.0 U	1.0 U
Dibromochloromethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzene	µg/L	2.9	3.2	1.0 U	1.0 U

TABLE 3
ANALYTICAL RESULTS SUMMARY
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
'MAY 2009

Sample Location:		MW8	MW8	MW9	MW19
Sample ID:	GW-017338-050809-ACH-003	GW-017338-050809-ACH-004	GW-017338-050809-ACH-001	GW-017338-050809-ACH-002	
Sample Date:	5/8/2009	5/8/2009	5/8/2009	5/8/2009	
		(Duplicate)			
Parameters:	Units				
Volatile Organic Compounds					
Methyl acetate	µg/L	2.0 U	2.0 U	2.0 U	
Methyl cyclohexane	µg/L	16	18	1.0 U	
Methyl Tert Butyl Ether	µg/L	5.0	5.3	1.0 U	
Methylene chloride	µg/L	1.0 U	1.0 U	1.0 U	
Styrene	µg/L	1.0 U	1.0 U	1.0 U	
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	
Toluene	µg/L	1.0 U	1.0 U	1.0 U	
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	
Trichloroethene	µg/L	1.0 U	1.0 U	0.57 J	
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U	
Trifluorotrichloroethane (Freon 113)	µg/L	1.0 U	1.0 U	1.0 U	
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U	
Xylene (total)	µg/L	3.0 U	3.0 U	3.0 U	
Semi-volatile Organic Compounds					
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	µg/L	10 U	10 U	10 U	
2,4,5-Trichlorophenol	µg/L	10 U	10 U	10 U	
2,4,6-Trichlorophenol	µg/L	10 U	10 U	10 U	
2,4-Dichlorophenol	µg/L	10 U	10 U	10 U	
2,4-Dimethylphenol	µg/L	10 U	10 U	10 U	
2,4-Dinitrophenol	µg/L	30 U	30 U	30 U	
2,4-Dinitrotoluene	µg/L	2.0 U	2.0 U	2.0 U	
2,6-Dinitrotoluene	µg/L	2.0 U	2.0 U	2.0 U	
2-Chloronaphthalene	µg/L	10 U	10 U	10 U	
2-Chlorophenol	µg/L	10 U	10 U	10 U	
2-Methylnaphthalene	µg/L	10 U	10 U	10 U	
2-Methylphenol	µg/L	10 U	10 U	10 U	
2-Nitroaniline	µg/L	20 U	20 U	20 U	
2-Nitrophenol	µg/L	10 U	10 U	10 U	
3,3'-Dichlorobenzidine	µg/L	20 U	20 U	20 U	
3-Nitroaniline	µg/L	20 U	20 U	20 U	
4,6-Dinitro-2-methylphenol	µg/L	30 U	30 U	30 U	

TABLE 3
ANALYTICAL RESULTS SUMMARY
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
'MAY 2009

	Sample Location:	MW8	MW8	MW9	MW19
	Sample ID:	GW-017338-050809-ACH-003	GW-017338-050809-ACH-004	GW-017338-050809-ACH-001	GW-017338-050809-ACH-002
	Sample Date:	5/8/2009	5/8/2009	5/8/2009	5/8/2009
			(Duplicate)		
Parameters:	Units				
Semi-volatile Organic Compounds (Cont'd.)					
4-Bromophenyl phenyl ether	µg/L	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	µg/L	10 U	10 U	10 U	10 U
4-Chloroaniline	µg/L	10 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether	µg/L	10 U	10 U	10 U	10 U
4-Methylphenol	µg/L	10 U	10 U	10 U	10 U
4-Nitroaniline	µg/L	20 U	20 U	20 U	20 U
4-Nitrophenol	µg/L	30 U	30 U	30 U	30 U
Acenaphthene	µg/L	10 U	10 U	10 U	10 U
Acenaphthylene	µg/L	10 U	10 U	10 U	10 U
Acetophenone	µg/L	10 U	10 U	10 U	10 U
Anthracene	µg/L	10 U	10 U	10 U	10 U
Atrazine	µg/L	10 U	10 U	10 U	10 U
Benzaldehyde	µg/L	10 U	10 U	10 U	10 U
Benzo(a)anthracene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(a)pyrene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(b)fluoranthene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(g,h,i)perylene	µg/L	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Biphenyl (1,1-Biphenyl)	µg/L	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	µg/L	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Ethylhexyl)phthalate	µg/L	10 UJ	10 UJ	10 UJ	10 UJ
Butyl benzylphthalate	µg/L	10 U	10 U	10 U	10 U
Caprolactam	µg/L	10 U	10 U	10 U	10 U
Carbazole	µg/L	10 U	10 U	10 U	10 U
Chrysene	µg/L	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Dibenzofuran	µg/L	10 U	10 U	10 U	10 U
Diethyl phthalate	µg/L	10 U	10 U	10 U	10 U
Dimethyl phthalate	µg/L	10 U	10 U	10 U	10 U
Di-n-butylphthalate	µg/L	10 U	10 U	10 U	10 U
Di-n-octyl phthalate	µg/L	10 U	10 U	10 U	10 U
Fluoranthene	µg/L	10 U	10 U	10 U	10 U
Fluorene	µg/L	10 U	10 U	10 U	10 U

TABLE 3
ANALYTICAL RESULTS SUMMARY
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
'MAY 2009

		Sample Location: Sample ID: Sample Date:	MW8 GW-017338-050809-ACH-003 5/8/2009	MW8 GW-017338-050809-ACH-004 5/8/2009 (Duplicate)	MW9 GW-017338-050809-ACH-001 5/8/2009	MW19 GW-017338-050809-ACH-002 5/8/2009
Parameters:	Units					
<i>Semi-volatile Organic Compounds (Cont'd.)</i>						
Hexachlorobenzene	µg/L		1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorobutadiene	µg/L		2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	µg/L		10 U	10 U	10 U	10 U
Hexachloroethane	µg/L		1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	µg/L		1.0 U	1.0 U	1.0 U	1.0 U
Isophorone	µg/L		10 U	10 U	10 U	10 U
Naphthalene	µg/L		10 U	18	10 U	10 U
Nitrobenzene	µg/L		1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodi-n-propylamine	µg/L		1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodiphenylamine	µg/L		10 U	10 U	10 U	10 U
Pentachlorophenol	µg/L		30 U	30 U	30 U	30 U
Phenanthrene	µg/L		10 U	10 U	10 U	10 U
Phenol	µg/L		10 U	10 U	10 U	10 U
Pyrene	µg/L		10 U	10 U	10 U	10 U
<i>Metals</i>						
Aluminum	µg/L		1180	1050	6220	1390
Antimony	µg/L		10.0 U	10.0 U	10.0 U	10.0 U
Arsenic	µg/L		5.0 U	5.0 U	5.0 U	5.0 U
Barium	µg/L		491	465	278	253
Beryllium	µg/L		2.0 U	2.0 U	2.0 U	2.0 U
Cadmium	µg/L		5.0 U	5.0 U	5.0 U	5.0 U
Calcium	µg/L		49900	46600	51400	44700
Chromium	µg/L		10.0 U	10.0 U	10.6	10.0 U
Cobalt	µg/L		17.8 J	16.1 J	4.8 J	50.0 U
Copper	µg/L		25.0 U	25.0 U	26.6	25.0 U
Iron	µg/L		67100	63800	22900	5680
Lead	µg/L		3.4 J	3.4 J	4.5 J	3.3 J
Magnesium	µg/L		32900	31300	25600	12100
Manganese	µg/L		1710	1620	531	420
Mercury	µg/L		0.20 U	0.20 U	0.40	0.20 U
Nickel	µg/L		40.0 U	40.0 U	6.9 J	40.0 U
Potassium	µg/L		3620 J	3390 J	8570	6310

TABLE 3
ANALYTICAL RESULTS SUMMARY
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
'MAY 2009

	Sample Location:		MW8	MW8	MW9	MW19
	Sample ID:	GW-017338-050809-ACH-003	GW-017338-050809-ACH-004	GW-017338-050809-ACH-001	GW-017338-050809-ACH-002	
	Sample Date:	5/8/2009	5/8/2009	5/8/2009	5/8/2009	
			(Duplicate)			
Parameters:	Units					
Metals (Cont'd.)						
Selenium	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	
Silver	µg/L	10.0 U	10.0 U	1.7 J	1.2 J	
Sodium	µg/L	102000	98500	133000	193000	
Thallium	µg/L	10.0 U	10.0 U	10.0 U	10.0 U	
Vanadium	µg/L	50.0 U	50.0 U	50.0 U	50.0 U	
Zinc	µg/L	30.0 U	30.0 U	19.1 J	6.8 J	

Notes:

J - Estimated.

U - Not detected.

UJ - Not detected, estimated reporting limit.

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
 OU-2 AREA INVESTIGATION
 GENERAL MOTORS ASSEMBLY PLANT
 WILMINGTON, DELAWARE
 MAY 2009

<i>Parameter</i>	<i>Calibration Date</i>	<i>Compound</i>	<i>%D</i>	<i>Associated Sample ID</i>	<i>Qualified Sample Results</i>	<i>Units</i>
VOCs	05/14/09	Acetone	45	GW-017338-050809-ACH-002	10 UJ	µg/L
SVOCs	05/14/09	bis(2-Ethylhexyl)phthalate	26	GW-017338-050809-ACH-001	10 UJ	µg/L
				GW-017338-050809-ACH-002	10 UJ	µg/L
				GW-017338-050809-ACH-003	10 UJ	µg/L
				GW-017338-050809-ACH-004	10 UJ	µg/L

Notes:

%D - Percent Difference.

SVOCs - Semi-Volatile Organic Compounds.

UJ - Not detected, estimated reporting limit.

VOCs - Volatile Organic Compounds.

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE RESULTS
 OU-2 AREA INVESTIGATION
 GENERAL MOTORS ASSEMBLY PLANT
 WILMINGTON, DELAWARE
 MAY 2009

<i>Parameter</i>	<i>Compound</i>	<i>Percent Recovery</i>	<i>Control Limits (percent)</i>	<i>Associated Sample ID</i>	<i>Qualified Sample Results</i>	<i>Units</i>
VOCs	Acetone	53	69 - 143	GW-017338-050809-ACH-001	10 UJ	µg/L
				GW-017338-050809-ACH-003	10 UJ	µg/L
				GW-017338-050809-ACH-004	10 UJ	µg/L
SVOCs	bis(2-Ethylhexyl)phthalate	63	66 - 112	GW-017338-050809-ACH-001	10 UJ	µg/L
				GW-017338-050809-ACH-002	10 UJ	µg/L
				GW-017338-050809-ACH-003	10 UJ	µg/L
				GW-017338-050809-ACH-004	10 UJ	µg/L

Notes:

SVOCs - Semi-Volatile Organic Compounds.

UJ - Not detected, estimated reporting limit.

VOCs - Volatile Organic Compounds.

TABLE 6

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE RINSE BLANKS
 OU-2 AREA INVESTIGATION
 GENERAL MOTORS ASSEMBLY PLANT
 WILMINGTON, DELAWARE
 MAY 2009

<i>Parameter</i>	<i>Rinse Blank Date</i>	<i>Analyte</i>	<i>Blank Result</i>	<i>Sample ID</i>	<i>Qualified Sample Result</i>	<i>Units</i>
Metals	05/08/09	Vanadium	2.2	GW-017338-050809-ACH-001	50.0 U	µg/L
				GW-017338-050809-ACH-002	50.0 U	µg/L
				GW-017338-050809-ACH-003	50.0 U	µg/L
				GW-017338-050809-ACH-004	50.0 U	µg/L

Notes:

U - Not detected.



MEMORANDUM

TO: Greg Carli
FROM: Susan Scrocchi/bjw/10 *SS*
C.C.: Golnoush Bolourani
REF. NO.: 17307-091009
DATE: October 12, 2009
E-Mail and Hard Copy if Requested
RE: **Data Quality Assessment and Validation
OU-2 Bulk Product Tank Area - Groundwater Samples
Wilmington, Delaware**

INTRODUCTION

The following details a quality assessment and validation of the analytical data resulting from the September 2009, collection of groundwater 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 Test America Laboratory in Edison, New Jersey (TA), in accordance with the methodologies presented in Table 2. Analytical results summaries are presented in Table 3.

The Quality Control (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
- 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 any detected concentrations of volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), and metals observed below the laboratory's practical quantitation limit (PQL)/report limit (RL) but above the laboratory's method detection limit (MDL) with a flag. 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.

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.

Calibration standards were analyzed at the required frequency and the results met the above criteria for linearity. Acetone and 2-butanone did not achieve a response factor of 0.05. All associated positive sample results were qualified as estimated and all non-detect results were rejected based on the poor analyte sensitivity (see 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. 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.

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 some compounds exhibiting variability in instrument response. Associated sample results have been qualified as estimated (see Table 5).

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.

Site specific analyses were performed as specified in Table 1 and all MS/MSD or MS/Dup recoveries were acceptable indicating good analytical accuracy and precision with the following exceptions:

- i) Some low SVOC recoveries were observed. All associated sample results were qualified as estimated to reflect the implied low bias (see Table 6).
- ii) Some high recoveries were observed. All associated sample results were non-detect and would not have been impacted by the implied high bias.
- iii) Some analyte concentrations were significantly greater than the spiking concentrations and the spike recoveries were not assessed.

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 sample results were non-detect and would not have been impacted.

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.
- 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 rinse blank sample, one field duplicate sample set, and two trip blank samples.

To assess the cleanliness of sample containers and the presence of field contamination, the rinse blank sample identified in Table 1 was collected and analyzed.

Several target compounds were detected in the rinse blank. The samples collected on the same day as the rinse blank were assessed. All associated sample results with concentrations similar to that found in the field blank were qualified as non-detect (see Table 7). Sample results that were either non-detect or significantly greater than the concentration found in the field blank would not have been impacted.

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 variability between aluminum results. See Table 8 for qualified data.

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, one 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 with the exception of methylene chloride present at low concentrations. All associated sample results were non-detect and would not have been impacted.

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 and exceptions noted.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

Sample I.D.	Location I.D.	Collection Date (mm/dd/yy)	Collection Time (hr:min)	<u>Analysis/Parameters</u>			Comments
				TCL VOCs	TCL SVOCs	TAL Metals	
GW-017338-081709-ACH-01	MW -9	08/17/09	13:30	X	X	X	
GW-017338-081709-ACH-02	MW-19	08/17/09	14:30	X	X	X	
GW-017338-081709-ACH-03	MW-11R	08/17/09	15:40	X	X	X	
GW-017338-081809-ACH-04	MW-3D	08/18/09	9:30	X	X	X	
GW-017338-081809-ACH-05	MW-8	08/18/09	10:30	X	X	X	
GW-017338-081809-ACH-06	MW-10	08/18/09	11:40	X	X	X	
GW-017338-081809-ACH-07	MW-6	08/18/09	13:40	X	X	X	
GW-017338-081809-ACH-08	MW-12	08/18/09	14:50	X	X	X	
TB-017338-081809-ACH-001	TRIP BLANK	08/18/09	----	X			
GW-017338-081909-ACH-09	MW-7	08/19/09	9:00	X	X	X	
GW-017338-081909-ACH-10	MW-7	08/19/09	9:15	X	X	X	Field duplicate of GW-017338-081909-ACH-09
GW-017338-081909-ACH-11	MW-2	08/19/09	10:30	X	X	X	
GW-017338-081909-ACH-12	MW-13	08/19/09	11:45	X	X	X	MS/MSD
GW-017338-081909-ACH-13	MW-11	08/19/09	14:00	X	X	X	
RB-017338-081909-ACH-14	RINSE BLANK	08/19/09	14:30	X	X	X	
GW-017338-081909-ACH-15	MW-3D	08/19/09	15:30	X	X	X	
TB-017338-081909-ACH-002	TRIP BLANK	08/19/09	----	X			

Notes:

MS Matrix Spike.
MSD Matrix Spike Duplicate.
SVOCs Semi-volatile Organic Compounds.
TAL Target Analyte List.
TCL Target Compound List.
VOCs Volatile Organic Compounds.

TABLE 2

SUMMARY OF ANALYTICAL METHODS
OU-2 AREA INVESTIGATION
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
SEPTEMBER 2009

<i>Parameter</i>	<i>Method</i> ¹
TCL VOCs	SW-846 8260B
TCL SVOCs	SW-846 8270C
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.
VOCs - Volatile Organic Compounds.

TABLE 3

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

<i>Sample Location:</i>		MW2	MW3D	MW3D	MW6
<i>Sample ID:</i>		GW-017338-081909-ACH-11	GW-017338-081809-ACH-04	GW-017338-081909-ACH-15	GW-017338-081809-ACH-07
<i>Sample Date:</i>		8/19/2009	8/18/2009	8/19/2009	8/18/2009
<i>Parameters:</i>	<i>Units</i>				
<i>Volatile Organic Compounds</i>					
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	100 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	100 U	2.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	100 U	2.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	100 U	2.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	100 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	100 U	2.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	1.0 U	100 U	2.0 U
1,2-Dibromoethane (Ethylene Dibromide)	µg/L	1.0 U	1.0 U	100 U	2.0 U
1,2-Dichlorobenzene	µg/L	0.20 J	1.0 U	100 U	2.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	100 U	2.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	100 U	2.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	100 U	2.0 U
1,4-Dichlorobenzene	µg/L	0.27 J	1.0 U	100 U	2.0 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	R	R	170 J	R
2-Hexanone	µg/L	10 U	10 U	1000 U	20 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	10 U	10 U	440 J	20 U
Acetone	µg/L	R	R	200000 J	R
Benzene	µg/L	1.0 U	0.49 J	580	3.0
Bromodichloromethane	µg/L	1.0 U	1.0 U	100 U	2.0 U
Bromoform	µg/L	1.0 U	1.0 U	100 U	2.0 U
Bromomethane (Methyl Bromide)	µg/L	1.0 U	1.0 UJ	100 U	2.0 UJ
Carbon disulfide	µg/L	1.0 U	1.0 U	100 U	2.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	100 U	2.0 U
Chlorobenzene	µg/L	5.9 U	1.0 U	100 U	2.0 U
Chloroethane	µg/L	1.0 U	1.0 U	100 U	2.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	100 U	2.0 U
Chloromethane (Methyl Chloride)	µg/L	1.0 U	1.0 U	100 U	2.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	100 U	2.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	100 U	2.0 U
Cyclohexane	µg/L	5.9	0.64 J	100 U	3.7

TABLE 3

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

<i>Sample Location:</i>		<i>MW2</i>	<i>MW3D</i>	<i>MW3D</i>	<i>MW6</i>
<i>Sample ID:</i>		<i>GW-017338-081909-ACH-11</i>	<i>GW-017338-081809-ACH-04</i>	<i>GW-017338-081909-ACH-15</i>	<i>GW-017338-081809-ACH-07</i>
<i>Sample Date:</i>		<i>8/19/2009</i>	<i>8/18/2009</i>	<i>8/19/2009</i>	<i>8/18/2009</i>
<i>Parameters:</i>	<i>Units</i>				
<i>Volatile Organic Compounds (Cont'd.)</i>					
Dibromochloromethane	µg/L	1.0 U	1.0 U	100 U	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	1.0 U	100 U	2.0 U
Ethylbenzene	µg/L	12 U	5.8	10000	1100
Isopropylbenzene	µg/L	10	4.4	100 U	93
Methyl acetate	µg/L	2.0 U	2.0 U	200 U	4.0 U
Methyl cyclohexane	µg/L	5.4	0.77 J	100 U	11
Methyl Tert Butyl Ether	µg/L	2.1	1.8	470	2.0 U
Methylene chloride	µg/L	1.0 U	1.0 U	100 U	2.0 U
Styrene	µg/L	1.0 U	1.0 U	100 U	2.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	100 U	2.0 U
Toluene	µg/L	14 U	1.0 U	150000	3400
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	100 U	2.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	100 U	2.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	100 U	2.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	100 U	2.0 U
Trifluorotrichloroethane (Freon 113)	µg/L	1.0 U	1.0 U	100 U	2.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	100 U	2.0 U
Xylene (total)	µg/L	28 U	13	17000	2200
<i>Semi-volatile Organic Compounds</i>					
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	µg/L	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	µg/L	10 U	10 U	10 U	10 U
2,4,6-Trichlorophenol	µg/L	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	µg/L	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	µg/L	10 U	10 U	200	10 U
2,4-Dinitrophenol	µg/L	31 UJ	31 UJ	30 UJ	30 UJ
2,4-Dinitrotoluene	µg/L	2.1 U	2.1 U	2.0 U	2.0 U
2,6-Dinitrotoluene	µg/L	2.1 U	2.1 U	2.0 U	2.0 U
2-Chloronaphthalene	µg/L	10 U	10 U	10 U	10 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

	<i>Parameters:</i>	<i>Sample Location:</i>		<i>Sample ID:</i>		<i>Sample Date:</i>	
		MW2	MW3D	MW3D	MW6		
		GW-017338-081909-ACH-11	GW-017338-081809-ACH-04	GW-017338-081909-ACH-15	GW-017338-081809-ACH-07		
	<i>Units</i>	8/19/2009	8/18/2009	8/19/2009	8/18/2009		
<i>Semi-volatile Organic Compounds (Cont'd.)</i>							
2-Chlorophenol	µg/L	10 U	10 U	10 U	10 U		
2-Methylnaphthalene	µg/L	10 U	10 U	10 U	10 U		
2-Methylphenol	µg/L	10 U	10 U	100	9.7 J		
2-Nitroaniline	µg/L	21 U	21 U	20 U	20 U		
2-Nitrophenol	µg/L	10 U	10 U	10 U	10 U		
3,3'-Dichlorobenzidine	µg/L	21 U	21 U	20 U	20 U		
3-Nitroaniline	µg/L	21 U	21 U	20 U	20 U		
4,6-Dinitro-2-methylphenol	µg/L	31 U	31 U	30 U	30 U		
4-Bromophenyl phenyl ether	µg/L	10 U	10 U	10 U	10 U		
4-Chloro-3-methylphenol	µg/L	10 U	10 U	10 U	10 U		
4-Chloroaniline	µg/L	10 U	10 U	10 U	10 U		
4-Chlorophenyl phenyl ether	µg/L	10 U	10 U	10 U	10 U		
4-Methylphenol	µg/L	10 U	10 U	240	10		
4-Nitroaniline	µg/L	21 U	21 U	20 U	20 U		
4-Nitrophenol	µg/L	31 U	31 U	30 U	30 U		
Acenaphthene	µg/L	10 U	10 U	10 U	10 U		
Acenaphthylene	µg/L	10 U	10 U	10 U	10 U		
Acetophenone	µg/L	10 U	10 U	14	10 U		
Anthracene	µg/L	10 U	10 U	10 U	10 U		
Atrazine	µg/L	10 U	10 U	10 U	10 U		
Benzaldehyde	µg/L	10 U	10 U	10 U	10 U		
Benzo(a)anthracene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U		
Benzo(a)pyrene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U		
Benzo(b)fluoranthene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U		
Benzo(g,h,i)perylene	µg/L	10 U	10 U	10 U	10 U		
Benzo(k)fluoranthene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U		
Biphenyl (1,1-Biphenyl)	µg/L	10 U	10 U	10 U	10 U		
bis(2-Chloroethoxy)methane	µg/L	10 U	10 U	10 U	10 U		
bis(2-Chloroethyl)ether	µg/L	1.0 U	1.0 U	1.0 U	1.0 U		
bis(2-Ethylhexyl)phthalate	µg/L	10 U	10 U	10 U	10 U		

TABLE 3

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

<i>Sample Location:</i>		<i>MW2</i>	<i>MW3D</i>	<i>MW3D</i>	<i>MW6</i>
<i>Sample ID:</i>		GW-017338-081909-ACH-11	GW-017338-081809-ACH-04	GW-017338-081909-ACH-15	GW-017338-081809-ACH-07
<i>Sample Date:</i>		8/19/2009	8/18/2009	8/19/2009	8/18/2009
<i>Parameters:</i>	<i>Units</i>				
<i>Semi-volatile Organic Compounds (Cont'd.)</i>					
Butyl benzylphthalate	µg/L	10 U	10 U	10 U	10 U
Caprolactam	µg/L	10 U	10 U	10 U	10 U
Carbazole	µg/L	10 U	10 U	10 U	10 U
Chrysene	µg/L	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Dibenzofuran	µg/L	10 U	10 U	10 U	10 U
Diethyl phthalate	µg/L	10 U	10 U	10 U	10 U
Dimethyl phthalate	µg/L	10 U	10 U	10 U	10 U
Di-n-butylphthalate	µg/L	10 U	10 U	10 U	10 U
Di-n-octyl phthalate	µg/L	10 U	10 U	10 U	10 U
Fluoranthene	µg/L	10 U	10 U	10 U	10 U
Fluorene	µg/L	10 U	10 U	10 U	10 U
Hexachlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorobutadiene	µg/L	2.1 U	2.1 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	µg/L	10 U	10 U	10 U	10 U
Hexachloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-cd)pyrene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Isophorone	µg/L	10 U	10 U	10 U	10 U
Naphthalene	µg/L	10 U	10 U	19 U	10 U
Nitrobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodi-n-propylamine	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodiphenylamine	µg/L	10 U	10 U	10 U	10 U
Pentachlorophenol	µg/L	31 U	31 U	30 U	30 U
Phenanthrene	µg/L	10 U	10 U	10 U	10 U
Phenol	µg/L	10 U	10 U	10 U	10 U
Pyrene	µg/L	10 U	10 U	10 U	10 U

TABLE 3

**ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009**

Sample Location:		MW2	MW3D	MW3D	MW6
Sample ID:		GW-017338-081909-ACH-11	GW-017338-081809-ACH-04	GW-017338-081909-ACH-15	GW-017338-081809-ACH-07
Sample Date:		8/19/2009	8/18/2009	8/19/2009	8/18/2009
Parameters:	Units				
Metals					
Aluminum	µg/L	200 U	3710	193 J	9250
Antimony	µg/L	10.0 U	10.0 U	10.0 U	10.0 U
Arsenic	µg/L	13.3	5.0 U	5.0 U	21.5
Barium	µg/L	526	363	705	644
Beryllium	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Cadmium	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Calcium	µg/L	46400	44100	92500	62700
Chromium	µg/L	10.0 U	4.7 J	10.0 U	9.0 J
Cobalt	µg/L	4.2 J	50.0 U	50.0 U	6.4 J
Copper	µg/L	8.1 J	35.5	6.6 J	25.7
Iron	µg/L	61800	30300	258000	31400
Lead	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Magnesium	µg/L	41400	27400	98600	23200
Manganese	µg/L	948	423	22100	758
Mercury	µg/L	0.32	0.28	0.40	0.28
Nickel	µg/L	40.0 U	6.4 J	40.0 U	6.9 J
Potassium	µg/L	4610 J	5640	4580 J	14800
Selenium	µg/L	10.0 U	10.0 U	10.0 U	10.0 U
Silver	µg/L	10.0 U	7.7 J	10.0 U	1.5 J
Sodium	µg/L	174000	81400	131000	180000
Thallium	µg/L	10.0 U	10.0 U	10.0 U	10.0 U
Vanadium	µg/L	50.0 U	6.8 J	2.3 J	12.2 J
Zinc	µg/L	19.0 J	26.0 J	34.8	21.1 J

CRA 017307Memo-10-Tbls

<i>Sample Location:</i>	MW7	MW7	MW8	MW9
<i>Sample ID:</i>	GW-017338-081909-ACH-09	GW-017338-081909-ACH-10	GW-017338-081809-ACH-05	GW-017338-081709-ACH-01
<i>Sample Date:</i>	8/19/2009	8/19/2009 (Duplicate)	8/18/2009	8/17/2009

Parameters:	Units				
Volatile Organic Compounds (Cont'd.)					
Dibromochloromethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	16 U	13 U	0.43 J	1.0 U
Isopropylbenzene	µg/L	1.9 U	1.9 U	7.1	1.0 U
Methyl acetate	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Methyl cyclohexane	µg/L	1.0 U	1.0 U	7.2	1.0 U
Methyl Tert Butyl Ether	µg/L	0.54 J	0.58 J	7.1	1.0 U
Methylene chloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.32 J
Toluene	µg/L	20 U	16 U	0.30 J	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (Freon 113)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	µg/L	36 U	29 U	18	3.0 U

2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	µg/L	11 U	11 U	11 U	10 U
2,4,5-Trichlorophenol	µg/L	11 U	11 U	11 U	10 U
2,4,6-Trichlorophenol	µg/L	11 U	11 U	11 U	10 U
2,4-Dichlorophenol	µg/L	11 U	11 U	11 U	10 U
2,4-Dimethylphenol	µg/L	11 U	11 U	11 U	10 U
2,4-Dinitrophenol	µg/L	33 UJ	32 UJ	32 UJ	31 UJ
2,4-Dinitrotoluene	µg/L	2.2 U	2.1 U	2.1 U	2.0 U
2,6-Dinitrotoluene	µg/L	2.2 U	2.1 U	2.1 U	2.0 U
2-Chloronaphthalene	µg/L	11 U	11 U	11 U	10 U

CRA 017307Memo-10-Tbls

TABLE 3
ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

	Sample Location:	MW7	MW7	MW8	MW9
	Sample ID:	GW-017338-081909-ACH-09	GW-017338-081909-ACH-10	GW-017338-081809-ACH-05	GW-017338-081709-ACH-01
	Sample Date:	8/19/2009	8/19/2009	8/18/2009	8/17/2009
			(Duplicate)		
Parameters:	Units				
Semi-volatile Organic Compounds (Cont'd.)					
Butyl benzylphthalate	µg/L	11 U	11 U	11 U	10 U
Caprolactam	µg/L	11 U	11 U	11 U	10 U
Carbazole	µg/L	11 U	11 U	11 U	10 U
Chrysene	µg/L	11 U	11 U	11 U	10 U
Dibenz(a,h)anthracene	µg/L	1.1 U	1.1 U	1.1 U	1.0 U
Dibenzofuran	µg/L	11 U	11 U	11 U	10 U
Diethyl phthalate	µg/L	11 U	11 U	11 U	10 U
Dimethyl phthalate	µg/L	11 U	11 U	11 U	10 U
Di-n-butylphthalate	µg/L	11 U	11 U	11 U	10 U
Di-n-octyl phthalate	µg/L	11 U	11 U	11 U	10 U
Fluoranthene	µg/L	11 U	11 U	11 U	10 U
Fluorene	µg/L	11 U	11 U	11 U	10 U
Hexachlorobenzene	µg/L	1.1 U	1.1 U	1.1 U	1.0 U
Hexachlorobutadiene	µg/L	2.2 U	2.1 U	2.1 U	2.0 U
Hexachlorocyclopentadiene	µg/L	11 U	11 U	11 U	10 U
Hexachloroethane	µg/L	1.1 U	1.1 U	1.1 U	1.0 U
Indeno(1,2,3-cd)pyrene	µg/L	1.1 U	1.1 U	1.1 U	1.0 U
Isophorone	µg/L	11 U	11 U	11 U	10 U
Naphthalene	µg/L	11 U	11 U	83	10 U
Nitrobenzene	µg/L	1.1 U	1.1 U	1.1 U	1.0 U
N-Nitrosodi-n-propylamine	µg/L	1.1 U	1.1 U	1.1 U	1.0 U
N-Nitrosodiphenylamine	µg/L	11 U	11 U	11 U	10 U
Pentachlorophenol	µg/L	33 U	32 U	32 U	31 U
Phenanthrene	µg/L	11 U	11 U	11 U	10 U
Phenol	µg/L	11 U	11 U	11 U	10 U
Pyrene	µg/L	11 U	11 U	11 U	10 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

	Sample Location:	MW7	MW7	MW8	MW9
	Sample ID:	GW-017338-081909-ACH-09	GW-017338-081909-ACH-10	GW-017338-081809-ACH-05	GW-017338-081709-ACH-01
	Sample Date:	8/19/2009	8/19/2009 (Duplicate)	8/18/2009	8/17/2009
Parameters:	Units				
Metals					
Aluminum	µg/L	7300 J	2380 J	6530	1390
Antimony	µg/L	10.0 U	10.0 U	10.0 U	10.0 U
Arsenic	µg/L	16.2	14.0	5.0 U	5.0 U
Barium	µg/L	424	348	614	220
Beryllium	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Cadmium	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Calcium	µg/L	38600	32700	61300	55100
Chromium	µg/L	9.0 J	10.0 U	5.8 J	10.0 U
Cobalt	µg/L	17.0 J	13.5 J	21.5 J	50.0 U
Copper	µg/L	34.1	25.8	31.3	25.0 U
Iron	µg/L	86200	72500	87500	4220
Lead	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Magnesium	µg/L	30700	26300	42000	27500
Manganese	µg/L	2190	1900	2070	536
Mercury	µg/L	0.51	0.43	0.33	0.44
Nickel	µg/L	8.7 J	40.0 U	5.5 J	40.0 U
Potassium	µg/L	4160 J	3370 J	3760 J	8400
Selenium	µg/L	10.0 U	10.0 U	10.0 U	10.0 U
Silver	µg/L	8.6 J	1.1 J	10.0 U	10.0 U
Sodium	µg/L	58800	49700	101000	145000
Thallium	µg/L	10.0 U	10.0 U	10.0 U	10.0 U
Vanadium	µg/L	17.6 J	5.8 J	8.5 J	50.0 U
Zinc	µg/L	31.4	30.0 U	8.9 J	8.0 J

TABLE 3

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

<i>Sample Location:</i>		<i>MW10</i>	<i>MW11</i>	<i>MW11R</i>	<i>MW12</i>
<i>Sample ID:</i>		GW-017338-081809-ACH-06	GW-017338-081909-ACH-13	GW-017338-081709-ACH-03	GW-017338-081809-ACH-08
<i>Sample Date:</i>		8/18/2009	8/19/2009	8/17/2009	8/18/2009
<i>Parameters:</i>	<i>Units</i>				
<i>Volatile Organic Compounds</i>					
1,1,1-Trichloroethane	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	0.27 J	2.0 U	1.0 U	1.0 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	R	7.2 J	R	R
2-Hexanone	µg/L	10 U	20 U	10 U	10 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	10 U	1.6 J	10 U	10 U
Acetone	µg/L	R	24 J	R	R
Benzene	µg/L	12	260	1.0 U	270
Bromodichloromethane	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
Bromomethane (Methyl Bromide)	µg/L	1.0 UJ	2.0 UJ	1.0 UJ	1.0 UJ
Carbon disulfide	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	0.51 J	2.0 U	1.0 U	1.0 U
Chloroethane	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	2.0 U	5.3	1.0 U
Chloromethane (Methyl Chloride)	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 J	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	10	0.85 J	1.0 U	6.7

TABLE 3

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

<i>Sample Location:</i>		<i>MW10</i>	<i>MW11</i>	<i>MW11R</i>	<i>MW12</i>
<i>Sample ID:</i>		<i>GW-017338-081809-ACH-06</i>	<i>GW-017338-081909-ACH-13</i>	<i>GW-017338-081709-ACH-03</i>	<i>GW-017338-081809-ACH-08</i>
<i>Sample Date:</i>		<i>8/18/2009</i>	<i>8/19/2009</i>	<i>8/17/2009</i>	<i>8/18/2009</i>
<i>Parameters:</i>	<i>Units</i>				
<i>Volatile Organic Compounds (Cont'd.)</i>					
Dibromochloromethane	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	490	1500	1.0 U	34
Isopropylbenzene	µg/L	85	4.0	1.0 U	79
Methyl acetate	µg/L	2.0 U	4.0 U	2.0 U	2.0 U
Methyl cyclohexane	µg/L	20	0.42 J	1.0 U	12
Methyl Tert Butyl Ether	µg/L	0.28 J	440	1.0 U	46
Methylene chloride	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
Styrene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	2.0 U	0.31 J	1.0 U
Toluene	µg/L	270	200	1.0 U	53
trans-1,2-Dichloroethene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (Freon 113)	µg/L	1.0 U	2.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	2.0 U	1.0 U	0.80 J
Xylene (total)	µg/L	1300	4900	3.0 U	190
<i>Semi-volatile Organic Compounds</i>					
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	µg/L	11 U	10 U	11 U	10 U
2,4,5-Trichlorophenol	µg/L	11 U	10 U	11 U	10 U
2,4,6-Trichlorophenol	µg/L	11 U	10 U	11 U	10 U
2,4-Dichlorophenol	µg/L	11 U	10 U	11 U	10 U
2,4-Dimethylphenol	µg/L	11 U	28	11 U	10 U
2,4-Dinitrophenol	µg/L	32 UJ	30 UJ	32 UJ	31 UJ
2,4-Dinitrotoluene	µg/L	2.1 U	2.0 U	2.1 U	2.0 U
2,6-Dinitrotoluene	µg/L	2.1 U	2.0 U	2.1 U	2.0 U
2-Chloronaphthalene	µg/L	11 U	10 U	11 U	10 U

TABLE 3
ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

	Sample Location:	MW10	MW11	MW11R	MW12
	Sample ID:	GW-017338-081809-ACH-06	GW-017338-081909-ACH-13	GW-017338-081709-ACH-03	GW-017338-081809-ACH-08
	Sample Date:	8/18/2009	8/19/2009	8/17/2009	8/18/2009
Parameters:	Units				
Semi-volatile Organic Compounds (Cont'd.)					
2-Chlorophenol	µg/L	11 U	10 U	11 U	10 U
2-Methylnaphthalene	µg/L	11 U	10 U	11 U	10 U
2-Methylphenol	µg/L	11 U	10 U	11 U	10 U
2-Nitroaniline	µg/L	21 U	20 U	21 U	20 U
2-Nitrophenol	µg/L	11 U	10 U	11 U	10 U
3,3'-Dichlorobenzidine	µg/L	21 U	20 U	21 U	20 U
3-Nitroaniline	µg/L	21 U	20 U	21 U	20 U
4,6-Dinitro-2-methylphenol	µg/L	32 U	30 U	32 U	31 U
4-Bromophenyl phenyl ether	µg/L	11 U	10 U	11 U	10 U
4-Chloro-3-methylphenol	µg/L	11 U	10 U	11 U	10 U
4-Chloroaniline	µg/L	11 U	10 U	11 U	10 U
4-Chlorophenyl phenyl ether	µg/L	11 U	10 U	11 U	10 U
4-Methylphenol	µg/L	11 U	10 U	11 U	10 U
4-Nitroaniline	µg/L	21 U	20 U	21 U	20 U
4-Nitrophenol	µg/L	32 U	30 U	32 U	31 U
Acenaphthene	µg/L	11 U	10 U	11 U	10 U
Acenaphthylene	µg/L	11 U	10 U	11 U	10 U
Acetophenone	µg/L	11 U	10 U	11 U	10 U
Anthracene	µg/L	11 U	10 U	11 U	10 U
Atrazine	µg/L	11 U	10 U	11 U	10 U
Benzaldehyde	µg/L	11 U	10 U	11 U	10 U
Benzo(a)anthracene	µg/L	1.1 U	1.0 U	1.1 U	1.0 U
Benzo(a)pyrene	µg/L	1.1 U	1.0 U	1.1 U	1.0 U
Benzo(b)fluoranthene	µg/L	1.1 U	1.0 U	1.1 U	1.0 U
Benzo(g,h,i)perylene	µg/L	11 U	10 U	11 U	10 U
Benzo(k)fluoranthene	µg/L	1.1 U	1.0 U	1.1 U	1.0 U
Biphenyl (1,1-Biphenyl)	µg/L	11 U	10 U	11 U	10 U
bis(2-Chloroethoxy)methane	µg/L	11 U	10 U	11 U	10 U
bis(2-Chloroethyl)ether	µg/L	1.1 U	1.0 U	1.1 U	1.0 U
bis(2-Ethylhexyl)phthalate	µg/L	11 U	10 U	11 U	10 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

<i>Sample Location:</i>		<i>MW10</i>	<i>MW11</i>	<i>MW11R</i>	<i>MW12</i>
<i>Sample ID:</i>		<i>GW-017338-081809-ACH-06</i>	<i>GW-017338-081909-ACH-13</i>	<i>GW-017338-081709-ACH-03</i>	<i>GW-017338-081809-ACH-08</i>
<i>Sample Date:</i>		<i>8/18/2009</i>	<i>8/19/2009</i>	<i>8/17/2009</i>	<i>8/18/2009</i>
<i>Parameters:</i>	<i>Units</i>				
<i>Semi-volatile Organic Compounds (Cont'd.)</i>					
Butyl benzylphthalate	µg/L	11 U	10 U	11 U	10 U
Caprolactam	µg/L	11 U	10 U	11 U	10 U
Carbazole	µg/L	11 U	10 U	11 U	10 U
Chrysene	µg/L	11 U	10 U	11 U	10 U
Dibenz(a,h)anthracene	µg/L	1.1 U	1.0 U	1.1 U	1.0 U
Dibenzofuran	µg/L	11 U	10 U	11 U	10 U
Diethyl phthalate	µg/L	11 U	10 U	11 U	10 U
Dimethyl phthalate	µg/L	11 U	10 U	11 U	10 U
Di-n-butylphthalate	µg/L	11 U	10 U	11 U	10 U
Di-n-octyl phthalate	µg/L	11 U	10 U	11 U	10 U
Fluoranthene	µg/L	11 U	10 U	11 U	10 U
Fluorene	µg/L	11 U	10 U	11 U	10 U
Hexachlorobenzene	µg/L	1.1 U	1.0 U	1.1 U	1.0 U
Hexachlorobutadiene	µg/L	2.1 U	2.0 U	2.1 U	2.0 U
Hexachlorocyclopentadiene	µg/L	11 U	10 U	11 U	10 U
Hexachloroethane	µg/L	1.1 U	1.0 U	1.1 U	1.0 U
Indeno(1,2,3-cd)pyrene	µg/L	1.1 U	1.0 U	1.1 U	1.0 U
Isophorone	µg/L	11 U	10 U	11 U	10 U
Naphthalene	µg/L	11 U	15 U	11 U	33
Nitrobenzene	µg/L	1.1 U	1.0 U	1.1 U	1.0 U
N-Nitrosodi-n-propylamine	µg/L	1.1 U	1.0 U	1.1 U	1.0 U
N-Nitrosodiphenylamine	µg/L	11 U	10 U	11 U	10 U
Pentachlorophenol	µg/L	32 U	30 U	32 U	31 U
Phenanthrene	µg/L	11 U	10 U	11 U	10 U
Phenol	µg/L	11 U	10 U	11 U	10 U
Pyrene	µg/L	11 U	10 U	11 U	10 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

	Sample Location:	MW10	MW11	MW11R	MW12
	Sample ID:	GW-017338-081809-ACH-06	GW-017338-081909-ACH-13	GW-017338-081709-ACH-03	GW-017338-081809-ACH-08
	Sample Date:	8/18/2009	8/19/2009	8/17/2009	8/18/2009
Parameters:	Units				
Metals					
Aluminum	µg/L	5920	5510	2710	14500
Antimony	µg/L	10.0 U	10.0 U	10.0 U	10.0 U
Arsenic	µg/L	5.0 U	46.5	5.0 U	10.3
Barium	µg/L	431	385	207	197 J
Beryllium	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Cadmium	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Calcium	µg/L	35400	78400	14600	32200
Chromium	µg/L	8.4 J	7.1 J	3.6 J	27.1
Cobalt	µg/L	9.2 J	137	8.6 J	4.1 J
Copper	µg/L	32.7	31.7	25.0 U	48.1
Iron	µg/L	26500	107000	9210	60000
Lead	µg/L	5.0 U	5.0 U	5.0 U	51.4
Magnesium	µg/L	28400	61700	10600	37200
Manganese	µg/L	1320	931	167	390
Mercury	µg/L	0.50	0.56	0.20 U	0.54
Nickel	µg/L	6.5 J	8.8 J	3.6 J	16.7 J
Potassium	µg/L	4300 J	4270 J	2450 J	3050 J
Selenium	µg/L	10.0 U	10.0 U	10.0 U	10.0 U
Silver	µg/L	10.0 U	10.0 U	1.5 J	1.5 J
Sodium	µg/L	70800	98200	62300	36200
Thallium	µg/L	10.0 U	10.0 U	10.0 U	10.0 U
Vanadium	µg/L	11.8 J	12.8 J	4.4 J	38.6 J
Zinc	µg/L	19.7 J	16.3 J	9.7 J	94.5

TABLE 3
ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

<i>Parameters:</i>	<i>Units</i>	<i>Sample Location:</i>	<i>Sample ID:</i>	<i>Sample Date:</i>
		MW13	MW19	
		GW-017338-081909-ACH-12	GW-017338-081709-ACH-02	
		8/19/2009	8/17/2009	
<i>Volatile Organic Compounds</i>				
1,1,1-Trichloroethane	µg/L	5.0 U	1.0 U	
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	1.0 U	
1,1,2-Trichloroethane	µg/L	5.0 U	1.0 U	
1,1-Dichloroethane	µg/L	5.0 U	1.0 U	
1,1-Dichloroethene	µg/L	5.0 U	1.0 U	
1,2,4-Trichlorobenzene	µg/L	5.0 U	1.0 U	
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	5.0 U	1.0 U	
1,2-Dibromoethane (Ethylene Dibromide)	µg/L	5.0 U	1.0 U	
1,2-Dichlorobenzene	µg/L	5.0 U	1.0 U	
1,2-Dichloroethane	µg/L	5.0 U	1.0 U	
1,2-Dichloropropane	µg/L	5.0 U	1.0 U	
1,3-Dichlorobenzene	µg/L	5.0 U	1.0 U	
1,4-Dichlorobenzene	µg/L	5.0 U	1.0 U	
2-Butanone (Methyl Ethyl Ketone)	µg/L	R	R	
2-Hexanone	µg/L	50 U	10 U	
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	50 U	10 U	
Acetone	µg/L	R	R	
Benzene	µg/L	12	1.0 U	
Bromodichloromethane	µg/L	5.0 U	1.0 U	
Bromoform	µg/L	5.0 U	1.0 U	
Bromomethane (Methyl Bromide)	µg/L	5.0 UJ	1.0 UJ	
Carbon disulfide	µg/L	5.0 U	0.29 J	
Carbon tetrachloride	µg/L	5.0 U	1.0 U	
Chlorobenzene	µg/L	5.0 U	1.0 U	
Chloroethane	µg/L	5.0 U	1.0 U	
Chloroform (Trichloromethane)	µg/L	5.0 U	1.0 U	
Chloromethane (Methyl Chloride)	µg/L	5.0 U	1.0 U	
cis-1,2-Dichloroethene	µg/L	5.0 U	0.54 J	
cis-1,3-Dichloropropene	µg/L	5.0 U	1.0 U	
Cyclohexane	µg/L	6.9	1.0 U	

TABLE 3
ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

	<i>Sample Location:</i>		
	<i>Sample ID:</i>	MW13 GW-017338-081909-ACH-12	MW19 GW-017338-081709-ACH-02
	<i>Sample Date:</i>	8/19/2009	8/17/2009
<i>Parameters:</i>	<i>Units</i>		
<i>Volatile Organic Compounds (Cont'd.)</i>			
Dibromochloromethane	µg/L	5.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	1.0 U
Ethylbenzene	µg/L	550	1.0 U
Isopropylbenzene	µg/L	8.2	1.0 U
Methyl acetate	µg/L	10 U	2.0 U
Methyl cyclohexane	µg/L	54	1.0 U
Methyl Tert Butyl Ether	µg/L	25	1.0 U
Methylene chloride	µg/L	5.0 U	1.0 U
Styrene	µg/L	5.0 U	1.0 U
Tetrachloroethene	µg/L	5.0 U	1.0 U
Toluene	µg/L	4800	1.0 U
trans-1,2-Dichloroethene	µg/L	5.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	5.0 U	1.0 U
Trichloroethene	µg/L	5.0 U	0.38 J
Trichlorofluoromethane (CFC-11)	µg/L	5.0 U	1.0 U
Trifluorotrichloroethane (Freon 113)	µg/L	5.0 U	1.0 U
Vinyl chloride	µg/L	5.0 U	1.0 U
Xylene (total)	µg/L	3100	3.0 U
<i>Semi-volatile Organic Compounds</i>			
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	µg/L	100 U	11 U
2,4,5-Trichlorophenol	µg/L	100 U	11 U
2,4,6-Trichlorophenol	µg/L	100 U	11 U
2,4-Dichlorophenol	µg/L	100 U	11 U
2,4-Dimethylphenol	µg/L	100 U	11 U
2,4-Dinitrophenol	µg/L	310 UJ	32 UJ
2,4-Dinitrotoluene	µg/L	20 U	2.1 U
2,6-Dinitrotoluene	µg/L	20 U	2.1 U
2-Chloronaphthalene	µg/L	100 U	11 U

TABLE 3
ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

	<i>Sample Location:</i>		
	<i>Sample ID:</i>	MW13 GW-017338-081909-ACH-12	MW19 GW-017338-081709-ACH-02
	<i>Sample Date:</i>	8/19/2009	8/17/2009
<i>Parameters:</i>	<i>Units</i>		
<i>Semi-volatile Organic Compounds (Cont'd.)</i>			
2-Chlorophenol	µg/L	100 U	11 U
2-Methylnaphthalene	µg/L	61 J	11 U
2-Methylphenol	µg/L	100 U	11 U
2-Nitroaniline	µg/L	200 U	21 U
2-Nitrophenol	µg/L	100 U	11 U
3,3'-Dichlorobenzidine	µg/L	200 U	21 U
3-Nitroaniline	µg/L	200 U	21 U
4,6-Dinitro-2-methylphenol	µg/L	310 U	32 U
4-Bromophenyl phenyl ether	µg/L	100 U	11 U
4-Chloro-3-methylphenol	µg/L	100 U	11 U
4-Chloroaniline	µg/L	100 U	11 U
4-Chlorophenyl phenyl ether	µg/L	100 U	11 U
4-Methylphenol	µg/L	100 U	11 U
4-Nitroaniline	µg/L	200 U	21 U
4-Nitrophenol	µg/L	310 U	32 U
Acenaphthene	µg/L	100 U	11 U
Acenaphthylene	µg/L	100 U	11 U
Acetophenone	µg/L	100 U	11 U
Anthracene	µg/L	100 U	11 U
Atrazine	µg/L	100 U	11 U
Benzaldehyde	µg/L	100 U	11 U
Benzo(a)anthracene	µg/L	10 U	1.1 U
Benzo(a)pyrene	µg/L	10 U	1.1 U
Benzo(b)fluoranthene	µg/L	10 U	1.1 U
Benzo(g,h,i)perylene	µg/L	100 U	11 U
Benzo(k)fluoranthene	µg/L	10 U	1.1 U
Biphenyl (1,1-Biphenyl)	µg/L	100 U	11 U
bis(2-Chloroethoxy)methane	µg/L	100 U	11 U
bis(2-Chloroethyl)ether	µg/L	10 U	1.1 U
bis(2-Ethylhexyl)phthalate	µg/L	100 U	11 U

TABLE 3
ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

	Sample Location:	MW13	MW19
	Sample ID:	GW-017338-081909-ACH-12	GW-017338-081709-ACH-02
	Sample Date:	8/19/2009	8/17/2009
Parameters:	Units		
Semi-volatile Organic Compounds (Cont'd.)			
Butyl benzylphthalate	µg/L	100 U	11 U
Caprolactam	µg/L	100 U	11 U
Carbazole	µg/L	100 U	11 U
Chrysene	µg/L	100 U	11 U
Dibenz(a,h)anthracene	µg/L	3.7 J	1.1 U
Dibenzofuran	µg/L	100 U	11 U
Diethyl phthalate	µg/L	100 U	11 U
Dimethyl phthalate	µg/L	100 U	11 U
Di-n-butylphthalate	µg/L	100 U	11 U
Di-n-octyl phthalate	µg/L	100 UJ	11 U
Fluoranthene	µg/L	100 U	11 U
Fluorene	µg/L	100 U	11 U
Hexachlorobenzene	µg/L	10 U	1.1 U
Hexachlorobutadiene	µg/L	20 U	2.1 U
Hexachlorocyclopentadiene	µg/L	100 UJ	11 U
Hexachloroethane	µg/L	10 U	1.1 U
Indeno(1,2,3-cd)pyrene	µg/L	3.7 J	1.1 U
Isophorone	µg/L	100 U	11 U
Naphthalene	µg/L	1900	11 U
Nitrobenzene	µg/L	10 U	1.1 U
N-Nitrosodi-n-propylamine	µg/L	10 U	1.1 U
N-Nitrosodiphenylamine	µg/L	100 U	11 U
Pentachlorophenol	µg/L	310 UJ	32 U
Phenanthrene	µg/L	100 U	11 U
Phenol	µg/L	100 U	11 U
Pyrene	µg/L	100 U	11 U

TABLE 3
ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

	<i>Sample Location:</i>		
	<i>Sample ID:</i>		
	<i>Sample Date:</i>		
		MW13	MW19
		GW-017338-081909-ACH-12	GW-017338-081709-ACH-02
		8/19/2009	8/17/2009
<i>Parameters:</i>	<i>Units</i>		
<i>Metals</i>			
Aluminum	µg/L	11200	12500
Antimony	µg/L	10.0 U	10.0 U
Arsenic	µg/L	30.9	5.0 U
Barium	µg/L	187 J	176 J
Beryllium	µg/L	2.0 U	2.0 U
Cadmium	µg/L	5.0 U	5.0 U
Calcium	µg/L	27300	32100
Chromium	µg/L	16.5	14.5
Cobalt	µg/L	8.1 J	3.1 J
Copper	µg/L	29.6	31.2
Iron	µg/L	69300	8460
Lead	µg/L	5.0 U	7.7
Magnesium	µg/L	18400	8880
Manganese	µg/L	800	264
Mercury	µg/L	0.24	0.22
Nickel	µg/L	9.6 J	7.8 J
Potassium	µg/L	3920 J	4830 J
Selenium	µg/L	10.0 U	10.0 U
Silver	µg/L	2.0 J	1.1 J
Sodium	µg/L	76700	66600
Thallium	µg/L	10.0 U	10.0 U
Vanadium	µg/L	24.1 J	26.5 J
Zinc	µg/L	25.6 J	30.3

Notes:

J - Estimated concentration.

R - Rejected.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

TABLE 4
QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INITIAL CALIBRATION RESULTS
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009

<i>Parameter</i>	<i>Compound</i>	<i>Calibration Date</i>	<i>RRF</i>	<i>Associated Sample ID</i>	<i>Qualified Sample Results</i>	<i>Units</i>
VOCs	2-Butanone (Methyl Ethyl Ketone)	8/14/09	0.03	GW-017338-081709-ACH-01	R	µg/L
				GW-017338-081709-ACH-02	R	µg/L
				GW-017338-081709-ACH-03	R	µg/L
				GW-017338-081809-ACH-04	R	µg/L
				GW-017338-081809-ACH-08	R	µg/L
				GW-017338-081809-ACH-05	R	µg/L
				GW-017338-081909-ACH-11	R	µg/L
VOCs	2-Butanone (Methyl Ethyl Ketone)	8/26/09	0.04	GW-017338-081809-ACH-06	R	µg/L
				GW-017338-081809-ACH-07	R	µg/L
				GW-017338-081909-ACH-12	R	µg/L
				GW-017338-081909-ACH-13	7.2 J	µg/L
				GW-017338-081909-ACH-09	R	µg/L
				GW-017338-081909-ACH-10	R	µg/L
VOCs	Acetone	8/14/09	0.02	GW-017338-081709-ACH-01	R	µg/L
				GW-017338-081709-ACH-02	R	µg/L
				GW-017338-081709-ACH-03	R	µg/L
				GW-017338-081809-ACH-04	R	µg/L
				GW-017338-081809-ACH-08	R	µg/L
				GW-017338-081809-ACH-05	R	µg/L
				GW-017338-081909-ACH-11	R	µg/L
				GW-017338-081909-ACH-15	200000 J	µg/L
VOCs	Acetone	8/26/09	0.02	GW-017338-081809-ACH-06	R	µg/L
				GW-017338-081809-ACH-07	R	µg/L
				GW-017338-081909-ACH-12	R	µg/L
				GW-017338-081909-ACH-13	24 J	µg/L
				GW-017338-081909-ACH-09	R	µg/L
				GW-017338-081909-ACH-10	R	µg/L

Notes:

J Estimated.
R Rejected.
RRF Relative Response Factor.
VOCs Volatile Organic Compounds.

TABLE 5
 QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
 OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
 WILMINGTON, DELAWARE
 SEPTEMBER 2009

<i>Parameter</i>	<i>Calibration Date</i>	<i>Compound</i>	<i>%D</i>	<i>Associated Sample ID</i>	<i>Qualified Sample Results</i>	<i>Units</i>
VOCs	8/21/09	Bromomethane (Methyl Bromide)	30	GW-017338-081709-ACH-01	1.0 U	µg/L
				GW-017338-081709-ACH-02	1.0 U	µg/L
				GW-017338-081709-ACH-03	1.0 U	µg/L
				GW-017338-081809-ACH-04	1.0 U	µg/L
				GW-017338-081809-ACH-08	1.0 U	µg/L
VOCs	8/27/09	Bromomethane (Methyl Bromide)	31	GW-017338-081809-ACH-06	1.0 U	µg/L
				GW-017338-081809-ACH-07	2.0 U	µg/L
				GW-017338-081909-ACH-12	5.0 U	µg/L
				GW-017338-081909-ACH-13	2.0 U	µg/L
SVOCs	8/21/09	2,4-Dinitrophenol	32	GW-017338-081709-ACH-01	31 U	µg/L
				GW-017338-081709-ACH-02	32 U	µg/L
				GW-017338-081709-ACH-03	32 U	µg/L
				GW-017338-081809-ACH-04	31 U	µg/L
				GW-017338-081809-ACH-05	32 U	µg/L
				GW-017338-081809-ACH-06	32 U	µg/L
				GW-017338-081809-ACH-07	30 U	µg/L
				GW-017338-081809-ACH-08	31 U	µg/L
				GW-017338-081909-ACH-09	33 U	µg/L
				GW-017338-081909-ACH-10	32 U	µg/L
				GW-017338-081909-ACH-11	31 U	µg/L
				GW-017338-081909-ACH-13	30 U	µg/L
				GW-017338-081909-ACH-15	30 U	µg/L
SVOCs	9/1/09	Benzaldehyde	30	RB-017338-081909-ACH-14	11 U	µg/L

Notes:

%D Percent Difference.

SVOCs Semi-Volatile Organic Compounds.

U Not detected.

VOCs Volatile Organic Compounds.

TABLE 6

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES
 OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
 WILMINGTON, DELAWARE
 SEPTEMBER 2009

<i>Parameter</i>	<i>Associated Sample ID</i>	<i>Analyte</i>	<i>MS Recovery (percent)</i>	<i>MSD Recovery (percent)</i>	<i>RPD</i>	<i>Control Limits</i>		<i>Qualified Sample Result</i>	<i>Units</i>
						<i>Recovery (percent)</i>	<i>RPD (percent)</i>		
SVOCs	GW-017338-081909-ACH-12	2,4-Dinitrophenol	44	47	6	59-130	30	310 UJ	µg/L
		Hexachlorocyclopentadiene	29	30	3	41-124	30	100 UJ	µg/L
		Pentachlorophenol	57	55	4	72-122	30	310 UJ	µg/L
		Di-n-octyl phthalate	61	63	3	62-174	30	100 UJ	µg/L

Notes:

MS Matrix Spike.
 MSD Matrix Spike Duplicate.
 RPD Relative Percent Difference.
 SVOCs Semi-volatile Organic Compounds.
 UJ Not detected, estimated reporting limit.

TABLE 7

**QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE RINSE BLANKS
OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
WILMINGTON, DELAWARE
SEPTEMBER 2009**

<i>Parameter</i>	<i>Rinse Blank Date</i>	<i>Analyte</i>	<i>Blank Result</i>	<i>Sample ID</i>	<i>Qualified Sample Result</i>	<i>Units</i>
VOCs	8/19	Benzene	2.2	GW-017338-081909-ACH-11	1.0 U	µg/L
				GW-017338-081909-ACH-09	2.2 U	µg/L
				GW-017338-081909-ACH-10	2.2 U	µg/L
VOCs	8/19	Chlorobenzene	1.3	GW-017338-081909-ACH-11	5.9 U	µg/L
				GW-017338-081909-ACH-12	5.0 U	µg/L
				GW-017338-081909-ACH-13	2.0 U	µg/L
VOCs	8/19	Ethylbenzene	37	GW-017338-081909-ACH-11	12 U	µg/L
				GW-017338-081909-ACH-09	16 U	µg/L
				GW-017338-081909-ACH-10	13 U	µg/L
VOCs	8/19	Isopropylbenzene	0.52	GW-017338-081909-ACH-09	1.9 U	µg/L
				GW-017338-081909-ACH-10	1.9 U	µg/L
VOCs	8/19	Naphthalene	11	GW-017338-081909-ACH-13	15 U	µg/L
				GW-017338-081909-ACH-15	19 U	µg/L
VOCs	8/19	Toluene	30	GW-017338-081909-ACH-11	14 U	µg/L
				GW-017338-081909-ACH-09	20 U	µg/L
				GW-017338-081909-ACH-10	16 U	µg/L
VOCs	8/19	Xylene (total)	120	GW-017338-081909-ACH-11	28 U	µg/L
				GW-017338-081909-ACH-09	36 U	µg/L
				GW-017338-081909-ACH-10	29 U	µg/L

Notes:

U Not detected.

VOCs Volatile Organic Compounds.

TABLE 8

QUALIFIED SAMPLE RESULTS DUE TO VARIABILITY IN FIELD DUPLICATE RESULTS
 OU-2 BULK PRODUCT TANK AREA - GROUNDWATER SAMPLES
 WILMINGTON, DELAWARE
 SEPTEMBER 2009

<i>Parameter</i>	<i>Analyte</i>	<i>Original Sample ID</i>	<i>Qualified Sample Result</i>	<i>Duplicate Sample ID</i>	<i>Qualified Sample Result</i>	<i>RPD</i>	<i>Units</i>
Metals	Aluminum	GW-017338-081909-ACH-09	7300 J	GW-017338-081909-ACH-10	2380 J	102	µg/L

Notes:

- 1 The qualifier applies to both the original and duplicate results.
 J Estimated.
 RPD Relative Percent Difference.



MEMORANDUM

TO: Greg Carli REF. NO.: 17307-091009

FROM: Sheri Finn/bjw/16 *sf* DATE: December 16, 2009

C.C.: Golnoush Bolourani E-Mail and Hard Copy if Requested

RE: **Data Quality Assessment and Validation
Annual Groundwater Samples
Wilmington, Delaware**

INTRODUCTION

The following details a quality assessment and validation of the analytical data resulting from the November 2009, collection of groundwater 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 Test America Laboratory in Edison, New Jersey (TA), in accordance with the methodologies presented in Table 2. Analytical results summaries are presented in Table 3.

The Quality Control (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
- 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 any detected concentrations of volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), and metals observed below the laboratory's practical quantitation limit (PQL)/report limit (RL) but above the laboratory's method detection limit (MDL) with a flag. 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.

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.

Calibration standards were analyzed at the required frequency and some results did not meet the above criteria for linearity and sensitivity. Associated sample results were qualified as estimated (see 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. 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.

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 some VOCs and SVOCs which exhibited variability in instrument response. Associated sample results have been qualified as estimated (see Table 5).

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.

Site specific analyses were performed as specified in and most MS/MSD or MS/Dup recoveries were acceptable indicating good analytical accuracy and precision. Low MS/MSD recoveries were reported for phenol and caprolactam and the associated sample results were qualified as estimated (see Table 6). A high aluminum MS recovery was reported and the associated detected sample results were qualified as estimated (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 with the exception of a low recovery for phenol and 2,4-Dinitrophenol. Associated sample results were qualified as estimated (see Table 7).

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.
- 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. A summary of the TICs is reported in Table 8.

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 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.

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. 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.

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, one 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.

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 and exceptions noted.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
ANNUAL GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2009

Analysis/Parameters

<i>Sample I.D.</i>	<i>Location I.D.</i>	<i>Collection Date (mm/dd/yy)</i>	<i>Collection Time (hr:min)</i>	<i>TCL VOCs</i>	<i>TCL SVOCs</i>	<i>TAL Metals</i>	<i>Comments</i>
EB-017338-111209-ACH-01	Equipment Blank	11/12/09	9:30	X	X	X	Equipment Blank
GW-017338-111209-ACH-02	MW-9	11/12/09	10:40	X	X	X	
GW-017338-111209-ACH-03	MW-8	11/12/09	11:50	X	X	X	
GW-017338-111209-ACH-04	MW-8	11/12/09	12:00	X	X	X	Field Duplicate of GW-017338-111209-ACH-03
GW-017338-111209-ACH-05	MW-19	11/12/09	13:10	X	X	X	
TB-017338-111209-ACH-001	Trip Blank	11/12/09	-	X			Trip Blank

Notes:

SVOCs - Semi-Volatile Organic Compounds.

TAL - Target Analyte List

TCL - Target Compound List.

VOCs - Volatile Organic Compounds.

TABLE 2

SUMMARY OF ANALYTICAL METHODS
ANNUAL GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2009

<i>Parameter</i>	<i>Method</i> ¹
TCL VOCs	SW-846 8260B
TCL SVOCs	SW-846 8270C
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.

VOCs - Volatile Organic Compounds.

TABLE 3

ANALYTICAL RESULTS SUMMARY
ANNUAL GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2009

<i>Sample Location:</i>	MW-8	MW-8	MW-9	MW-19
<i>Sample ID:</i>	GW-017338-111209-ACH-03	GW-017338-111209-ACH-04	GW-017338-111209-ACH-02	GW-017338-111209-ACH-05
<i>Sample Date:</i>	11/12/2009	11/12/2009	11/12/2009	11/12/2009
<i>Result Type Code:</i>	TRG	TRG	TRG	TRG
<i>Sample Type:</i>		(Duplicate)		

*Parameters**Units**Volatile Organic Compounds*

1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U
1,2-Dibromoethane (Ethylene Dibromide)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	10 UJ	10 UJ	10 UJ	10 UJ
2-Hexanone	µg/L	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	10 U	10 U	10 U	10 U
Acetone	µg/L	R	R	R	R
Benzene	µg/L	12	12	1.0 U	1.0 U
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl Bromide)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	2.8	2.8	1.0 U	0.18 J
Chloroethane	µg/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl Chloride)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	0.41 J
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	5.3	5.1	1.0 U	1.0 U
Dibromochloromethane	µg/L	1.0 U	1.0 U	1.0 U	1.0 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
ANNUAL GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2009

	Sample Location:	MW-8	MW-8	MW-9	MW-19
	Sample ID:	GW-017338-111209-ACH-03	GW-017338-111209-ACH-04	GW-017338-111209-ACH-02	GW-017338-111209-ACH-05
	Sample Date:	11/12/2009	11/12/2009	11/12/2009	11/12/2009
	Result Type Code:	TRG	TRG	TRG	TRG
	Sample Type:		(Duplicate)		
Parameters	Units				
<i>Volatile Organic Compounds (Cont'd.)</i>					
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	0.80 J	0.79 J	1.0 U	1.0 U
Isopropylbenzene	µg/L	24	24	1.0 U	1.0 U
Methyl acetate	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Methyl cyclohexane	µg/L	18	18	1.0 U	1.0 U
Methyl Tert Butyl Ether	µg/L	8.9	9.1	0.18 J	1.0 U
Methylene chloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	1.0 U	0.53 J	1.0 U
Toluene	µg/L	0.25 J	0.28 J	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (Freon 113)	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	µg/L	17	17	3.0 U	3.0 U
<i>Semi-volatile Organic Compounds</i>					
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	µg/L	10 U	10 U	5.6 U	5.1 U
2,4,5-Trichlorophenol	µg/L	10 U	10 U	5.6 U	5.1 U
2,4,6-Trichlorophenol	µg/L	10 U	10 U	5.6 U	5.1 U
2,4-Dichlorophenol	µg/L	10 U	10 U	5.6 U	5.1 U
2,4-Dimethylphenol	µg/L	10 U	10 U	5.6 U	5.1 U
2,4-Dinitrophenol	µg/L	31 UJ	31 UJ	17 UJ	15 UJ
2,4-Dinitrotoluene	µg/L	2.1 U	2.0 U	1.1 U	1.0 U
2,6-Dinitrotoluene	µg/L	2.1 U	2.0 U	1.1 U	1.0 U
2-Chloronaphthalene	µg/L	10 U	10 U	5.6 U	5.1 U
2-Chlorophenol	µg/L	10 U	10 U	5.6 U	5.1 U
2-Methylnaphthalene	µg/L	10 U	10 U	5.6 U	5.1 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
ANNUAL GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2009

	Sample Location:	MW-8	MW-8	MW-9	MW-19
	Sample ID:	GW-017338-111209-ACH-03	GW-017338-111209-ACH-04	GW-017338-111209-ACH-02	GW-017338-111209-ACH-05
	Sample Date:	11/12/2009	11/12/2009	11/12/2009	11/12/2009
	Result Type Code:	TRG	TRG	TRG	TRG
	Sample Type:		(Duplicate)		
Parameters	Units				
<i>Semi-volatile Organic Compounds (Cont'd.)</i>					
2-Methylphenol	µg/L	10 U	10 U	5.6 U	5.1 U
2-Nitroaniline	µg/L	21 U	20 U	11 U	10 U
2-Nitrophenol	µg/L	10 U	10 U	5.6 U	5.1 U
3,3'-Dichlorobenzidine	µg/L	21 U	20 U	11 U	10 U
3-Nitroaniline	µg/L	21 U	20 U	11 U	10 U
4,6-Dinitro-2-methylphenol	µg/L	31 U	31 U	17 U	15 U
4-Bromophenyl phenyl ether	µg/L	10 U	10 U	5.6 U	5.1 U
4-Chloro-3-methylphenol	µg/L	10 U	10 U	5.6 U	5.1 U
4-Chloroaniline	µg/L	10 U	10 U	5.6 U	5.1 U
4-Chlorophenyl phenyl ether	µg/L	10 U	10 U	5.6 U	5.1 U
4-Methylphenol	µg/L	10 U	10 U	5.6 U	5.1 U
4-Nitroaniline	µg/L	21 U	20 U	11 U	10 U
4-Nitrophenol	µg/L	31 U	31 U	17 U	15 U
Acenaphthene	µg/L	10 U	10 U	5.6 U	5.1 U
Acenaphthylene	µg/L	10 U	10 U	5.6 U	5.1 U
Acetophenone	µg/L	10 U	10 U	5.6 U	5.1 U
Anthracene	µg/L	10 U	10 U	5.6 U	5.1 U
Atrazine	µg/L	10 U	10 U	5.6 U	5.1 U
Benzaldehyde	µg/L	10 UJ	10 UJ	5.6 UJ	5.1 UJ
Benzo(a)anthracene	µg/L	1.0 U	1.0 U	0.56 U	0.51 U
Benzo(a)pyrene	µg/L	1.0 U	1.0 U	0.56 U	0.51 U
Benzo(b)fluoranthene	µg/L	1.0 U	1.0 U	0.56 U	0.51 U
Benzo(g,h,i)perylene	µg/L	10 U	10 U	5.6 U	5.1 U
Benzo(k)fluoranthene	µg/L	1.0 U	1.0 U	0.56 U	0.51 U
Biphenyl (1,1-Biphenyl)	µg/L	10 U	10 U	5.6 U	5.1 U
bis(2-Chloroethoxy)methane	µg/L	10 U	10 U	5.6 U	5.1 U
bis(2-Chloroethyl)ether	µg/L	1.0 U	1.0 U	0.56 U	0.51 U
bis(2-Ethylhexyl)phthalate	µg/L	10 U	10 U	5.6 U	5.1 U
Butyl benzylphthalate	µg/L	10 U	10 U	5.6 U	5.1 U
Caprolactam	µg/L	10 U	10 U	5.6 U	5.1 U
Carbazole	µg/L	10 U	10 U	5.6 U	5.1 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
ANNUAL GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2009

	Sample Location:	MW-8	MW-8	MW-9	MW-19
	Sample ID:	GW-017338-111209-ACH-03	GW-017338-111209-ACH-04	GW-017338-111209-ACH-02	GW-017338-111209-ACH-05
	Sample Date:	11/12/2009	11/12/2009	11/12/2009	11/12/2009
	Result Type Code:	TRG	TRG	TRG	TRG
	Sample Type:		(Duplicate)		
Parameters	Units				
Semi-volatile Organic Compounds (Cont'd.)					
Chrysene	µg/L	10 U	10 U	5.6 U	5.1 U
Dibenz(a,h)anthracene	µg/L	1.0 U	1.0 U	0.56 UJ	0.51 UJ
Dibenzofuran	µg/L	10 U	10 U	5.6 U	5.1 U
Diethyl phthalate	µg/L	10 U	10 U	5.6 U	5.1 U
Dimethyl phthalate	µg/L	10 U	10 U	5.6 U	5.1 U
Di-n-butylphthalate	µg/L	10 U	10 U	5.6 U	5.1 U
Di-n-octyl phthalate	µg/L	10 U	10 U	5.6 U	5.1 U
Fluoranthene	µg/L	10 U	10 U	5.6 U	5.1 U
Fluorene	µg/L	10 U	10 U	5.6 U	5.1 U
Hexachlorobenzene	µg/L	1.0 U	1.0 U	0.56 U	0.51 U
Hexachlorobutadiene	µg/L	2.1 U	2.0 U	1.1 U	1.0 U
Hexachlorocyclopentadiene	µg/L	10 U	10 U	5.6 U	5.1 U
Hexachloroethane	µg/L	1.0 U	1.0 U	0.56 U	0.51 U
Indeno(1,2,3-cd)pyrene	µg/L	1.0 U	1.0 U	0.56 U	0.51 U
Isophorone	µg/L	10 U	10 U	5.6 U	5.1 U
Naphthalene	µg/L	220	220	5.6 U	5.1 U
Nitrobenzene	µg/L	1.0 U	1.0 U	0.56 U	0.51 U
N-Nitrosodi-n-propylamine	µg/L	1.0 U	1.0 U	0.56 U	0.51 U
N-Nitrosodiphenylamine	µg/L	10 U	10 U	5.6 U	5.1 U
Pentachlorophenol	µg/L	31 U	31 U	17 U	15 U
Phenanthrene	µg/L	10 U	10 U	5.6 U	5.1 U
Phenol	µg/L	10 UJ	10 UJ	5.6 UJ	5.1 UJ
Pyrene	µg/L	10 U	10 U	5.6 U	5.1 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
ANNUAL GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2009

	Sample Location:	MW-8	MW-8	MW-9	MW-19
	Sample ID:	GW-017338-111209-ACH-03	GW-017338-111209-ACH-04	GW-017338-111209-ACH-02	GW-017338-111209-ACH-05
	Sample Date:	11/12/2009	11/12/2009	11/12/2009	11/12/2009
	Result Type Code:	TRG	TRG	TRG	TRG
	Sample Type:		(Duplicate)		
Parameters	Units				
<i>Metals</i>					
Aluminum	µg/L	2530 J	2410 J	6460 J	2250 J
Antimony	µg/L	10.0 U	10.0 U	10.0 U	10.0 U
Arsenic	µg/L	3.9 J	4.4 J	5.0 U	5.0 U
Barium	µg/L	613	618	283	198 J
Beryllium	µg/L	2.0 U	2.0 U	2.0 U	2.0 U
Cadmium	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Calcium	µg/L	60100	60100	53900	40500
Chromium	µg/L	10.0 U	10.0 U	9.8 J	10.0 U
Cobalt	µg/L	21.8 J	21.4 J	4.3 J	50.0 U
Copper	µg/L	25.0 U	25.0 U	22.4 J	25.0 U
Iron	µg/L	85100	85100	23100	5240
Lead	µg/L	5.0 U	5.0 U	5.0 U	5.0 U
Magnesium	µg/L	40800	40800	26500	11500
Manganese	µg/L	1980	1980	386	390
Mercury	µg/L	0.20 U	0.20 U	0.36	0.20 U
Nickel	µg/L	40.0 U	40.0 U	5.7 J	40.0 U
Potassium	µg/L	4020 J	4110 J	8960	4640 J
Selenium	µg/L	10.0 U	10.0 U	10.0 U	10.0 U
Silver	µg/L	10.0 U	10.0 U	1.1 J	1.3 J
Sodium	µg/L	109000	109000	146000	73800
Thallium	µg/L	10.0 U	10.0 U	10.0 U	10.0 U
Vanadium	µg/L	3.0 J	3.1 J	10.1 J	4.9 J
Zinc	µg/L	30.0 U	30.0 U	19.4 J	30.0 U

Notes:

- Not analyzed.

J - Estimated.

R - Rejected.

U - Not detected.

UJ - Not detected, estimated reporting limit.

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INITIAL CALIBRATION RESULTS
SUMMARY OF ANALYTICAL METHODS
ANNUAL GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2009

<i>Parameter</i>	<i>Calibration Date</i>	<i>Compound</i>	<i>R²</i>	<i>RRF</i>	<i>%RSD</i>	<i>Associated Sample ID</i>	<i>Qualified Sample Results</i>	<i>Units</i>
VOCs	10/21/09	Acetone	-	0.038	-	GW-017338-111209-ACH-02	R	µg/L
						GW-017338-111209-ACH-03	R	µg/L
						GW-017338-111209-ACH-04	R	µg/L
						GW-017338-111209-ACH-05	R	µg/L
SVOCs	11/03/09	Benzaldehyde	-	-	37.8	GW-017338-111209-ACH-02	5.6 UJ	µg/L
						GW-017338-111209-ACH-05	5.1 UJ	µg/L
SVOCs	11/03/09	Dibenz(a,h)anthracene	0.992	-	-	GW-017338-111209-ACH-02	0.56 UJ	µg/L
						GW-017338-111209-ACH-05	0.51 UJ	µg/L
SVOCs	11/16/09	Benzaldehyde	-	-	53	GW-017338-111209-ACH-03	10 UJ	µg/L
						GW-017338-111209-ACH-04	10 UJ	µg/L

Notes:

%RSD Percent Relative Standard Deviation.

R² Correlation Coefficient.

RRF Relative Response Factor.

SVOCs Semi-Volatile Organic Compounds.

UJ Not detected, estimated reporting limit.

VOCs Volatile Organic Compounds.

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
SUMMARY OF ANALYTICAL METHODS
ANNUAL GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2009

<i>Parameter</i>	<i>Calibration Date</i>	<i>Compound</i>	<i>%D</i>	<i>RRF</i>	<i>Associated Sample ID</i>	<i>Qualified Sample Results</i>	<i>Units</i>
VOCs	11/23/09	1,2-Dibromo-3-chloropropane (DBCP)	28	-	GW-017338-111209-ACH-02	1.0 UJ	µg/L
					GW-017338-111209-ACH-03	1.0 UJ	µg/L
					GW-017338-111209-ACH-04	1.0 UJ	µg/L
VOCs	11/23/09	2-Butanone (Methyl Ethyl Ketone)	-	0.047	GW-017338-111209-ACH-02	10 UJ	µg/L
					GW-017338-111209-ACH-03	10 UJ	µg/L
					GW-017338-111209-ACH-04	10 UJ	µg/L
VOCs	11/23/09	Chloroethane	29	-	GW-017338-111209-ACH-02	1.0 UJ	µg/L
					GW-017338-111209-ACH-03	1.0 UJ	µg/L
					GW-017338-111209-ACH-04	1.0 UJ	µg/L
VOCs	11/23/09	2-Butanone (Methyl Ethyl Ketone)	-	0.048	GW-017338-111209-ACH-05	10 UJ	µg/L
SVOCs	11/13/09	Benzaldehyde	63	-	GW-017338-111209-ACH-02	0.56 UJ	µg/L
					GW-017338-111209-ACH-05	0.51 UJ	µg/L
SVOCs	11/17/09	Benzaldehyde	30	-	GW-017338-111209-ACH-03	10 UJ	µg/L
					GW-017338-111209-ACH-04	10 UJ	µg/L

Notes:

%D Percent Difference.

RRF Relative Response Factor.

SVOCs Semi-Volatile Organic Compounds.

UJ Not detected, estimated reporting limit.

VOCs Volatile Organic Compounds.

TABLE 6

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES
SUMMARY OF ANALYTICAL METHODS
ANNUAL GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2009

<i>Parameter</i>	<i>Associated Sample ID</i>	<i>Analyte</i>	<i>MS Recovery (percent)</i>	<i>MSD Recovery (percent)</i>	<i>RPD</i>	<i>Control Limits</i>		<i>Qualified Sample Result</i>	<i>Units</i>
						<i>Recovery (percent)</i>	<i>RPD (percent)</i>		
SVOCs	GW-017338-111209-ACH-02	Caprolactam	12	9	24	10-44	0-30	5.6 UJ	µg/L
		Phenol	24	23	2	31-128	0-30	5.6 UJ	µg/L
Metals	GW-017338-111209-ACH-02	Aluminum	204	NA	NA	75-125	20	6460 J	µg/L
	GW-017338-111209-ACH-03							2530 J	µg/L
	GW-017338-111209-ACH-04							2410 J	µg/L
	GW-017338-111209-ACH-05							2250 J	µg/L

Notes:

- J Estimated.
 MS Matrix Spike.
 MSD Matrix Spike Duplicate.
 R Rejected.
 RPD Relative Percent Difference.
 SVOCs Semi-Volatile Organic Compounds.
 UJ Not detected, estimated reporting limit.

TABLE 7

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE RESULTS
 SUMMARY OF ANALYTICAL METHODS
 ANNUAL GROUNDWATER SAMPLING
 GENERAL MOTORS ASSEMBLY PLANT
 WILMINGTON, DELAWARE
 NOVEMBER 2009

<i>Parameter</i>	<i>Compound</i>	<i>Percent Recovery</i>	<i>Control Limits (percent)</i>	<i>Associated Sample ID</i>	<i>Qualified Sample Results</i>	<i>Units</i>
SVOCs	2,4-Dinitrophenol	29	34-120	GW-017338-111209-ACH-02	17 UJ	µg/L
				GW-017338-111209-ACH-03	31 UJ	µg/L
				GW-017338-111209-ACH-04	31 UJ	µg/L
				GW-017338-111209-ACH-05	15 UJ	µg/L
SVOCs	Phenol	24	31-128	GW-017338-111209-ACH-02	5.6 UJ	µg/L
				GW-017338-111209-ACH-03	10 UJ	µg/L
				GW-017338-111209-ACH-04	10 UJ	µg/L
				GW-017338-111209-ACH-05	5.1 UJ	µg/L

Notes:

SVOCs Semi-Volatile Organic Compounds.

UJ Not detected, estimated reporting limit.

TABLE 8

ANALYTICAL RESULTS SUMMARY - TICs
ANNUAL GROUNDWATER SAMPLING
GENERAL MOTORS ASSEMBLY PLANT
WILMINGTON, DELAWARE
NOVEMBER 2009

<i>Sample Location:</i>		MW-8	MW-8
<i>Sample ID:</i>		GW-017338-111209-ACH-03	GW-017338-111209-ACH-04
<i>Sample Date:</i>		11/12/2009	11/12/2009
<i>Result Type Code:</i>		TIC	TIC
<i>Sample Type:</i>			(Duplicate)
<i>Parameters</i>	<i>Units</i>		
<i>Volatile Organic Compounds</i>			
Unknown 1	µg/L	350 J	15 J
Unknown 10	µg/L	220 J	85 J
Unknown 11	µg/L	14 J	54 J
Unknown 12	µg/L	27 J	220 J
Unknown 13	µg/L	18 J	27 J
Unknown 14	µg/L	-	18 J
Unknown 19	µg/L	17 J	-
Unknown 2	µg/L	39 J	350 J
Unknown 3	µg/L	42 J	39 J
Unknown 4	µg/L	19 J	42 J
Unknown 5	µg/L	180 J	19 J
Unknown 6	µg/L	42 J	180 J
Unknown 7	µg/L	130 J	41 J
Unknown 8	µg/L	85 J	18 J
Unknown 9	µg/L	54 J	140 J
<i>Semi-volatile Organic Compounds</i>			
2,4,5-Trimethyl-benzoicacid A	µg/L	35 NJ	33 NJ
2,4,6-Trimethyl-benzoicacid A	µg/L	27 NJ	26 NJ
Bisphenol A A	µg/L	20 NJ	21 NJ
Indane A	µg/L	240 NJ	240 NJ
Pentamethylbenzene A	µg/L	16 NJ	15 NJ
Unknown 1	µg/L	-	22 J
Unknown 10	µg/L	62 J	36 J
Unknown 11	µg/L	38 J	140 J
Unknown 12	µg/L	160 J	19 J
Unknown 13	µg/L	19 J	26 J
Unknown 14	µg/L	26 J	18 J
Unknown 15	µg/L	18 J	20 J
Unknown 16	µg/L	20 J	12 J
Unknown 17	µg/L	16 J	18 J
Unknown 18	µg/L	30 J	37 J
Unknown 2	µg/L	22 J	19 J
Unknown 3	µg/L	20 J	37 J
Unknown 4	µg/L	39 J	78 J
Unknown 5	µg/L	82 J	15 J
Unknown 6	µg/L	16 J	15 J
Unknown 7	µg/L	16 J	24 J
Unknown 8	µg/L	29 J	84 J
Unknown 9	µg/L	88 J	56 J

Notes:

- Not analyzed.

J - Estimated.

NJ* - Presence tentatively identified. Estimated value.



MEMORANDUM

TO: Greg Carli REF. NO.: 017338

FROM: Kathy Shaw/lo/1/CT  DATE: April 22, 2010

C.C.: Susan Scrocchi SSOW: 017307-091009

RE: Data Quality Assessment and Validation
OU-2 Bulk Product Tank Area – Quarterly Groundwater Samples
General Motors Wilmington Site – Wilmington, Delaware

The following details a quality assessment and validation of the analytical data resulting from the March 2010 collection of 19 groundwater and three (3) quality control samples from the General Motors Wilmington 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 TestAmerica Laboratories, Inc. in Edison, New Jersey (TA) in accordance with the methodologies presented in Table 2.

The Quality Control (QC) criteria used to assess the data were established by the methods and the Quality Assurance Project Plan (QAPP). Summaries of the analytical data are presented in Table 3. Application of quality assurance criteria was consistent with following guidance documents:

- i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", USEPA-540-R-08-01, June 2008.
- ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Review", EPA 540/R-94/013, February 1994.

These are collectively referred to as "Guidelines" throughout this memorandum.

Sample Quantitation

The laboratory reported any detected concentrations of volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), and metals observed below the laboratory's report limit (RL) but above the laboratory's method detection limit (MDL) with a "J" flag. 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 ($\pm 2^\circ\text{C}$) 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.

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 for acetone and 4-methyl-2-pentanone were less than 0.05. All associated sample results that were non-detect were rejected due to poor analyte sensitivity.

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. 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.

Continuing Calibration – Organic Analyses (Cont'd)

- 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 exception of the samples outlined in Table 5.

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 results were non-detect with the exception of the analytes presented in Table 6.

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.

All MS/MSD or MS/Dup recoveries were acceptable indicating good analytical accuracy and precision, with the exception of the samples outlined in Table 7.

Laboratory Control Sample/Laboratory Control Duplicate Analysis

The laboratory control sample and laboratory control duplicate (LCS/LCD) analyses serve as a monitor of the overall performance in all steps of the sample analysis and are analyzed with each sample batch. The LCS/LCD percent recoveries were evaluated against method and laboratory established control limits. The LCS/LCD percent recoveries were within the laboratory control limits or did not warrant qualification, indicating that an acceptable level of overall performance was achieved with the exception of samples presented with qualifiers in Table 8.

Laboratory precision was verified by the relative percent difference (RPD) of the LCS/LCD when a matrix spike/matrix spike duplicate was not analyzed. The RPDs were within the laboratory control limits, indicating that an acceptable level of overall laboratory precision was achieved.

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.
- 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.

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 were 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 equipment blank sample, one field duplicate sample set, and one trip blank sample.

To assess the cleanliness of sample containers and the presence of field contamination, the equipment 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 methylene chloride. All associated sample results were non-detect and would not have been impacted.

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.

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 9. 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.

- VOC data were rejected in a number of samples due to initial calibration violations.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLING
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

Sample Identification	Location	Matrix	QC Samples	Parameters			
				TCL VOC + TICs	TAL Metals	TCL SVOC + TICs	SVOC SIM
GW-017338-030110-ACH-001	MW-9	Water	MS/MSD	X	X	X	X
GW-017338-030110-ACH-002	MW-11R	Water		X	X	X	X
GW-017338-030110-ACH-003	MW-8	Water		X	X	X	X
GW-017338-030110-ACH-004	MW-19	Water		X	X	X	X
GW-017338-030210-RAM-005	MW-20	Water	Equipment Blank	X	X	X	X
EB-017338-030210-ACH-006	--	Water		X	X	X	X
GW-017338-030210-RAM-007	MW-21	Water		X	X	X	X
GW-017338-030210-ACH-008	MW-3D	Water	Duplicate (008)	X	X	X	X
GW-017338-030210-RAM-009	MW-10	Water		X	X	X	X
GW-017338-030210-ACH-010	MW-3D	Water		X	X	X	X
GW-017338-030210-RAM-011	MW-15	Water		X	X	X	X
GW-017338-030210-ACH-012	MW-6	Water		X	X	X	X
GW-017338-030210-RAM-013	MW-16	Water		X	X	X	X
GW-017338-030310-ACH-014	MW-18	Water		X	X	X	X
GW-017338-030310-RAM-015	MW-17	Water		X	X	X	X
GW-017338-030310-ACH-016	MW-7	Water		X	X	X	X
GW-017338-030310-RAM-017	MW-12	Water		X	X	X	X
GW-017338-030310-ACH-018	MW-2	Water		X	X	X	X
GW-017338-030310-RAM-019	MW-3D	Water		X	X	X	X
GW-017338-030310-ACH-020	MW-11	Water	Trip Blank	X	X	X	X
GW-017338-030310-RAM-021	MW-13	Water		X	X	X	X
TRIPBLANK-017338-030310-ACH-001	--	Water		X			

Notes:

MS/MSD - Matrix Spike/Matrix Spike Duplicate
 QC - Quality Control
 SVOC - Semivolatile Organic Compounds
 TAL - Target Analyte List
 TCL - Target Compound List
 TIC - Tentatively Identified Compounds
 VOC - Volatile Organic Compounds
 SIM - Select Ion Monitoring

TABLE 2

**SUMMARY OF ANALYTICAL METHODS, HOLDING TIME PERIODS, AND PRESERVATIVES
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE**

<i>Parameter</i>	<i>Method</i> ¹	<i>Matrix</i>	<i>Holding Time</i>	<i>Preservation</i> ²
TCL VOC + TICs	SW-846 8260	Water	- 14 days from sample collection to completion of analysis.	pH < 2 and Iced, 4 ± 2° C
TCL SVOC, SVOC SIM + TICs	SW-846 8270C	Water	- 7 days from sample collection to extraction - 40 days from extraction to completion of analysis	Iced, 4 ± 2° C
TAL Metals		Water	- 180 days from sample collection to completion of analysis	pH < 2 and Iced, 4 ± 2° C
Aluminum	SW-846 6010B			
Antimony	SW-846 6010B			
Arsenic	SW-846 6010B			
Barium	SW-846 6010B			
Beryllium	SW-846 6010B			
Cadmium	SW-846 6010B			
Calcium	SW-846 6010B			
Chromium	SW-846 6010B			
Cobalt	SW-846 6010B			
Copper	SW-846 6010B			
Iron	SW-846 6010B			
Lead	SW-846 6010B			
Magnesium	SW-846 6010B			
Manganese	SW-846 6010B			
Nickel	SW-846 6010B			
Potassium	SW-846 6010B			
Selenium	SW-846 6010B			
Silver	SW-846 6010B			
Sodium	SW-846 6010B			
Thallium	SW-846 6010B			
Vanadium	SW-846 6010B			
Zinc	SW-846 6010B			
Mercury	SW-846 7470A	Water	- 28 days from sample collection to completion of analysis	pH < 2 and Iced, 4 ± 2° C

Notes

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition, and Promulgated updates, November 1986

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

Sample Location:		MW-2	MW-3D	MW-3D	MW-3D	MW-6	MW-7	MW-8	MW-9
Sample ID:		GW-017338-030310-ACH-018	GW-017338-030210-ACH-008	GW-017338-030210-ACH-010	GW-017338-030310-RAM-019	GW-017338-030210-ACH-012	GW-017338-030310-ACH-016	GW-017338-030110-ACH-003	GW-017338-030110-ACH-001
Sample Date:		3/3/2010	3/2/2010	3/2/2010	3/3/2010	3/2/2010	3/3/2010	3/1/2010	3/1/2010
result_type_code		TRG	TRG	TRG	TRG	TRG	TRG	TRG	TRG
				(Duplicate)					
Parameters:	Units								
Volatile Organic Compounds									
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	0.88 J	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.1	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	7.9	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	10 U	10 U	10 U	500 U	20 U	10 U	10 U	10 U
2-Hexanone	ug/L	10 U	10 U	10 U	500 U	20 U	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	R	R	R	380 J	R	R	R	R
Acetone	ug/L	R	R	R	96000 J	R	R	R	R
Benzene	ug/L	5.7	1.0 U	1.0 U	1000	5.6	4.6	2.2	1.0 U
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.6	1.0 U	1.0 U	50 U	2.0 U	1300	1.7	1.0 U
Chloroethane	ug/L	1.0 UJ	1.0 U	1.0 U	50 UJ	2.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane	ug/L	5.2	1.4	1.0 U	50 U	9.9	1.0 U	2.3	1.0 U
Dibromochloromethane	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	ug/L	1.2	1.0 U	0.26 J	19000	870	1.5	0.31 J	1.0 U
Isopropyl benzene	ug/L	3.5	5.0	5.0	22 J	360	4.3	3.3	1.0 U
Methyl acetate	ug/L	2.0 U	2.0 U	2.0 U	100 U	4.0 U	2.0 U	2.0 U	2.0 U
Methyl cyclohexane	ug/L	1.0 U	1.0 U	0.69 J	50 U	28	1.0 U	10	1.0 U
Methyl tert butyl ether (MTBE)	ug/L	2.2	1.5	1.5	630	2.0 U	0.73 J	3.1	1.0 U
Methylene chloride	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Styrene	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	0.41 J
Toluene	ug/L	2.3	1.0	1.1	170000	4000	2.1	0.58 J	1.0 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (Freon 113)	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	50 U	2.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	ug/L	2.2 J	7.3	8.3	32000	1700	2.5 J	0.82 J	3.0 U
Semi-volatile Organic Compounds									
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

Sample Location:		MW-2	MW-3D	MW-3D	MW-3D	MW-6	MW-7	MW-8	MW-9
Sample ID:		GW-017338-030310-ACH-018	GW-017338-030210-ACH-008	GW-017338-030210-ACH-010	GW-017338-030310-RAM-019	GW-017338-030210-ACH-012	GW-017338-030310-ACH-016	GW-017338-030110-ACH-003	GW-017338-030110-ACH-001
Sample Date:		3/3/2010	3/2/2010	3/2/2010	3/3/2010	3/2/2010	3/3/2010	3/1/2010	3/1/2010
result_type_code		TRG	TRG	TRG	TRG	TRG	TRG	TRG	TRG
				(Duplicate)					
2,4,6-Trichlorophenol	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	ug/L	10 U	10 U	11 U	220	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	ug/L	30 U	31 U	32 U	30 U	31 U	30 U	31 U	31 U
2,4-Dinitrotoluene	ug/L	2.0 U	2.0 U	2.1 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	ug/L	2.0 U	2.0 U	2.1 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
2-Methylphenol	ug/L	10 U	10 U	11 U	140	10 U	10 U	10 U	10 U
2-Nitroaniline	ug/L	20 U	20 U	21 U	20 U	20 U	20 U	20 U	20 U
2-Nitrophenol	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	ug/L	20 U	20 U	21 U	20 U	20 U	20 U	20 U	20 U
3-Nitroaniline	ug/L	20 U	20 U	21 U	20 U	20 U	20 U	20 U	20 U
4,6-Dinitro-2-methylphenol	ug/L	30 U	31 U	32 U	30 U	31 U	30 U	31 U	31 U
4-Bromophenyl phenyl ether	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	ug/L	10 U	10 U	11 U	370	29	10 U	10 U	10 U
4-Nitroaniline	ug/L	20 U	20 U	21 U	20 U	20 U	20 U	20 U	20 U
4-Nitrophenol	ug/L	30 U	31 U	32 U	30 U	31 U	30 U	31 U	31 U
Acenaphthene	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Acetophenone	ug/L	10 U	10 U	11 U	20	11	10 U	10 U	10 U
Anthracene	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Atrazine	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Benzaldehyde	ug/L	10 UJ	10 UJ	11 UJ	14 J	5.4 J	10 UJ	10 UJ	10 UJ
Benzo(g,h,i)perylene	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	ug/L	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Biphenyl (1,1-Biphenyl)	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	ug/L	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Butyl benzylphthalate (BBP)	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Caprolactam	ug/L	10 U	10 U	0.63 J	10 U	10 U	10 U	10 U	10 U
Carbazole	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Chrysene	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	ug/L	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibenzofuran	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Diethyl phthalate	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Dimethyl phthalate	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate (DBP)	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Di-n-octyl phthalate (DnOP)	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Fluorene	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	ug/L	2.0 U	2.0 U	2.1 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	ug/L	1.0 U	1.0 U	1.1 U	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	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isophorone	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	ug/L	10 U	10 U	11 U	10 U	29	10 U	100 J	10 U
Nitrobenzene	ug/L	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodi-n-propylamine	ug/L	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodiphenylamine	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Phenanthrene	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Phenol	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

Sample Location:		MW-2	MW-3D	MW-3D	MW-3D	MW-6	MW-7	MW-8	MW-9
Sample ID:		GW-017338-030310-ACH-018	GW-017338-030210-ACH-008	GW-017338-030210-ACH-010	GW-017338-030310-RAM-019	GW-017338-030210-ACH-012	GW-017338-030310-ACH-016	GW-017338-030110-ACH-003	GW-017338-030110-ACH-001
Sample Date:		3/3/2010	3/2/2010	3/2/2010	3/3/2010	3/2/2010	3/3/2010	3/1/2010	3/1/2010
result_type_code		TRG	TRG	TRG	TRG	TRG	TRG	TRG	TRG
				(Duplicate)					
Pyrene	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Semi-volatile Organic Compounds - SPLPIM									
Benzo(a)anthracene	ug/L	0.050 U	0.042 J	0.031 J	0.050 U	0.051 U	0.050 U	0.051 U	0.051 U
Benzo(a)pyrene	ug/L	0.050 U	0.035 J	0.053 U	0.050 U	0.051 U	0.050 U	0.051 U	0.051 U
Benzo(b)fluoranthene	ug/L	0.050 U	0.050 J	0.053 U	0.050 U	0.051 U	0.050 U	0.051 U	0.051 U
Hexachlorobenzene	ug/L	0.020 U	0.020 U	0.021 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Pentachlorophenol	ug/L	0.20 U	0.20 U	0.21 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Metals									
Aluminum	ug/L	200 U	3230	2460	130 J	1290	1340	1050	6940
Antimony	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Arsenic	ug/L	12.0	5.0 U	5.0 U	5.0 U	13.2	13.9	5.0 U	5.0 U
Barium	ug/L	456	456	443	722	615	463	427	297
Beryllium	ug/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Cadmium	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Calcium	ug/L	48000	55600	55100	92200	67200	36900	49400	54700
Chromium	ug/L	10.0 U	4.3 J	3.6 J	10.0 U	10.0 U	10.0 U	10.0 U	11.3
Cobalt	ug/L	40.6 J	3.2 J	2.8 J	4.4 J	3.1 J	13.1 J	18.1 J	5.9 J
Copper	ug/L	25.0 U	26.2	21.9 J	25.0 U	25.0 U	25.0 U	25.0 U	19.8 J
Iron	ug/L	55600	31300	29400	264000	28400	84800	62000	25100
Lead	ug/L	5.0 U	7.0 U	6.4 U	4.9 J	3.1 J	5.0 U	5.0 U	8.1 U
Magnesium	ug/L	39400	32500	31800	99700	25000	31000	30600	27400
Manganese	ug/L	870	528	516	23600	933	2410	1690	435
Mercury	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.40
Nickel	ug/L	3.7 J	40.0 U	40.0 U	40.0 U	40.0 U	40.0 U	40.0 U	7.1 J
Potassium	ug/L	4520 J	6610	6500	5050	14700	4200 J	3230 J	8520
Selenium	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Silver	ug/L	1.6 J	5.7 J	5.3 J	9.6 J	3.4 J	2.9 J	1.6 J	1.9 J
Sodium	ug/L	139000	96700	95100	160000	204000	72000	86700	148000
Thallium	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Vanadium	ug/L	50.0 U	5.9 J	4.7 J	50.0 U	2.4 J	3.7 J	50.0 U	11.8 J
Zinc	ug/L	70.1	21.5 J	17.2 J	20.1 J	11.4 J	30.0 U	30.0 U	23.2 J

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

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

Sample Location:	MW-10	MW-11	MW-11R	MW-12	MW-13	MW-15	MW-16	MW-17
Sample ID:	GW-017338-030210-RAM-009	GW-017338-030310-ACH-020	GW-017338-030110-ACH-002	GW-017338-030310-RAM-017	GW-017338-030310-RAM-021	GW-017338-030210-RAM-011	GW-017338-030210-ACH-013	GW-017338-030310-RAM-015
Sample Date:	3/2/2010	3/3/2010	3/1/2010	3/3/2010	3/3/2010	3/2/2010	3/2/2010	3/3/2010
result_type_code	TRG	TRG	TRG	TRG	TRG	TRG	TRG	TRG
Parameters:	Units							
Volatile Organic Compounds								
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	0.19 J	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	0.27 J	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	10 U	5.7 J	10 U	10 U	10 U	10 U	10 U
2-Hexanone	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	R	1.2 J	R	R	R	R	R
Acetone	ug/L	R	10 J	R	R	R	R	R
Benzene	ug/L	8.3	330	1.0 U	280	1.0 U	0.51 J	1.0 U
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.0 U	0.65 J	1.0 U	1.0 U	0.87 J	1.0 U	1.0 U
Chloroethane	ug/L	1.0 U	1.0 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.5	1.0 U	0.22 J	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	0.25 J	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane	ug/L	22	5.4	1.0 U	23	16	0.37 J	0.69 J
Dibromochloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	ug/L	290	2200	1.0 U	15	620	7.4	270
Isopropyl benzene	ug/L	100	7.2	1.0 U	98	9.9	1.4	560
Methyl acetate	ug/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methyl cyclohexane	ug/L	52	1.1	1.0 U	35	110	0.48 J	1.6
Methyl tert butyl ether (MTBE)	ug/L	1.0 U	320	1.0 U	35	18	1.0 U	1.0 U
Methylene chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	0.81 J	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.66 J	1.0 U
Toluene	ug/L	41	1200	1.0 U	1.3	5000	1.0	10
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trifluoro-trichloroethane (Freon 113)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	ug/L	920	5400	3.0 U	110	3000	22	170
Semi-volatile Organic Compounds								
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	11 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	ug/L	11 U	10 U	10 U	10 U	10 U	10 U	10 U

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

Sample Location:	MW-10		MW-11		MW-11R		MW-12		MW-13		MW-15		MW-16		MW-17	
Sample ID:	GW-017338-030210-RAM-009		GW-017338-030310-ACH-020		GW-017338-030110-ACH-002		GW-017338-030310-RAM-017		GW-017338-030310-RAM-021		GW-017338-030210-RAM-011		GW-017338-030210-ACH-013		GW-017338-030310-RAM-015	
Sample Date:	3/2/2010		3/3/2010		3/1/2010		3/3/2010		3/3/2010		3/2/2010		3/2/2010		3/3/2010	
result_type_code	TRG		TRG		TRG		TRG		TRG		TRG		TRG		TRG	
2,4,6-Trichlorophenol	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
2,4-Dichlorophenol	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
2,4-Dimethylphenol	ug/L	4.8 J		30		10 U		10 U		15		10 U		10 U		10 U
2,4-Dinitrophenol	ug/L	32 U		30 U		31 U		30 U		30 U		31 U		31 U		31 U
2,4-Dinitrotoluene	ug/L	2.1 U		2.0 U		2.0 U		2.0 U		2.0 U		2.0 U		2.0 U		2.0 U
2,6-Dinitrotoluene	ug/L	2.1 U		2.0 U		2.0 U		2.0 U		2.0 U		2.0 U		2.0 U		2.0 U
2-Chloronaphthalene	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
2-Chlorophenol	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
2-Methylnaphthalene	ug/L	3.7 J		10 U		10 U		10 U		64		10 U		10 U		10 U
2-Methylphenol	ug/L	11 U		2.5 J		10 U		10 U		7.0 J		10 U		10 U		10 U
2-Nitroaniline	ug/L	21 U		20 U		20 U		20 U		20 U		20 U		20 U		20 U
2-Nitrophenol	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
3,3'-Dichlorobenzidine	ug/L	21 U		20 U		20 U		20 U		20 U		20 U		20 U		20 U
3-Nitroaniline	ug/L	21 U		20 U		20 U		20 U		20 U		20 U		20 U		20 U
4,6-Dinitro-2-methylphenol	ug/L	32 U		30 U		31 U		30 U		30 U		31 U		31 U		31 U
4-Bromophenyl phenyl ether	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
4-Chloro-3-methylphenol	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
4-Chloroaniline	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
4-Chlorophenyl phenyl ether	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
4-Methylphenol	ug/L	11 U		8.3 J		10 U		10 U		23		10 U		10 U		10 U
4-Nitroaniline	ug/L	21 U		20 U		20 U		20 U		20 U		20 U		20 U		20 U
4-Nitrophenol	ug/L	32 U		30 U		31 U		30 U		30 U		31 U		31 U		31 U
Acenaphthene	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Acenaphthylene	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Acetophenone	ug/L	11 U		10 U		10 U		10 U		180		10 U		15		10 U
Anthracene	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Atrazine	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Benzaldehyde	ug/L	11 UJ		10 UJ		10 UJ		10 UJ		10 UJ		10 UJ		10 UJ		10 UJ
Benzo(g,h,i)perylene	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Benzo(k)fluoranthene	ug/L	1.1 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U
Biphenyl (1,1-Biphenyl)	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
bis(2-Chloroethoxy)methane	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
bis(2-Chloroethyl)ether	ug/L	1.1 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Butyl benzylphthalate (BBP)	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Caprolactam	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Carbazole	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Chrysene	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Dibenz(a,h)anthracene	ug/L	1.1 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U
Dibenzofuran	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Diethyl phthalate	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Dimethyl phthalate	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Di-n-butylphthalate (DBP)	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Di-n-octyl phthalate (DnOP)	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Fluoranthene	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		3.4 J		10 U
Fluorene	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Hexachlorobutadiene	ug/L	2.1 U		2.0 U		2.0 U		2.0 U		2.0 U		2.0 U		2.0 U		2.0 U
Hexachlorocyclopentadiene	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Hexachloroethane	ug/L	1.1 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U
Indeno(1,2,3-cd)pyrene	ug/L	1.1 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U
Isophorone	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Naphthalene	ug/L	11 U		10 U		10 U		19		1700		10 U		340		10 U
Nitrobenzene	ug/L	1.1 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U
N-Nitrosodi-n-propylamine	ug/L	1.1 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U		1.0 U
N-Nitrosodiphenylamine	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Phenanthrene	ug/L	11 U		10 U		10 U		10 U		10 U		10 U		10 U		10 U
Phenol	ug/L	11 U		10 U		10 U		1.7 J		10 U		10 U		10 U		10 U

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

Sample Location:		MW-10	MW-11	MW-11R	MW-12	MW-13	MW-15	MW-16	MW-17
Sample ID:		GW-017338-030210-RAM-009	GW-017338-030310-ACH-020	GW-017338-030110-ACH-002	GW-017338-030310-RAM-017	GW-017338-030310-RAM-021	GW-017338-030210-RAM-011	GW-017338-030210-ACH-013	GW-017338-030310-RAM-015
Sample Date:		3/2/2010	3/3/2010	3/1/2010	3/3/2010	3/3/2010	3/2/2010	3/2/2010	3/3/2010
result_type_code		TRG	TRG	TRG	TRG	TRG	TRG	TRG	TRG
Pyrene	ug/L	11 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Semi-volatile Organic Compounds - SPLPIM									
Benzo(a)anthracene	ug/L	0.053 U	0.050 U	0.051 U	0.050 U	0.10 U	0.051 U	0.052	0.051 U
Benzo(a)pyrene	ug/L	0.053 U	0.050 U	0.051 U	0.050 U	0.10 U	0.051 U	0.051 U	0.051 U
Benzo(b)fluoranthene	ug/L	0.053 U	0.050 U	0.051 U	0.050 U	0.10 U	0.051 U	0.051 U	0.051 U
Hexachlorobenzene	ug/L	0.021 U	0.020 U	0.020 U	0.020 U	0.040 U	0.020 U	0.020 U	0.020 U
Pentachlorophenol	ug/L	0.21 U	0.20 U	0.20 U	0.20 U	0.40 U	0.20 U	0.20 U	0.20 U
Metals									
Aluminum	ug/L	859	459	1480	1030	8740	17300	1560	1560
Antimony	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Arsenic	ug/L	5.0 U	34.7	5.0 U	4.6 J	24.3	5.0 U	5.0 U	5.0 U
Barium	ug/L	464	422	292	140 J	200 J	286	484	159 J
Beryllium	ug/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Cadmium	ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Calcium	ug/L	38500	73600	29100	28700	27300	40800	96100	35600
Chromium	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	11.8	18.5	10.0 U	10.0 U
Cobalt	ug/L	3.8 J	112	25.5 J	50.0 U	6.1 J	9.3 J	50.0 U	50.0 U
Copper	ug/L	25.0 U	25.0 U	25.0 U	25.0 U	17.9 J	25.8	25.0 U	25.0 U
Iron	ug/L	26000	97700	6370	43000	54500	23500	11400	3560
Lead	ug/L	5.0 U	3.5 J	5.0 U	11.3	9.3	15.3	5.0 U	4.3 J
Magnesium	ug/L	32000	61600	19100	30000	18700	21200	16300	18600
Manganese	ug/L	1570	869	368	352	561	78.7	628	18.3
Mercury	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	ug/L	40.0 U	40.0 U	40.0 U	40.0 U	6.5 J	22.9 J	40.0 U	40.0 U
Potassium	ug/L	4310 J	4220 J	3820 J	2030 J	4340 J	8180	23800	4440 J
Selenium	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Silver	ug/L	1.8 J	3.1 J	1.1 J	0.99 J	1.6 J	5.1 J	1.9 J	1.1 J
Sodium	ug/L	86400	108000	81200	35200	80000	143000	219000	33200
Thallium	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Vanadium	ug/L	2.5 J	2.7 J	2.8 J	3.3 J	17.1 J	30.1 J	2.7 J	3.0 J
Zinc	ug/L	30.0 U	6.1 J	9.6 J	11.2 J	19.7 J	30.6	7.8 J	9.3 J

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

TABLE 3

ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

Sample Location:		MW-18	MW-19	MW-20	MW-21
Sample ID:		GW-017338-030310-ACH-014	GW-017338-030110-ACH-004	GW-017338-030210-RAM-005	GW-017338-030210-RAM-007
Sample Date:		3/3/2010	3/1/2010	3/2/2010	3/2/2010
result_type_code		TRG	TRG	TRG	TRG
Parameters:	Units				
Volatile Organic Compounds					
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	10 U	10 U	10 U	10 U
2-Hexanone	ug/L	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	R	R	R	R
Acetone	ug/L	R	R	R	R
Benzene	ug/L	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
Bromoform	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.0 U	1.0 U	0.16 J	1.0 U
Chloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	ug/L	0.54 J	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	0.24 J	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	ug/L	1.1	1.0 U	1.0 U	1.0 U
Isopropyl benzene	ug/L	0.47 J	1.0 U	1.0 U	1.0 U
Methyl acetate	ug/L	2.0 U	2.0 U	2.0 U	2.0 U
Methyl cyclohexane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	ug/L	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
Toluene	ug/L	2.4	0.31 J	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (Freon 113)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	ug/L	2.0 J	3.0 U	3.0 U	3.0 U
Semi-volatile Organic Compounds					
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	ug/L	10 U	10 U	10 U	10 U

TABLE 3
ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

Sample Location:		MW-18		MW-19		MW-20		MW-21	
Sample ID:		GW-017338-030310-ACH-014		GW-017338-030110-ACH-004		GW-017338-030210-RAM-005		GW-017338-030210-RAM-007	
Sample Date:		3/3/2010		3/1/2010		3/2/2010		3/2/2010	
result_type_code		TRG		TRG		TRG		TRG	
2,4,6-Trichlorophenol	ug/L	10	U	10	U	10	U	10	U
2,4-Dichlorophenol	ug/L	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	ug/L	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	ug/L	31	U	31	U	31	U	31	U
2,4-Dinitrotoluene	ug/L	2.0	U	2.0	U	2.0	U	2.1	U
2,6-Dinitrotoluene	ug/L	2.0	U	2.0	U	2.0	U	2.1	U
2-Chloronaphthalene	ug/L	10	U	10	U	10	U	10	U
2-Chlorophenol	ug/L	10	U	10	U	10	U	10	U
2-Methylnaphthalene	ug/L	10	U	10	U	10	U	10	U
2-Methylphenol	ug/L	10	U	10	U	10	U	10	U
2-Nitroaniline	ug/L	20	U	20	U	20	U	21	U
2-Nitrophenol	ug/L	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	ug/L	20	U	20	U	20	U	21	U
3-Nitroaniline	ug/L	20	U	20	U	20	U	21	U
4,6-Dinitro-2-methylphenol	ug/L	31	U	31	U	31	U	31	U
4-Bromophenyl phenyl ether	ug/L	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	ug/L	10	U	10	U	10	U	10	U
4-Chloroaniline	ug/L	10	U	10	U	10	U	10	U
4-Chlorophenyl phenyl ether	ug/L	10	U	10	U	10	U	10	U
4-Methylphenol	ug/L	10	U	10	U	10	U	10	U
4-Nitroaniline	ug/L	20	U	20	U	20	U	21	U
4-Nitrophenol	ug/L	31	U	31	U	31	U	31	U
Acenaphthene	ug/L	10	U	10	U	10	U	10	U
Acenaphthylene	ug/L	10	U	10	U	10	U	10	U
Acetophenone	ug/L	10	U	10	U	10	U	10	U
Anthracene	ug/L	10	U	10	U	10	U	10	U
Atrazine	ug/L	10	U	10	U	10	U	10	U
Benzaldehyde	ug/L	10	UJ	10	UJ	10	UJ	10	UJ
Benzo(g,h,i)perylene	ug/L	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
Biphenyl (1,1-Biphenyl)	ug/L	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy)methane	ug/L	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
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	10	U	10	U	10	U	10	U
Butyl benzylphthalate (BBP)	ug/L	10	U	10	U	10	U	10	U
Caprolactam	ug/L	10	U	10	U	10	U	10	U
Carbazole	ug/L	10	U	10	U	10	U	10	U
Chrysene	ug/L	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
Dibenzofuran	ug/L	10	U	10	U	10	U	10	U
Diethyl phthalate	ug/L	10	U	10	U	10	U	10	U
Dimethyl phthalate	ug/L	10	U	10	U	10	U	10	U
Di-n-butylphthalate (DBP)	ug/L	10	U	10	U	10	U	10	U
Di-n-octyl phthalate (DnOP)	ug/L	10	U	10	U	10	U	10	U
Fluoranthene	ug/L	10	U	10	U	10	U	10	U
Fluorene	ug/L	10	U	10	U	10	U	10	U
Hexachlorobutadiene	ug/L	2.0	U	2.0	U	2.0	U	2.1	U
Hexachlorocyclopentadiene	ug/L	10	U	10	U	10	U	10	U
Hexachloroethane	ug/L	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
Isophorone	ug/L	10	U	10	U	10	U	10	U
Naphthalene	ug/L	10	U	10	U	10	U	10	U
Nitrobenzene	ug/L	1.0	U	1.0	U	1.0	U	1.0	U
N-Nitrosodi-n-propylamine	ug/L	1.0	U	1.0	U	1.0	U	1.0	U
N-Nitrosodiphenylamine	ug/L	10	U	10	U	10	U	10	U
Phenanthrene	ug/L	10	U	10	U	10	U	10	U
Phenol	ug/L	10	U	10	U	10	U	10	U

TABLE 3
ANALYTICAL RESULTS SUMMARY
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

Sample Location:		MW-18		MW-19		MW-20		MW-21	
Sample ID:		GW-017338-030310-ACH-014		GW-017338-030110-ACH-004		GW-017338-030210-RAM-005		GW-017338-030210-RAM-007	
Sample Date:		3/3/2010		3/1/2010		3/2/2010		3/2/2010	
result_type_code		TRG		TRG		TRG		TRG	
Pyrene	ug/L	10 U		10 U		10 U		10 U	
Semi-volatile Organic Compounds - SPLPIM									
Benzo(a)anthracene	ug/L	0.051 U		0.051 U		0.051 U		0.052 U	
Benzo(a)pyrene	ug/L	0.051 U		0.051 U		0.051 U		0.052 U	
Benzo(b)fluoranthene	ug/L	0.051 U		0.051 U		0.051 U		0.052 U	
Hexachlorobenzene	ug/L	0.020 U		0.020 U		0.020 U		0.021 U	
Pentachlorophenol	ug/L	0.20 U		0.20 U		0.20 U		0.21 U	
Metals									
Aluminum	ug/L	1000		1010		2240		1120	
Antimony	ug/L	10.0 U		10.0 U		10.0 U		10.0 U	
Arsenic	ug/L	5.0 U		5.0 U		5.0 U		5.0 U	
Barium	ug/L	57.7 J		251		89.3 J		85.1 J	
Beryllium	ug/L	2.0 U		2.0 U		2.0 U		2.0 U	
Cadmium	ug/L	5.0 U		5.0 U		5.0 U		5.0 U	
Calcium	ug/L	15400		43400		18900		10800	
Chromium	ug/L	10.0 U		10.0 U		3.4 J		10.0 U	
Cobalt	ug/L	50.0 U		50.0 U		50.0 U		3.6 J	
Copper	ug/L	20.6 J		25.0 U		25.0 U		25.0 U	
Iron	ug/L	1460		6530		2700		850	
Lead	ug/L	5.0 U		5.0 U		5.0 U		5.0 U	
Magnesium	ug/L	13000		13700		4900 J		7010	
Manganese	ug/L	329		487		14.4 J		169	
Mercury	ug/L	0.20 U		0.20 U		0.20 U		0.20 U	
Nickel	ug/L	40.0 U		40.0 U		4.1 J		7.8 J	
Potassium	ug/L	1640 J		4510 J		2930 J		774 J	
Selenium	ug/L	10.0 U		10.0 U		10.0 U		10.0 U	
Silver	ug/L	10.0 U		10.0 U		10.0 U		10.0 U	
Sodium	ug/L	58700		108000		112000		14900	
Thallium	ug/L	10.0 U		10.0 U		10.0 U		10.0 U	
Vanadium	ug/L	8.0 J		2.4 J		4.7 J		2.3 J	
Zinc	ug/L	6.2 J		6.2 J		46.3		28.7 J	

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

TABLE 4

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO VIOLATION OF INITIAL CALIBRATION ACCEPTANCE CRITERIA
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

<i>Parameter</i>	<i>Analyte</i>	<i>Calibration Date</i>	<i>RRF</i>	<i>Associated Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TCL VOC	4-Methyl-2-pentanone	2/2/10	0.0477	EB-017338-030210-ACH-006	R	µg/L
				GW-017338-030110-ACH-001	R	µg/L
				GW-017338-030110-ACH-002	R	µg/L
				GW-017338-030110-ACH-003	R	µg/L
				GW-017338-030110-ACH-004	R	µg/L
				GW-017338-030210-ACH-008	R	µg/L
				GW-017338-030210-ACH-010	R	µg/L
				GW-017338-030210-ACH-012	R	µg/L
				GW-017338-030210-RAM-005	R	µg/L
				GW-017338-030210-RAM-007	R	µg/L
				GW-017338-030210-RAM-009	R	µg/L
				GW-017338-030210-RAM-011	R	µg/L
				GW-017338-030310-ACH-014	R	µg/L
				GW-017338-030310-ACH-016	R	µg/L
				GW-017338-030310-RAM-015	R	µg/L
				TRIP BLANK-017338-030310-ACH-001	R	µg/L
				GW-017338-030210-ACH-013	R	µg/L
				GW-017338-030310-ACH-018	R	µg/L
				GW-017338-030310-ACH-020	1.2 J	µg/L
				GW-017338-030310-RAM-017	R	µg/L
				GW-017338-030310-RAM-019	380 J	µg/L
				GW-017338-030310-RAM-021	R	µg/L
TCL VOC	Acetone	2/2/10	0.0484	EB-017338-030210-ACH-006	R	µg/L
				GW-017338-030110-ACH-001	R	µg/L
				GW-017338-030110-ACH-002	R	µg/L
				GW-017338-030110-ACH-003	R	µg/L
				GW-017338-030110-ACH-004	R	µg/L
				GW-017338-030210-ACH-008	R	µg/L
				GW-017338-030210-ACH-010	R	µg/L
				GW-017338-030210-ACH-012	R	µg/L
				GW-017338-030210-RAM-005	R	µg/L
				GW-017338-030210-RAM-007	R	µg/L
				GW-017338-030210-RAM-009	R	µg/L
				GW-017338-030210-RAM-011	R	µg/L
				GW-017338-030310-ACH-014	R	µg/L

TABLE 4

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO VIOLATION OF INITIAL CALIBRATION ACCEPTANCE CRITERIA
 OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
 GENERAL MOTORS WILMINGTON SITE
 WILMINGTON, DELAWARE

<i>Parameter</i>	<i>Analyte</i>	<i>Calibration Date</i>	<i>RRF</i>	<i>Associated Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TCL VOC	Acetone	2/2/10	0.0484	GW-017338-030310-ACH-016	R	µg/L
				GW-017338-030310-RAM-015	R	µg/L
				TRIP BLANK-017338-030310-ACH-001	R	µg/L
				GW-017338-030210-ACH-013	R	µg/L
				GW-017338-030310-ACH-018	R	µg/L
				GW-017338-030310-ACH-020	10 J	µg/L
				GW-017338-030310-RAM-017	R	µg/L
				GW-017338-030310-RAM-019	96000 J	µg/L
				GW-017338-030310-RAM-019	93000 J	µg/L
				GW-017338-030310-RAM-021	R	µg/L

Notes:

- J - Estimated Concentration
 R - Rejected

TABLE 5

**QUALIFIED SAMPLE RESULTS DUE TO VIOLATION OF CONTINUING CALIBRATION REQUIREMENTS
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE**

<i>Parameter</i>	<i>Analyte</i>	<i>Calibration Date</i>	<i>% Recovery or %D</i>	<i>Associated Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TCL SVOC	Benzaldehyde	3/5/10	93.3	EB-017338-030210-ACH-006	11 UJ	µg/L
				GW-017338-030110-ACH-001	10 UJ	µg/L
				GW-017338-030110-ACH-002	10 UJ	µg/L
				GW-017338-030110-ACH-003	10 UJ	µg/L
				GW-017338-030110-ACH-004	10 UJ	µg/L
				GW-017338-030210-ACH-008	10 UJ	µg/L
				GW-017338-030210-ACH-010	11 UJ	µg/L
				GW-017338-030210-ACH-013	10 UJ	µg/L
				GW-017338-030210-RAM-005	10 UJ	µg/L
				GW-017338-030210-RAM-007	10 UJ	µg/L
				GW-017338-030210-RAM-009	11 UJ	µg/L
				GW-017338-030210-RAM-011	10 UJ	µg/L
				GW-017338-030310-ACH-014	10 UJ	µg/L
				GW-017338-030310-RAM-015	10 UJ	µg/L
TCL SVOC	Benzaldehyde	3/8/10	-28.5	GW-017338-030310-RAM-019	14 J	µg/L

Notes:

- J - Estimated Concentration
 UJ - Non-detect with an Estimated Report Limit

TABLE 6

**SUMMARY OF QUALIFIED SAMPLE DATA DUE TO LABORATORY BLANK CONTAMINATION
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE**

<i>Parameter</i>	<i>Analyte</i>	<i>Analysis Date</i>	<i>Blank Result</i>	<i>Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
TAL Metals	Barium	3/6/2010	4.57	EB-017338-030210-ACH-006	200 U	µg/L
TAL Metals	Copper	3/9/2010	4.09	GW-017338-030310-RAM-017	25.0 U	µg/L
TAL Metals	Lead	3/6/2010	4.10	GW-017338-030110-ACH-001	8.1 U	µg/L
				GW-017338-030110-ACH-002	5.0 U	µg/L
				GW-017338-030210-ACH-008	7.0 U	µg/L
				GW-017338-030210-ACH-010	6.4 U	µg/L
				GW-017338-030210-RAM-005	5.0 U	µg/L
				GW-017338-030210-RAM-009	5.0 U	µg/L

Notes:

U - Qualified as Not Detected at the report limit

TABLE 7

SUMMARY OF QUALIFIED SAMPLE DATA DUE TO OUTLYING
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND/OR RELATIVE PERCENT DIFFERENCE
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

<i>Parameter</i>	<i>Analyte</i>	<i>MS Recovery (percent)</i>	<i>MSD Recovery (percent)</i>	<i>RPD</i>	<i>Control Limits</i>		<i>Associated Sample ID</i>	<i>Qualified Result</i>		<i>Units</i>
					<i>Recovery (percent)</i>	<i>RPD (percent)</i>				
TCL VOC	Chloroethane	49	46	6	69-145	30	GW-017338-030310-RAM-021	1.0	UJ	µg/L
TCL SVOC	Benzaldehyde	61	61	1	80-154	30	GW-017338-030110-ACH-003	10	UJ	µg/L
	Naphthalene	56	57	1	64-110	30		100	J	µg/L

Notes:

- J - Estimated Concentration
UJ - Non-detect with an Estimated Report Limit

TABLE 8

SUMMARY OF QUALIFIED SAMPLE RESULTS DUE TO OUTLYING
LABORATORY CONTROL SAMPLE / LABORATORY CONTROL SAMPLE DUPLICATE RESULTS
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

<i>Parameter</i>	<i>Analyte</i>	<i>LCS Date</i>	<i>LCS %Rec</i>	<i>LCD %Rec</i>	<i>RPD (percent)</i>	<i>Control Limits</i>		<i>Associated Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
						<i>%Rec</i>	<i>RPD</i>			
TCL VOC	Chloroethane	3/8/2010	49	--	--	69-145	--	GW-017338-030210-ACH-013	1.0 UJ	µg/L
								GW-017338-030310-ACH-018	1.0 UJ	µg/L
								GW-017338-030310-ACH-020	1.0 UJ	µg/L
								GW-017338-030310-RAM-017	1.0 UJ	µg/L
								GW-017338-030310-RAM-019	50 UJ	µg/L
								GW-017338-030310-RAM-021	1.0 UJ	µg/L
TCL SVOC	Benzaldehyde	3/6/2010	67	--	--	80-154	--	EB-017338-030210-ACH-006	11 UJ	µg/L
								GW-017338-030110-ACH-001	10 UJ	µg/L
								GW-017338-030110-ACH-002	10 UJ	µg/L
								GW-017338-030110-ACH-003	10 UJ	µg/L
								GW-017338-030110-ACH-004	10 UJ	µg/L
								GW-017338-030210-ACH-008	10 UJ	µg/L
								GW-017338-030210-ACH-010	11 UJ	µg/L
								GW-017338-030210-ACH-012	5.4 J	µg/L
								GW-017338-030210-ACH-013	10 UJ	µg/L
								GW-017338-030210-RAM-005	10 UJ	µg/L
								GW-017338-030210-RAM-007	10 UJ	µg/L
								GW-017338-030210-RAM-009	11 UJ	µg/L
								GW-017338-030210-RAM-011	10 UJ	µg/L
								GW-017338-030310-ACH-014	10 UJ	µg/L
								GW-017338-030310-RAM-015	10 UJ	µg/L
TCL SVOC	Benzaldehyde	3/7/2010	78	73	7	80-154	30	GW-017338-030310-ACH-016	10 UJ	µg/L
								GW-017338-030310-ACH-018	10 UJ	µg/L
								GW-017338-030310-ACH-020	10 UJ	µg/L
								GW-017338-030310-RAM-017	10 UJ	µg/L
								GW-017338-030310-RAM-019	14 J	µg/L
								GW-017338-030310-RAM-021	10 UJ	µg/L

Notes:

J - Estimated Concentration
 UJ - Non-detect with an Estimated Report Limit
 RPD - Relative Percent Difference

TABLE 9

**SUMMARY OF DETECTED ANALYTES IN FIELD DUPLICATE SAMPLE SETS
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE**

<i>Analysis</i>	<i>Parameters</i>	<i>Original Sample ID</i>	<i>Original Result</i>	<i>Duplicate Sample ID</i>	<i>Duplicate Result</i>	<i>RPD</i>	<i>Units</i>
		GW-017338-030210-ACH-008		GW-017338-030210-ACH-010			
TCL VOC	Cyclohexane		1.4		1.0 U	NC	µg/L
	Ethylbenzene		1.0 U		0.26	NC	µg/L
	Isopropyl benzene		5.0		5.0	0	µg/L
	Methyl cyclohexane		1.0 U		0.69	NC	µg/L
	Methyl tert butyl ether		1.5		1.5	0	µg/L
	Toluene		1.0		1.1	9.5	µg/L
	Xylenes (total)		7.3		8.3	13	µg/L
TCL VOC	Caprolactam		10 U		0.63 J	NC	µg/L
SVOC SIM	Benzo(a)anthracene		0.042 J		0.031	30	µg/L
	Benzo(a)pyrene		0.035 J		0.053 U	NC	µg/L
	Benzo(b)fluoranthene		0.050 J		0.053 U	NC	µg/L
TAL Metals	Aluminum		3230		2460	27	µg/L
	Barium		456		443	2.9	µg/L
	Calcium		55600		55100	0.90	µg/L
	Chromium		4.3 J		3.6 J	18	µg/L
	Cobalt		3.2 J		2.8 J	13	µg/L
	Copper		26.2		21.9 J	18	µg/L
	Iron		31300		29400	6.3	µg/L
	Magnesium		32500		31800	2.2	µg/L
	Manganese		528		516	2.3	µg/L
	Potassium		6610		6500	1.7	µg/L
	Silver		5.7 J		5.3 J	7.3	µg/L
	Sodium		96700		95100	1.7	µg/L
	Vanadium		5.9 J		4.7 J	23	µg/L
	Zinc		21.5 J		17.2 J	22	µg/L

Notes:

RPD - Relative Percent Difference

NC - Not calculable

TABLE 10

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

<i>Sample Location</i>	<i>Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>		<i>Semi-Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>	
GW-017338-030110-ACH-003	Unknown 1	22	J	Unknown 1	78	J
	Naphthalene	180		Unknown 2	58	J
	Unknown 2	120	J	Unknown 3	66	J
	Unknown 3	18	J	Unknown 4	26	J
	Unknown 4	100	J	Unknown 5	180	J
	Unknown 5	23	J	Unknown 6	51	J
	Unknown 6	16	J	Unknown 7	10	J
	Unknown 7	160	J	Unknown 8	10	J
	Unknown 8	10	J			
	Indane	140	J			
GW-017338-030210-ACH-008	Isopropyl ether	5.8	NJ	Unknown 1	9.5	J
	Indane	11	J			
	Unknown 3	5.8	J			
	Unknown 4	6.6	J			
GW-017338-030210-ACH-010	Isopropyl ether	5.9	NJ			
	Indane	11	J			
	Unknown 3	5.5	J			
	Unknown 4	7.3	J			
GW-017338-030210-ACH-012	N-Propylbenzene	580	NJ	Unknown 1	460	J
	Unknown 10	33	J	Unknown 10	620	J
	Indane	790	J	Unknown 11	280	J
	Naphthalene	52		Unknown 12	270	J
	1-Methyl-Indan,	52	NJ	Unknown 13	130	J
	Unknown 5	83	J	Unknown 14	79	J
	Unknown 6	260	J	Unknown 15	20	J
	Unknown 7	160	J	Unknown 16	82	J
	Unknown 8	160	J	Unknown 17	82	J
	Unknown 9	600	J	Unknown 18	200	J
				Unknown 19	22	J
				Unknown 2	370	J
				Unknown 20	82	J
				Unknown 3	1000	J

TABLE 10

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

<i>Sample Location</i>	<i>Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>		<i>Semi-Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>	
GW-017338-030210-ACH-012				Unknown 4	280	J
				Unknown 5	26	J
				Unknown 6	44	J
				Unknown 7	18	J
				Unknown 8	440	J
				Unknown 9	20	J
GW-017338-030210-ACH-013	Unknown 10	1200	J	Unknown 1	190	J
	Unknown 4	650	J	Unknown 10	170	J
	Unknown 5	310	J	Unknown 11	440	J
	Unknown 6	1600	J	Unknown 12	160	J
	Unknown 7	520	J	Unknown 13	240	J
	Unknown 8	420	J	Unknown 14	110	J
	Unknown 9	530	J	Unknown 15	47	J
				Unknown 16	310	J
				Unknown 17	210	J
				Unknown 18	65	J
				Unknown 19	240	J
				Unknown 2	340	J
				Unknown 20	410	J
				Unknown 21	48	J
				Unknown 3	380	J
				Unknown 4	65	J
				Unknown 5	470	J
				Unknown 6	300	J
				Unknown 7	210	J
				Unknown 8	190	J
				Unknown 9	180	J
GW-017338-030210-RAM-009	N-Propylbenzene	43	NJ	Unknown 1	190	J
	Unknown 10	8.7	J	Unknown 10	16	J
	Isopropyl ether	17	NJ	Unknown 2	42	J
	1,2,4-Trimethylbenzene	7.4	NJ	Unknown 3	41	J
	Unknown 4	11	J	Unknown 4	20	J
	Unknown 5	16	J	Unknown 5	55	J
	Unknown 6	18	J	Unknown 6	88	J

TABLE 10

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

<i>Sample Location</i>	<i>Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>		<i>Semi-Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>	
GW-017338-030210-RAM-009	Unknown 7	13	J	Unknown 7	9.6	J
	Unknown 8	12	J	Unknown 8	11	J
	Unknown 9	27	J	Unknown 9	9.1	J
GW-017338-030310-ACH-016	Unknown 1	26	J	Unknown 1	330	J
	Unknown 2	5.3	J	Unknown 2	10	J
				Unknown 3	29	J
				Unknown 4	13	J
				Unknown 5	15	J
				Unknown 6	9.6	J
GW-017338-030310-ACH-018	Unknown 1	8.3	NJ			
GW-017338-030310-ACH-020	Isopropyl ether	14	NJ	Unknown 1	800	J
	Indane	9.1	J	Unknown 10	50	J
	Tert-amyl methyl ether	16	NJ	Unknown 11	11	J
	Unknown 4	5.6	J	Unknown 12	14	J
	Unknown 5	6.0	J	Unknown 13	16	J
	Unknown 6	6.5	J	Unknown 14	20	J
				Unknown 15	22	J
				Unknown 16	12	J
				Unknown 17	41	J
				Unknown 18	1800	J
				Unknown 2	680	J
				Unknown 4	18	J
				Unknown 5	8.5	J
				Unknown 6	10	J
				Unknown 7	11	J
				Unknown 8	1400	J
				Unknown 9	180	J
GW-017338-030310-RAM-017	N-propylbenzene	43	NJ	Unknown 1	11	J
	Unknown 10	39	J	Ethylbenzene	10	J
	Isopropyl ether	17	NJ	Unknown 11	9.1	J
	Indane	38	J	Unknown 12	32	J
	Camphor	18	NJ	Unknown 13	100	J

TABLE 10

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

Sample Location	Volatile Organics	Estimated Concentration (µg/L)		Semi-Volatile Organics	Estimated Concentration (µg/L)		
GW-017338-030310-RAM-017	Naphthalene	37	NJ	Unknown 14	15	J	
	Unknown 6	13	NJ	Unknown 15	23	J	
	Unknown 7	30	J	Unknown 16	32	J	
	Unknown 8	23	J	Unknown 2	20	J	
	Unknown 9	22	J	Unknown 3	10	J	
				Indane	22	J	
				Unknown 5	8.1	J	
				Unknown 6	47	J	
				Unknown 7	12	J	
				Unknown 8	19	J	
				Unknown 9	39	J	
	GW-017338-030310-RAM-019	Isopropyl alcohol	76000	NJ	Ethylbenzene	2300	J
					Unknown 10	1500	J
Unknown 11					25	J	
Unknown 12					41	J	
Unknown 13					22	J	
Unknown 14					290	J	
Unknown 15					31	J	
Unknown 16					160	J	
Unknown 17					29	J	
Unknown 18					55	J	
Unknown 19					30	J	
Unknown 2					37	J	
Unknown 20					3700	J	
Unknown 21					25	J	
Unknown 22					21	J	
Butanoic acid					88	J	
Toluene					7600	J	
Unknown 6					69	J	
Unknown 7	39	J					
Unknown 8	530	J					
Unknown 9	2500	J					
GW-017338-030310-RAM-021	Unknown 10	1500	J	Ethylbenzene	340	J	
	Unknown 2	750	J	Unknown 10	160	J	

TABLE 10

TENTATIVELY IDENTIFIED COMPOUNDS
OU-2 BULK PRODUCT TANK AREA - QUARTERLY GROUNDWATER SAMPLES
GENERAL MOTORS WILMINGTON SITE
WILMINGTON, DELAWARE

<i>Sample Location</i>	<i>Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>	<i>Semi-Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>
GW-017338-030310-RAM-021	Unknown 3	930 J	Unknown 11	310 J
	Unknown 4	1100 J	Unknown 12	240 J
	Unknown 5	1400 J	Unknown 13	180 J
	Unknown 6	1400 J	Unknown 14	380 J
	Unknown 7	1100 J	Unknown 15	81 J
	Unknown 8	1600 J	Unknown 16	80 J
	Unknown 9	570 J	Unknown 17	110 J
			Unknown 18	280 J
			Unknown 19	360 J
			Toluene	1000 J
			Unknown 20	180 J
			Unknown 21	360 J
			Unknown 22	140 J
			Unknown 23	52 J
			3 & 4-methylphenol	23 NJ
			Indane	210 J
			Unknown 6	780 J
			Unknown 7	380 J
			Unknown 8	120 J
			Unknown 9	230 J

Notes:

J - Estimated Concentration
NJ - Tentatively Identified



**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.: 58510-119002

FROM: Susan Scrocchi/bjw/4 *SCS*

DATE: June 30, 2010

E-Mail and Hard Copy if Requested

RE: **Data Quality Assessment and Validation
Quarterly Groundwater Samples
Wilmington, Delaware
May 2010**

INTRODUCTION

The following details a quality assessment and validation of the analytical data resulting from the May 2010, collection of groundwater samples from the 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 Test America Laboratory in Edison, New Jersey (TA), in accordance with the methodologies presented in Table 2. Analytical results summaries are presented in Table 3.

The Quality Control (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
- 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 any detected concentrations of volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), and metals observed below the laboratory's practical quantitation limit (PQL)/report limit (RL) but above the laboratory's method detection limit (MDL) with a flag. 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.

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.

Calibration standards were analyzed at the required frequency and some results did not meet the above criteria for linearity and sensitivity. Associated sample results were qualified as estimated (see 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. 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.

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.

Site specific analyses were performed as specified in and most MS/MSD or MS/Dup recoveries were acceptable indicating good analytical accuracy and precision. Low MS/MSD recoveries were reported for some SVOCs and the associated sample results were qualified as estimated (see Table 5). A high aluminum MS recovery was reported and the associated detected sample results were qualified as estimated (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 all within the laboratory control limits indicating acceptable analytical accuracy with the following exceptions:

- i) A high SVOC recovery. All associated sample results were non-detect and would not have been impacted by the implied high bias.
- ii) Low SVOC recoveries were observed. All associated sample results were qualified as estimated (see Table 6).
- iii) An extremely low caprolactam recovery was observed. All associated sample results were non-detect and were rejected due to poor analyte efficiency (see Table 6).

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.
- 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. A summary of the TICs is reported in Table 7.

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 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.

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. 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.

To monitor potential cross-contamination of VOC during aqueous sample transportation and storage, one 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.

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 and exceptions noted.

TABLE 1
SAMPLE COLLECTION AND ANALYSIS SUMMARY
QUARTERLY GROUNDWATER SAMPLING
WILMINGTON, DELAWARE
MAY 2010

<i>Sample I.D.</i>	<i>Location I.D.</i>	<i>Collection Date (mm/dd/yy)</i>	<i>Collection Time (hr:min)</i>	<i>Analysis/Parameters</i>			<i>Comments</i>
				<i>TCL VOCs plus TICS</i>	<i>SVOCs plus TICS</i>	<i>TAL Metals</i>	
EB-017338-051810-ACH-01	Equipment Blank	05/18/10	8:40:00 AM	X	X	X	
GW-017338-051810-ACH-02	MW-8	05/18/10	9:30:00 AM	X	X	X	MS/MSD
GW-017338-051810-ACH-03	MW-9	05/18/10	1:00:00 AM	X	X	X	
GW-017338-051810-ACH-04	MW-9	05/18/10	1:10:00 AM	X	X	X	Field duplicate of GW-017338-051810-ACH-03
GW-017338-051810-ACH-05	MW-19	05/18/10	2:00:00 PM	X	X	X	
Trip Blank-017338-051810-ACH-06	Trip Blank	05/18/10	2:00:00 PM	X			

Notes:

TCL Target Compound List.
VOCs Volatile Organic Compounds.
TICs Tentatively Identified Compounds.
SVOCs Semi-Volatile Organic Compounds.
TAL Target Analyte List.
MS Matrix Spike.
MSD Matrix Spike Duplicate.

TABLE 2

**SUMMARY OF ANALYTICAL METHODS
QUARTERLY GROUNDWATER SAMPLING
WILMINGTON, DELAWARE
MAY 2010**

<i>Parameter</i>	<i>Method</i> ¹
TCL VOCs	SW-846 8260B
TCL SVOCs	SW-846 8270C
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.
VOCs - Volatile Organic Compounds.

TABLE 3

ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER SAMPLING
WILMINGTON, DELAWARE
MAY 2010

	<i>Sample Location:</i>	<i>Equipment Blank</i>	<i>MW-8</i>	<i>MW-9</i>	<i>MW-9</i>
	<i>Sample ID:</i>	<i>EB-017338-051810-ACH-01</i>	<i>GW-017338-051810-ACH-02</i>	<i>GW-017338-051810-ACH-03</i>	<i>GW-017338-051810-ACH-04</i>
	<i>Sample Date:</i>	<i>5/18/2010</i>	<i>5/18/2010</i>	<i>5/18/2010</i>	<i>5/18/2010</i>
	<i>Result Type Code:</i>	<i>TRG</i>	<i>TRG</i>	<i>TRG</i>	<i>TRG</i>
					<i>(Duplicate)</i>
<i>Parameters:</i>	<i>Units</i>				
<i>Volatile Organic Compounds</i>					
1,1,1-Trichloroethane	µg/L	0.25 U	0.25 U	0.25 U	0.25 U
1,1,2,2-Tetrachloroethane	µg/L	0.090 U	0.090 U	0.090 U	0.090 U
1,1,2-Trichloroethane	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
1,1-Dichloroethane	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
1,1-Dichloroethene	µg/L	0.14 U	0.14 U	0.14 U	0.14 U
1,2,4-Trichlorobenzene	µg/L	0.44 U	0.44 U	0.44 U	0.44 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	0.15 U	0.15 U	0.15 U	0.15 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.090 U	0.090 U	0.090 U	0.090 U
1,2-Dichlorobenzene	µg/L	0.16 U	0.27 J	0.16 U	0.16 U
1,2-Dichloroethane	µg/L	0.24 U	0.24 U	0.24 U	0.24 U
1,2-Dichloropropane	µg/L	0.090 U	0.090 U	0.090 U	0.090 U
1,3-Dichlorobenzene	µg/L	0.22 U	0.22 U	0.22 U	0.22 U
1,4-Dichlorobenzene	µg/L	0.15 U	0.28 J	0.15 U	0.15 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	0.82 U	0.82 U	0.82 U	0.82 U
2-Hexanone	µg/L	0.55 U	0.55 U	0.55 U	0.55 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	0.68 U	0.68 U	0.68 U	0.68 U
Acetone	µg/L	2.5 U	2.5 U	2.5 U	2.5 U
Benzene	µg/L	0.13 U	4.5	0.13 U	0.13 U
Bromodichloromethane	µg/L	0.093 U	0.093 U	0.093 U	0.093 U
Bromoform	µg/L	0.10 U	0.10 U	0.10 U	0.10 U
Bromomethane (Methyl bromide)	µg/L	0.31 U	0.31 U	0.31 U	0.31 U
Carbon disulfide	µg/L	0.15 U	0.15 U	0.15 U	0.15 U
Carbon tetrachloride	µg/L	0.19 U	0.19 U	0.19 U	0.19 U
Chlorobenzene	µg/L	0.16 U	2.9	0.16 U	0.16 U
Chloroethane	µg/L	0.45 U	0.45 U	0.45 U	0.45 U
Chloroform (Trichloromethane)	µg/L	0.15 U	0.15 U	0.15 U	0.15 U
Chloromethane (Methyl chloride)	µg/L	0.21 U	0.21 U	0.21 U	0.21 U
cis-1,2-Dichloroethene	µg/L	0.20 U	0.20 U	0.20 U	0.20 U
cis-1,3-Dichloropropene	µg/L	0.11 U	0.11 U	0.11 U	0.11 U
Cyclohexane	µg/L	0.13 U	2.8	0.13 U	0.13 U
Dibromochloromethane	µg/L	0.11 U	0.11 U	0.11 U	0.11 U
Dichlorodifluoromethane (CFC-12)	µg/L	0.29 U	0.29 U	0.29 U	0.29 U
Ethylbenzene	µg/L	0.25 U	0.33 J	0.25 U	0.25 U
Isopropyl benzene	µg/L	0.21 U	6.0	0.21 U	0.21 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER SAMPLING
WILMINGTON, DELAWARE
MAY 2010

	<i>Sample Location:</i>	<i>Equipment Blank</i>	<i>MW-8</i>	<i>MW-9</i>	<i>MW-9</i>
	<i>Sample ID:</i>	<i>EB-017338-051810-ACH-01</i>	<i>GW-017338-051810-ACH-02</i>	<i>GW-017338-051810-ACH-03</i>	<i>GW-017338-051810-ACH-04</i>
	<i>Sample Date:</i>	<i>5/18/2010</i>	<i>5/18/2010</i>	<i>5/18/2010</i>	<i>5/18/2010</i>
	<i>Result Type Code:</i>	<i>TRG</i>	<i>TRG</i>	<i>TRG</i>	<i>TRG</i>
					<i>(Duplicate)</i>
<i>Parameters:</i>	<i>Units</i>				
<i>Volatile Organic Compounds (Cont'd.)</i>					
Methyl acetate	µg/L	0.33 U	0.33 U	0.33 U	0.33 U
Methyl cyclohexane	µg/L	0.090 U	11	0.090 U	0.090 U
Methyl tert butyl ether (MTBE)	µg/L	0.18 U	4.6	0.44 J	0.40 J
Methylene chloride	µg/L	0.19 U	0.19 U	0.19 U	0.19 U
Styrene	µg/L	0.13 U	0.13 U	0.13 U	0.13 U
Tetrachloroethene	µg/L	0.20 U	0.20 U	0.51 J	0.41 J
Toluene	µg/L	0.090 U	0.090 U	0.090 U	0.090 U
trans-1,2-Dichloroethene	µg/L	0.14 U	0.14 U	0.14 U	0.14 U
trans-1,3-Dichloropropene	µg/L	0.12 U	0.12 U	0.12 U	0.12 U
Trichloroethene	µg/L	0.18 U	0.18 U	0.18 U	0.18 U
Trichlorofluoromethane (CFC-11)	µg/L	0.16 U	0.16 U	0.16 U	0.16 U
Trifluorotrichloroethane (Freon 113)	µg/L	0.28 U	0.28 U	0.28 U	0.28 U
Vinyl chloride	µg/L	0.13 U	0.13 U	0.13 U	0.13 U
Xylene (total)	µg/L	0.43 U	1.2 J	0.43 U	0.43 U
<i>Semi-volatile Organic Compounds</i>					
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	3.3 U	3.2 U	3.3 U	3.3 U
2,4-Dinitrotoluene	µg/L	0.44 U	0.43 U	0.45 U	0.45 U
2,6-Dinitrotoluene	µg/L	0.61 U	0.60 U	0.61 U	0.61 U
2-Chloronaphthalene	µg/L	3.9 U	3.8 U	3.9 U	3.9 U
2-Methylnaphthalene	µg/L	3.2 U	3.1 U	3.2 U	3.2 U
2-Nitroaniline	µg/L	5.9 U	5.8 U	5.9 U	5.9 U
3,3'-Dichlorobenzidine	µg/L	7.2 U	7.0 U	7.3 U	7.3 U
3-Nitroaniline	µg/L	4.5 U	4.4 UJ	4.5 U	4.5 U
4-Bromophenyl phenyl ether	µg/L	4.0 U	4.0 U	4.1 U	4.1 U
4-Chloroaniline	µg/L	2.2 UJ	2.1 UJ	2.2 UJ	2.2 UJ
4-Chlorophenyl phenyl ether	µg/L	4.0 U	4.0 U	4.1 U	4.1 U
4-Nitroaniline	µg/L	4.1 U	4.0 U	4.1 U	4.1 U
Acenaphthene	µg/L	3.9 U	3.8 U	3.9 U	3.9 U
Acenaphthylene	µg/L	4.2 U	4.1 U	4.2 U	4.2 U
Acetophenone	µg/L	4.4 U	4.3 U	4.5 U	4.5 U
Anthracene	µg/L	3.7 U	3.6 U	3.7 U	3.7 U
Atrazine	µg/L	4.9 U	4.8 U	5.0 U	5.0 U
Benzaldehyde	µg/L	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ

TABLE 3

ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER SAMPLING
WILMINGTON, DELAWARE
MAY 2010

	<i>Sample Location:</i>	<i>Equipment Blank</i>	<i>MW-8</i>	<i>MW-9</i>	<i>MW-9</i>
	<i>Sample ID:</i>	<i>EB-017338-051810-ACH-01</i>	<i>GW-017338-051810-ACH-02</i>	<i>GW-017338-051810-ACH-03</i>	<i>GW-017338-051810-ACH-04</i>
	<i>Sample Date:</i>	<i>5/18/2010</i>	<i>5/18/2010</i>	<i>5/18/2010</i>	<i>5/18/2010</i>
	<i>Result Type Code:</i>	<i>TRG</i>	<i>TRG</i>	<i>TRG</i>	<i>TRG</i>
					<i>(Duplicate)</i>
<i>Parameters:</i>	<i>Units</i>				
<i>Semi-volatile Organic Compounds (Cont'd.)</i>					
Benzo(g,h,i)perylene	µg/L	2.8 U	2.7 U	2.8 U	2.8 U
Benzo(k)fluoranthene	µg/L	0.31 U	0.30 U	0.31 U	0.31 U
Biphenyl (1,1-Biphenyl)	µg/L	5.6 U	5.5 U	5.6 U	5.6 U
bis(2-Chloroethoxy)methane	µg/L	3.6 U	3.5 U	3.6 U	3.6 U
bis(2-Chloroethyl)ether	µg/L	0.42 U	0.41 U	0.43 U	0.43 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	2.5 U	2.4 U	2.5 U	2.5 U
Butyl benzylphthalate (BBP)	µg/L	2.9 U	2.8 U	2.9 U	2.9 U
Caprolactam	µg/L	R	R	R	R
Carbazole	µg/L	3.2 U	3.1 U	3.2 U	3.2 U
Chrysene	µg/L	3.9 U	3.8 U	3.9 U	3.9 U
Dibenz(a,h)anthracene	µg/L	0.16 U	0.16 U	0.17 U	0.17 U
Dibenzofuran	µg/L	3.7 U	3.6 U	3.7 U	3.7 U
Diethyl phthalate	µg/L	3.9 U	3.9 U	4.0 U	4.0 U
Dimethyl phthalate	µg/L	3.4 U	3.3 U	3.4 U	3.4 U
Di-n-butylphthalate (DBP)	µg/L	2.9 U	2.8 U	2.9 U	2.9 U
Di-n-octyl phthalate (DnOP)	µg/L	2.0 U	1.9 U	2.0 U	2.0 U
Fluoranthene	µg/L	2.7 U	2.7 U	2.8 U	2.8 U
Fluorene	µg/L	3.4 U	3.3 U	3.4 U	3.4 U
Hexachlorobutadiene	µg/L	0.97 UJ	0.95 UJ	0.98 UJ	0.98 UJ
Hexachlorocyclopentadiene	µg/L	4.7 U	4.6 U	4.8 U	4.8 U
Hexachloroethane	µg/L	0.52 U	0.51 U	0.52 U	0.52 U
Indeno(1,2,3-cd)pyrene	µg/L	0.12 U	0.12 U	0.12 U	0.12 U
Isophorone	µg/L	3.7 U	3.6 U	3.7 U	3.7 U
Naphthalene	µg/L	3.8 U	110	3.8 U	3.8 U
Nitrobenzene	µg/L	0.42 U	0.41 U	0.43 U	0.43 U
N-Nitrosodi-n-propylamine	µg/L	0.33 U	0.32 U	0.33 U	0.33 U
N-Nitrosodiphenylamine	µg/L	4.0 U	3.9 U	4.0 U	4.0 U
Phenanthrene	µg/L	3.7 U	3.6 U	3.7 U	3.7 U
Pyrene	µg/L	4.4 U	4.3 U	4.4 U	4.4 U
<i>Semi-volatile Organic Compounds - SPLPIM</i>					
Benzo(a)anthracene	µg/L	0.021 U	0.020 U	0.021 U	0.021 U
Benzo(a)pyrene	µg/L	0.031 U	0.030 U	0.031 U	0.031 U
Benzo(b)fluoranthene	µg/L	0.041 U	0.040 U	0.042 U	0.042 U
Hexachlorobenzene	µg/L	0.010 U	0.010 U	0.010 U	0.010 U

TABLE 3
ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER SAMPLING
WILMINGTON, DELAWARE
MAY 2010

	<i>Sample Location:</i>	<i>Equipment Blank</i>	<i>MW-8</i>	<i>MW-9</i>	<i>MW-9</i>
	<i>Sample ID:</i>	<i>EB-017338-051810-ACH-01</i>	<i>GW-017338-051810-ACH-02</i>	<i>GW-017338-051810-ACH-03</i>	<i>GW-017338-051810-ACH-04</i>
	<i>Sample Date:</i>	<i>5/18/2010</i>	<i>5/18/2010</i>	<i>5/18/2010</i>	<i>5/18/2010</i>
	<i>Result Type Code:</i>	<i>TRG</i>	<i>TRG</i>	<i>TRG</i>	<i>TRG</i>
					<i>(Duplicate)</i>
<i>Parameters:</i>	<i>Units</i>				
<i>Metals</i>					
Aluminum	µg/L	87.0 U	5190 J	5410 J	7580 J
Antimony	µg/L	4.6 U	4.6 U	4.6 U	4.6 U
Arsenic	µg/L	3.8 U	3.8 U	3.8 U	3.8 U
Barium	µg/L	3.2 U	474	222	250
Beryllium	µg/L	0.94 U	0.94 U	0.94 U	0.94 U
Cadmium	µg/L	0.92 U	0.92 U	0.92 U	0.92 U
Calcium	µg/L	72.2 U	58900	48400	48300
Chromium	µg/L	3.2 U	3.2 J	8.3 J	11.4
Cobalt	µg/L	2.8 U	20.3 J	3.9 J	5.7 J
Copper	µg/L	3.6 U	3.6 U	17.1 J	18.0 J
Iron	µg/L	40.2 U	74500	19000	26600
Lead	µg/L	2.8 U	7.0	7.6	9.5
Magnesium	µg/L	56.9 U	36200	22700	22700
Manganese	µg/L	2.5 U	1990	296	278
Mercury	µg/L	0.18 U	0.18 U	0.65	0.72
Nickel	µg/L	3.5 U	5.0 J	5.5 J	7.3 J
Potassium	µg/L	209 U	3600 J	7620	7610
Selenium	µg/L	4.8 U	4.8 U	4.8 U	4.8 U
Silver	µg/L	0.97 U	0.97 U	1.5 J	1.1 J
Sodium	µg/L	355 J	93900	126000	124000
Thallium	µg/L	4.6 U	4.6 U	4.6 U	4.6 U
Vanadium	µg/L	2.0 U	5.8 J	8.4 J	12.4 J
Zinc	µg/L	5.8 U	10.5 J	15.4 J	25.8 J

TABLE 3

ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER SAMPLING
WILMINGTON, DELAWARE
MAY 2010

	<i>Sample Location:</i>	<i>MW-19</i>	<i>Trip Blank</i>
	<i>Sample ID:</i>	<i>GW-017338-051810-ACH-05</i>	<i>Trip Blank-017338-051810-ACH-06</i>
	<i>Sample Date:</i>	<i>5/18/2010</i>	<i>5/18/2010</i>
	<i>Result Type Code:</i>	<i>TRG</i>	<i>TRG</i>
<i>Parameters:</i>	<i>Units</i>		
<i>Volatile Organic Compounds</i>			
1,1,1-Trichloroethane	µg/L	0.25 U	0.25 U
1,1,2,2-Tetrachloroethane	µg/L	0.090 U	0.090 U
1,1,2-Trichloroethane	µg/L	0.10 U	0.10 U
1,1-Dichloroethane	µg/L	0.10 U	0.10 U
1,1-Dichloroethene	µg/L	0.14 U	0.14 U
1,2,4-Trichlorobenzene	µg/L	0.44 U	0.44 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	0.15 U	0.15 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.090 U	0.090 U
1,2-Dichlorobenzene	µg/L	0.16 U	0.16 U
1,2-Dichloroethane	µg/L	0.24 U	0.24 U
1,2-Dichloropropane	µg/L	0.090 U	0.090 U
1,3-Dichlorobenzene	µg/L	0.22 U	0.22 U
1,4-Dichlorobenzene	µg/L	0.15 U	0.15 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	0.82 U	0.82 U
2-Hexanone	µg/L	0.55 U	0.55 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	0.68 U	0.68 U
Acetone	µg/L	2.5 U	2.5 U
Benzene	µg/L	0.13 U	0.13 U
Bromodichloromethane	µg/L	0.093 U	0.093 U
Bromoform	µg/L	0.10 U	0.10 U
Bromomethane (Methyl bromide)	µg/L	0.31 U	0.31 U
Carbon disulfide	µg/L	0.15 U	0.15 U
Carbon tetrachloride	µg/L	0.19 U	0.19 U
Chlorobenzene	µg/L	0.16 U	0.16 U
Chloroethane	µg/L	0.45 U	0.45 U
Chloroform (Trichloromethane)	µg/L	0.15 U	0.15 U
Chloromethane (Methyl chloride)	µg/L	0.21 U	0.21 U
cis-1,2-Dichloroethene	µg/L	0.44 J	0.20 U
cis-1,3-Dichloropropene	µg/L	0.11 U	0.11 U
Cyclohexane	µg/L	0.13 U	0.13 U
Dibromochloromethane	µg/L	0.11 U	0.11 U
Dichlorodifluoromethane (CFC-12)	µg/L	0.29 U	0.29 U
Ethylbenzene	µg/L	0.25 U	0.25 U
Isopropyl benzene	µg/L	0.21 U	0.21 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER SAMPLING
WILMINGTON, DELAWARE
MAY 2010

	<i>Sample Location:</i>	<i>MW-19</i>	<i>Trip Blank</i>
	<i>Sample ID:</i>	<i>GW-017338-051810-ACH-05</i>	<i>Trip Blank-017338-051810-ACH-06</i>
	<i>Sample Date:</i>	<i>5/18/2010</i>	<i>5/18/2010</i>
	<i>Result Type Code:</i>	<i>TRG</i>	<i>TRG</i>
<i>Parameters:</i>	<i>Units</i>		
<i>Volatile Organic Compounds (Cont'd.)</i>			
Methyl acetate	µg/L	0.33 U	0.33 U
Methyl cyclohexane	µg/L	0.090 U	0.090 U
Methyl tert butyl ether (MTBE)	µg/L	0.27 J	0.18 U
Methylene chloride	µg/L	0.19 U	0.19 U
Styrene	µg/L	0.13 U	0.13 U
Tetrachloroethene	µg/L	0.20 U	0.20 U
Toluene	µg/L	0.090 U	0.090 U
trans-1,2-Dichloroethene	µg/L	0.14 U	0.14 U
trans-1,3-Dichloropropene	µg/L	0.12 U	0.12 U
Trichloroethene	µg/L	0.44 J	0.18 U
Trichlorofluoromethane (CFC-11)	µg/L	0.16 U	0.16 U
Trifluorotrichloroethane (Freon 113)	µg/L	0.28 U	0.28 U
Vinyl chloride	µg/L	0.13 U	0.13 U
Xylene (total)	µg/L	0.43 U	0.43 U
<i>Semi-volatile Organic Compounds</i>			
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	3.4 U	-
2,4-Dinitrotoluene	µg/L	0.46 U	-
2,6-Dinitrotoluene	µg/L	0.63 U	-
2-Chloronaphthalene	µg/L	4.0 U	-
2-Methylnaphthalene	µg/L	3.3 U	-
2-Nitroaniline	µg/L	6.1 U	-
3,3'-Dichlorobenzidine	µg/L	7.4 U	-
3-Nitroaniline	µg/L	4.6 U	-
4-Bromophenyl phenyl ether	µg/L	4.2 U	-
4-Chloroaniline	µg/L	2.2 UJ	-
4-Chlorophenyl phenyl ether	µg/L	4.2 U	-
4-Nitroaniline	µg/L	4.2 U	-
Acenaphthene	µg/L	4.0 U	-
Acenaphthylene	µg/L	4.3 U	-
Acetophenone	µg/L	4.6 U	-
Anthracene	µg/L	3.8 U	-
Atrazine	µg/L	5.1 U	-
Benzaldehyde	µg/L	1.4 UJ	-

TABLE 3

ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER SAMPLING
WILMINGTON, DELAWARE
MAY 2010

	<i>Sample Location:</i>	<i>MW-19</i>	<i>Trip Blank</i>
	<i>Sample ID:</i>	<i>GW-017338-051810-ACH-05</i>	<i>Trip Blank-017338-051810-ACH-06</i>
	<i>Sample Date:</i>	<i>5/18/2010</i>	<i>5/18/2010</i>
	<i>Result Type Code:</i>	<i>TRG</i>	<i>TRG</i>
<i>Parameters:</i>	<i>Units</i>		
<i>Semi-volatile Organic Compounds (Cont'd.)</i>			
Benzo(g,h,i)perylene	µg/L	2.9 U	-
Benzo(k)fluoranthene	µg/L	0.32 U	-
Biphenyl (1,1-Biphenyl)	µg/L	5.8 U	-
bis(2-Chloroethoxy)methane	µg/L	3.7 U	-
bis(2-Chloroethyl)ether	µg/L	0.44 U	-
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	2.6 U	-
Butyl benzylphthalate (BBP)	µg/L	3.0 U	-
Caprolactam	µg/L	R	-
Carbazole	µg/L	3.3 U	-
Chrysene	µg/L	4.0 U	-
Dibenz(a,h)anthracene	µg/L	0.17 U	-
Dibenzofuran	µg/L	3.8 U	-
Diethyl phthalate	µg/L	4.1 U	-
Dimethyl phthalate	µg/L	3.5 U	-
Di-n-butylphthalate (DBP)	µg/L	2.9 U	-
Di-n-octyl phthalate (DnOP)	µg/L	2.0 U	-
Fluoranthene	µg/L	2.8 U	-
Fluorene	µg/L	3.5 U	-
Hexachlorobutadiene	µg/L	1.0 UJ	-
Hexachlorocyclopentadiene	µg/L	4.9 U	-
Hexachloroethane	µg/L	0.53 U	-
Indeno(1,2,3-cd)pyrene	µg/L	0.13 U	-
Isophorone	µg/L	3.8 U	-
Naphthalene	µg/L	3.9 U	-
Nitrobenzene	µg/L	0.44 U	-
N-Nitrosodi-n-propylamine	µg/L	0.34 U	-
N-Nitrosodiphenylamine	µg/L	4.1 U	-
Phenanthrene	µg/L	3.8 U	-
Pyrene	µg/L	4.5 U	-
<i>Semi-volatile Organic Compounds - SPLPIM</i>			
Benzo(a)anthracene	µg/L	0.021 U	-
Benzo(a)pyrene	µg/L	0.032 U	-
Benzo(b)fluoranthene	µg/L	0.043 U	-
Hexachlorobenzene	µg/L	0.011 U	-

TABLE 3

**ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER SAMPLING
WILMINGTON, DELAWARE
MAY 2010**

	<i>Sample Location:</i>	<i>MW-19</i>	<i>Trip Blank</i>
	<i>Sample ID:</i>	<i>GW-017338-051810-ACH-05</i>	<i>Trip Blank-017338-051810-ACH-06</i>
	<i>Sample Date:</i>	<i>5/18/2010</i>	<i>5/18/2010</i>
	<i>Result Type Code:</i>	<i>TRG</i>	<i>TRG</i>
<i>Parameters:</i>	<i>Units</i>		
<i>Metals</i>			
Aluminum	µg/L	4460 J	-
Antimony	µg/L	4.6 U	-
Arsenic	µg/L	5.2	-
Barium	µg/L	219	-
Beryllium	µg/L	0.94 U	-
Cadmium	µg/L	0.92 U	-
Calcium	µg/L	41700	-
Chromium	µg/L	5.2 J	-
Cobalt	µg/L	3.1 J	-
Copper	µg/L	13.3 J	-
Iron	µg/L	8700	-
Lead	µg/L	6.3	-
Magnesium	µg/L	12400	-
Manganese	µg/L	454	-
Mercury	µg/L	0.18 U	-
Nickel	µg/L	3.5 J	-
Potassium	µg/L	4470 J	-
Selenium	µg/L	4.8 U	-
Silver	µg/L	0.97 U	-
Sodium	µg/L	73800	-
Thallium	µg/L	4.6 U	-
Vanadium	µg/L	8.4 J	-
Zinc	µg/L	10.0 J	-

Notes:

J - Estimated concentration.

U - Not present at or above the associated value.

UJ - Estimated reporting limit.

R - Rejected.

- - Not analyzed.

TABLE 4

**QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INITIAL CALIBRATION RESULTS
QUARTERLY GROUNDWATER SAMPLING
WILMINGTON, DELAWARE
MAY 2010**

<i>Parameter</i>	<i>Compound</i>	<i>Calibration Date</i>	<i>R²</i>	<i>Associated Sample ID</i>	<i>Qualified Sample Results</i>	<i>Units</i>
SVOCs	Benzaldehyde	5/19/10	66	GW-017338-051810-ACH-02	1.4 UJ	µg/L
				GW-017338-051810-ACH-03	1.4 UJ	µg/L
				GW-017338-051810-ACH-04	1.4 UJ	µg/L
				GW-017338-051810-ACH-05	1.4 UJ	µg/L

Notes:

SVOCs Semi-Volatile Organic Compounds.

R² Correlation Coefficient

UJ Not detected, estimated reporting limit.

TABLE 5

**QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES
QUARTERLY GROUNDWATER SAMPLING
WILMINGTON, DELAWARE
MAY 2010**

<i>Parameter</i>	<i>Associated Sample ID</i>	<i>Analyte</i>	<i>MS Recovery (percent)</i>	<i>MSD Recovery (percent)</i>	<i>RPD</i>	<i>Control Limits</i>		<i>Qualified Sample Result</i>	<i>Units</i>
						<i>Recovery (percent)</i>	<i>RPD (percent)</i>		
SVOCs	GW-017338-051810-ACH-02	3-Nitroaniline	55	47	18	62-111	30	4.4 UJ	µg/L
	GW-017338-051810-ACH-02	4-Chloroaniline	50	43	16	63-105	30	2.1 UJ	µg/L
Metals	GW-017338-051810-ACH-02	Aluminum	187	-	-	75-125	-	5190 J	µg/L
	GW-017338-051810-ACH-03							5410 J	µg/L
	GW-017338-051810-ACH-04							7580 J	µg/L
	GW-017338-051810-ACH-05							4460 J	µg/L

Notes:

SVOCs	Semi-Volatile Organic Compounds.
MS	Matrix Spike.
MSD	Matrix Spike Duplicate.
RPD	Relative Percent Difference.
UJ	Not detected, estimated reporting limit.
J	Estimated.

TABLE 6

**QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK SPIKE RESULTS
QUARTERLY GROUNDWATER SAMPLING
WILMINGTON, DELAWARE
MAY 2010**

<i>Parameter</i>	<i>BS Date</i>	<i>Compound</i>	<i>% Rec</i>	<i>Acceptable Limits</i>	<i>Associated Sample ID</i>	<i>Qualified Sample Results</i>	<i>Units</i>
SVOCs	5/20/10	4-Chloroaniline	45	63-105	GW-017338-051810-ACH-02	2.1 UJ	µg/L
					GW-017338-051810-ACH-03	2.2 UJ	µg/L
					GW-017338-051810-ACH-04	2.2 UJ	µg/L
					GW-017338-051810-ACH-05	2.2 UJ	µg/L
SVOCs	5/20/10	Caprolactam	9	10-44	GW-017338-051810-ACH-02	R	µg/L
					GW-017338-051810-ACH-03	R	µg/L
					GW-017338-051810-ACH-04	R	µg/L
					GW-017338-051810-ACH-05	R	µg/L
SVOCs	5/20/10	Hexachlorobutadiene	60	61-117	GW-017338-051810-ACH-02	0.95 UJ	µg/L
					GW-017338-051810-ACH-03	0.98 UJ	µg/L
					GW-017338-051810-ACH-04	0.98 UJ	µg/L
					GW-017338-051810-ACH-05	1.0 UJ	µg/L

Notes:

SVOCs Semi-Volatile Organic Compounds.
 UJ Not detected, estimated reporting limit.
 R Rejected.

TABLE 7

**TENTATIVELY IDENTIFIED COMPOUNDS
QUARTERLY GROUNDWATER SAMPLING
WILMINGTON, DELAWARE
MAY 2010**

<i>Sample Location</i>	<i>Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>	<i>Semi-Volatile Organics</i>	<i>Estimated Concentration (µg/L)</i>
GW-017338-051810-ACH-02	Indane	190 J	Phenol, 4,4"-(1-methylethylidene)bis-	100 J
	Diethylbenzene isomer	24 J		
	Ethylmethylbenzene isomer	120 J		
	C10H12 Aromatic	24 J		
	Tetramethylbenzene isomer	100 J		
	2,3-dihydro-methyl-1H-Indene isomer	190 J		
	Unknown Aromatic	12 J		
	2,3-dihydro-dimethyl-1H-Indene isomer	11 J		
GW-017338-051810-ACH-03	None	-	None	-
GW-017338-051810-ACH-04	None	-	None	-
GW-017338-051810-ACH-05	None	-	None	-

Notes:

J Estimated.
- Not analyzed.