APPENDIX D

OPERATION, MAINTENANCE, AND MONITORING PLAN

APPENDIX D
PHASE V
FINAL POST RAO OPERATION, MAINTENANCE AND MONITORING (OMM) PLAN
RTN 3-3939

FORMER LANDFILL SITE

FORMER GENERAL MOTORS CORPORATION ASSEMBLY PLANT
FRAMINGHAM, MASSACHUSETTS

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LIST OF ACRONYMS

ADESA	ADESA Boston, Inc.
AUL	Activity and Use Limitation
bgs	Below Ground Surface
BWSC	Bureau of Waste Site Cleanup
CMR	Commonwealth of Massachusetts Regulations
CRA	Conestoga-Rovers & Associates, Inc.
CSA	Comprehensive Site Assessment
E&S	Erosion and Sediment
FCC	Framingham Conservation Commission
FSP	field sampling plan
ft	Feet or Foot
GM	General Motors Corporation
GVW	Gross Vehicle Weight
HASP	Health and Safety Plan
LSP	Licensed Site Professional
MADEP	Massachusetts Department of Environmental Protection
MCP	Massachusetts Contingency Plan
NSR	No Significant Risk
NTU	nephelometric turbidity units
OHM	Oil and/or Hazardous Material
OMM	Operation, Maintenance, and/or Monitoring
Property	63 Western Ave., Framingham, MA
PVC	polyvinyl chloride
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RAO	Response Action Outcome
RAP	Remedial Action Plan
RIP	Remedial Implementation Plan
RTN	Release Tracking Number
Site	Former Landfill Site (RTN: 3-3939)
sq ft	square feet
SVOCs	Semivolatile Organic Compounds
VOCs	Volatile Organic Compounds

PREFACE

Conestoga-Rovers & Associates (CRA) has prepared, on behalf of General Motors Corporation (GM), this Final Operation, Maintenance and/or Monitoring (OMM) Plan (OMM Plan) for the Former Landfill site [Site or Release Tracking Number (RTN) 3-3939] located at 63 Western Avenue in Framingham, Massachusetts. The OMM Plan provides the Massachusetts Contingency Plan (MCP) Phase V Post Class A-4 Response Action Outcome (RAO) OMM activities that will be conducted for the Site in accordance with the requirements of 310 Commonwealth of Massachusetts (CMR) 40.000 as part of the Activity and Use Limitation (AUL) associated with the Site. The purpose of the AUL and the associated OMM activities is to ensure the effective performance and integrity of the Comprehensive Remedial Action and maintain the condition of No Significant Risk (NSR) at the Site. A copy of the registered AUL is provided as Appendix K of the As-Built Construction Report.

This OMM Plan also complies with the Order of Conditions issued on August 4, 2005 by the Framingham Conservation Commission (FCC) and the Massachusetts Department of Environmental Protection (MADEP) regarding the implementation of the Comprehensive Response Action. The engineered barrier, associated remedial components, and the AUL provide an adequate and appropriate remedy for Site oil and/or hazardous material (OHM) to satisfy the MADEP Bureau of Waste Site Cleanup (BWSC) environmental Comprehensive Response Action Requirements under the MCP. The Site ownership will be transferred from GM to ADESA Boston (ADESA) following the submittal of the RAO for the Site. With the possible exception of the interim period prior to the sale of the property, ADESA will be responsible for implementation of the OMM Plan. An approximately 0.2 acre portion of the Site is currently owned by ADESA and a separate AUL was placed on that parcel. The AULs are identical except for the property and owner references and the OMM Plan is applicable to the entire Site.

The Phase IV Comprehensive Remedial Action includes an engineered barrier, consisting primarily of soil, aggregate subgrade, and bituminous pavement layers. The Site will continue to be used for temporary parking of vehicles by ADESA. The Class A-4 RAO, including the AUL, incorporated Site fencing and security, minimization of impacts to natural resources, and comprehensive stormwater management and soil erosion and sediment (E&S) migration controls both during and after remedial construction activities.

In the future, the OMM Plan will be revised on an "as-needed" basis to maintain ADESA's long-term obligation for OMM of the Comprehensive Remedial Action components and the AUL. MADEP will be informed of future changes to the OMM Plan as required by the MCP.

1.0 INTRODUCTION

1.1 BACKGROUND

The Former Landfill at 63 Western Road in Framingham, Massachusetts (Site) is situated on approximately 6.8 acres of land owned by GM and 0.2 acres of land owned by ADESA. The location of the landfill and Site features upon completion of the engineered barrier are shown on Figures D 1.1 and D 1.2, respectively.

The Site consists of a Former Landfill that is located on the southwest side of the property. Between 1947 and 1970, waste material from the former assembly plant was placed into a depression in the ground surface between two railway spurs. The waste was placed to a maximum depth of approximately 25 feet (ft) below ground surface (bgs). Between 1947 and 1964, waste materials deposited at the Site were reportedly burned. The use of the Site for waste disposal was discontinued in 1970 and, therefore, the Site is not regulated as a closed landfill in accordance with 310 CMR 19.00 (Solid Waste Facilities/Management). The Phase II Comprehensive Site Assessment (CSA) activities including the human health, public welfare, and environmental/ecological risk characterization for the Site are provided in the Final Phase II CSA Report (CRA, August 2005).

1.2 PURPOSE AND ORGANIZATION

The purpose of the OMM activities is to ensure the effective performance and integrity of the Class A-4 RAO concurrent with the AULs. The OMM Plan provides the long-term requirements to ensure the safe and effective ongoing performance of the OMM activities, to provide ongoing reporting and remedy evaluation and to maintain a level of NSR. The OMM Plan is organized as follows:

- Section 1.0 - presents an introduction, and the purpose and organization of the OMM Plan;
- Section 2.0 - provides OMM objectives and descriptions of the remedial components;
- Section 3.0 - presents reference drawings, which illustrate the construction features of the remedial components;
- Section 4.0 - presents the Site organizational structure for OMM activities;
- Section 5.0 - presents the OMM inspection and maintenance requirements;
- Section 6.0 - summarizes the AUL;

- Section 7.0 - presents the Health and Safety Plan (HASP) for OMM activities; and
- Section 8.0 - presents a listing of the reports, which document in detail the Comprehensive Response Action activities conducted for the Site.

2.0 DESCRIPTION

The general provisions of the OMM Plan activities are as follows:

i) compliance with the AUL;

ii) maintenance of the Comprehensive Remedial Action;

iii) monitoring to evaluate the performance of the remedial systems and whether the Comprehensive Remedial Action is meeting its design specifications;

iv) monitoring of conditions at the Site to evaluate the effectiveness of the Comprehensive Remedial Action in containing OHM;

v) efforts to correct problems if performance monitoring indicates that the Comprehensive Remedial Action is not performing as designed; and

vi) documentation of the results of OMM activities.

The specific objectives for OMM of the Site remedy or Comprehensive Remedial Action components are as follows:

i) maintaining a level of NSR;

ii) maintaining the integrity and effectiveness of the engineered barrier, including routine maintenance and making repairs to the barrier as necessary to correct the effects of settling, subsidence, erosion, or other events;

iii) maintaining the integrity of and repairing damage to the lined stormwater sewer which transects the Site;

iv) maintaining the integrity and effectiveness of the stormwater management features, soil erosion and sediment migration controls, and wetland protection features;

v) minimizing potential impacts to wetlands and Riverfront Areas, including snow management; and

vi) evaluating and documenting effective performance of the Comprehensive Remedial Action by monitoring, ongoing evaluations, and documentation.

The Comprehensive Remedial Action was designed and constructed to accomplish the remedial objectives for the Site. The components of the Comprehensive Remedial Action that require maintenance and monitoring to meet the objectives of the OMM Plan have been categorized into three separate systems as follows:

- Engineered Barrier;
- Stormwater Management; and
- Monitoring Well Network.

Description of each of the three Site systems is presented in the following sections, reference drawings are listed in Section 3.0, and monitoring and ongoing evaluation and documentation activities are described in Section 5.0.

The overall OMM activities, including inspections, routine and unscheduled maintenance, and monitoring are summarized in Table D 2.1.

2.1 ENGINEERED BARRIER

The engineered barrier was constructed over the Former Landfill in accordance with the engineering design provided in the Phase IV Remedial Implementation Plan (RIP) (CRA, October 2005). The multi-barrier cap includes both an asphalt cap and a soil cap comprised of the following layers (from bottom to the top):

1. soil cap (0.5-acre) consisting of the following layers:
   a) approximately 12-inch thick subgrade soil,
   b) geotextile definition layer,
   c) approximately 30-inch thick common fill,
   d) 6-inch thick vegetated topsoil layer;
2. asphalt cap (4.8 acres) consisting of the following layers:
   a) approximately 12-inch thick subgrade soil/spoils layer,
   b) geotextile definition layer,
   c) approximately 12-inch thick common fill,
   d) geotextile structural reinforcement layer,
   e) approximately 8-inch thick subbase granular layer,
   f) approximately 4-inch thick base granular layer, and
   g) approximately 5.75-inch thick asphalt base and top coat layers.

The engineered barrier extends four feet beyond the horizontal limit of waste. The horizontal limit of waste across the Site is defined by the definition layer, comprised of a

six-ounce white geotextile that was placed over an approximately 1-ft layer of stabilized sediment/soil excavated from the drainage swales and the expansion of the North Pond.

The security fence located on the west and south sides of the Site was repaired where necessary as part of the remedial construction activities. A new 4-ft high wire mesh fence was installed on the top of a soil berm constructed between the Former Landfill and the wetlands located to the south of the Site. The engineered barrier was tied into the soil berm along the east side of the Site and existing asphalt and concrete paved surfaces along the east and north sides of the Site. The soil berm provides a natural barrier in the wetland buffer zone between the Site and the wetlands located to the south side of the Site.

Details of the engineered barrier and other remedy components are provided on the reference Drawings as listed in Section 3.0.

2.2 STORMWATER MANAGEMENT

Prior to remedial construction, the majority of stormwater run-off from the Site occurred by sheet flow to the southeast and northwest to two retention ponds, the South Pond and North Pond. The post-development stormwater run-off generally is in the same directions as pre-development flow. The asphalt cover is graded and sloped to provide optimum stormwater runoff to the Site stormwater management features based on comprehensive stormwater modeling and evaluations. The post-development stormwater management upgrades and controls included:

- vegetative swale from southeast corner of the new paved area to the South Pond;
- vegetative swale from northeast corner of the new paved area to the North Pond;
- rock check dams in both vegetative swales;
- discharge riprap aprons;
- upgraded discharge structure in the South Pond to provide additional peak flow control;
- cleared vegetation, removed sediment and expanded North Ponds 1 and 2;
- upgraded discharge structure in the North Pond to provide additional peak flow control of runoff discharging via the existing sewer beneath the North Pond that connects Wetland "A" to Beaverdam Brook;
- cleaning of the existing storm sewers, catchbasins, and manholes, and abandonment of redundant structures; and

- cleaning and double lining of the storm sewer which transects the Site connecting Wetland "A" to Beaverdam Brook.

Details of the stormwater management features are provided on the reference drawings listed in Section 3.0.

2.3 MONITORING WELL NETWORK

The current groundwater monitoring well network was installed in October 2004 and consists of the seven monitoring wells located around the perimeter of the Former Landfill. The identification, location, and rationale for these monitoring wells are as follows:

Monitoring Well ID	*Location/Rationale*
MW1-04	Northwest boundary / upgradient
MW2-04	Northwest boundary / upgradient
MW3-04	North boundary /upgradient
MW4-04	Southeast boundary / cross-gradient
MW5-04	South boundary / downgradient
MW6-04	South boundary / downgradient
MW7-04	Southwest boundary / downgradient

The monitoring wells were installed using four-inch diameter, 0.010-inch slot, schedule 40 polyvinyl chloride (PVC) screens and flush joint threaded risers. The monitoring wells were constructed in 10-inch outside diameter boreholes that varied in depth from 16 to 20 ft bgs. The well screens were situated to extend approximately 1 to 3 ft above the static water level, which was determined to range from 7 to 12 ft bgs. A sand pack consisting of 0 Morie sand was placed in the borehole annulus to approximately 2 ft above the top of the well screen. A 1 to 2-ft thick bentonite chip seal was then placed above the sandpack. The remainder of the annular space of the borehole was filled with non-shrinking, high-suspended solids cementitious bentonite grout added to within 2 ft of the ground surface via positive displacement using a tremie pipe. Construction was completed with either a 6-inch diameter steel protective stick-up casing with a locking cap or an 8-inch diameter flush-mounted road box and vented locking pressure cap, depending on well locations. A protective casing was installed in a 2-ft deep concrete surface seal for all flush-mounted road boxes. All monitoring wells were developed,

and were purged to a silt-free condition of less than 5 nephelometric turbidity units (NTUs) with the exception of well MW3-04 which was developed to a turbidity of approximately 20 NTUs during groundwater sampling activities. The monitoring well construction details are provided in Table D2.2 and well stratigraphic and instrumentation logs are provided in Attachment A.

3.0 REFERENCE DRAWINGS

A set of As-Recorded Drawings for the Phase IV remedial action were prepared based on the Phase IV RIP Design Drawings, field engineering inspections, and surveying during remedial action activities. The As-Recorded Drawings are enclosed in Appendix A of the As-Built Construction Report and RAO Statement and are as follows:

- Drawing 1 Pre-Construction Conditions;
- Drawing 2 Site Works;
- Drawing 3 On-Site Excavated Spoils Placement;
- Drawing 4 Grading Plan;
- Drawing 5 Cap Sections;
- Drawing 6 Cap Details;
- Drawing 9 Miscellaneous Details;
- Drawing 11 North Pond Grading;
- Drawing 12 North and South Pond Details; and
- Drawing 13 Storm Sewer Rehabilitation.

4.0 ORGANIZATIONAL STRUCTURE

Figure D4.1 presents the Site organizational structure, and identifies the various personnel, or contractors, and their main responsibilities for OMM Plan activities.

As illustrated, following the transfer of the property from GM to ADESA, ADESA holds the management (Project Management) and the day-to-day operation responsibility (Site Manager) for the Site. The ADESA Site Manager Reports to the ADESA Project Manager and is responsible for the overall management of the OMM activities at the Site. The ADESA Project Manager also is responsible for the maintenance of the Site inspection and OMM Reports, and for the timely completion and submission of the mandatory Site reports.

The ADESA Project Manager's duties include, but are not necessarily limited to, the following:

- the overall management of the inspection and maintenance requirements;
- the preparation of reports documenting OMM activities;
- financial accounting for supply and equipment purchases, payroll, and disbursements associated with the OMM activities;
- attendance at meetings regarding the OMM activities;
- provide liaison for the Site with various suppliers, consultants, Agency representatives, and contractors regarding the OMM activities; and
- inspection of the Site Comprehensive Remedial Action components to ensure that these components are maintained according to the requirements stipulated by the OMM Plan.

The ADESA Site Manager has the overall responsibility to ensure that the day-to-day specific Site OMM requirements, as stipulated by the OMM Plan, are fulfilled. The ADESA Site Manager will conduct the day-to-day coordination for implementation of the OMM Plan activities.

5.0 MAINTENANCE

Maintenance requirements for the remedy components include routine inspection, routine or scheduled maintenance, unscheduled maintenance, and record keeping of these activities. Any maintenance activities which involve excavation beneath the engineered barrier or repairs/confined space entry into the storm sewer which transects the Site should be conducted in accordance with the procedures provided by the AUL (i.e., a Soil Management Plan and a HASP).

5.1 INSPECTION AND MAINTENANCE

5.1.1 INSPECTION AND MAINTENANCE RECORDS

Inspections and routine and unscheduled maintenance activities will be documented on log sheets. Separate log sheets for the engineered barrier, stormwater management features, and monitoring wells are provided as Figures D5.1, D5.2a, D5.2b and D5.3, respectively. The log sheets will be maintained and filed at the Site.

5.1.2 QUARTERLY INSPECTIONS AND MAINTENANCE

Routine inspections will be performed on the various Comprehensive Remedial Action components at a quarterly frequency for at least the first two years of OMM. The frequency of inspections after the first two years will be determined by the results of the first two years of inspection. Quarterly inspections for the engineered barrier will include the following:

- inspections of engineered barrier;
- inspections of the perimeter security fence, guard rails, wire mesh fence, and soil berm; and
- inspections of stormwater management features including the ponds and swales.

The inspections will be documented in an inspection log (Figure D 5.1).

5.1.2.1 ENGINEERED BARRIER MAINTENANCE

Inspections

The engineered barrier soil and asphalt covers, will be visually inspected on a periodic basis by walking the entire Site to observe and determine the presence of broken or cracked asphalt, surface erosion and sloughing, ponding of water, areas bare of vegetation, and subsidence or settlement. During the inspection, the Property perimeter security fence on the south and west sides of the Site, the earthen berm, wire mesh fence installed at the top of the berm, and guard rails also will be inspected to determine damage, erosion, and other conditions that require repair.

Routine Maintenance

Routine maintenance of the engineered barrier includes necessary repair, sealing and/or patching of soil erosion areas, cracks, potholes, and broken asphalt. Routine maintenance of the engineered barrier also includes at least twice yearly (spring and fall) sweeping (asphalt) and grass mowing (soil). The sweeping will be conducted by a mechanical sweeper. One objective of the sweeping is to minimize dust and particulate which would increase total suspended solids in stormwater runoff. A second objective of the sweeping is to allow better visual inspection of the asphalt cover for cracks and other integrity failures. The objectives of the grass cutting is to maintain the vegetative cover in good condition, prevent larger root bearing vegetation from becoming established in the soil cap, prevent vegetation from encroaching on the asphalt barrier, and provide a safer work environment for OMM activities.

Routine maintenance of the engineered barrier will also include regular snow removal during the winter months. A Snow Management Plan was developed for the Site as described below.

A temporary soil erosion control blanket installed on the soil portion of the engineered barrier and the berm along the south side of the Site will be maintained until the establishment of vegetative cover. Mowing of the vegetative cover will not be conducted until the temporary erosion control blanket has significantly biodegraded. The maintenance of the vegetative cover will be determined based on the inspections and will include mowing grass portions of the cover twice a year, once in the early spring and once in the late fall; and, reseeding and/or fertilizing on an as-required basis. Caution must be used when mowing since metal staples are used to secure the erosion control blanket in place.

Snow Management Plan

Snow management will be required in the winter period to minimize potential impacts of total suspended solids in stormwater runoff and snow melt runoff containing sand and salt to wetlands and Riverfront Areas. The soil berm and wire mesh fence were specifically designed to minimize the potential for plowed snow to be placed into the wetlands. Three snow placement areas have been identified at the Site, as follows:

1. Southeast corner of the Site, north of the earthen berm and west of the vegetated swale [approximately 65,000 square feet (sq ft)];
2. Southwest corner of the Site, north of the earthen berm (approximately 18,100 sq ft); and
3. Northwest of the Site between the Site and the North Pond, (approximately 10,000 sq ft) (if needed).

The two primary snow placement areas are paved. The remaining snow placement area is an unpaved area and will have a silt fence or other appropriate erosion control structure installed on the downgradient side, closest to the vegetated swale, if this area is used. This area will only be used if the first two areas are full and additional storage capacity is needed. Snow melt will discharge to the north and south ponds, and will not impact any watercourses. After snow melt in the spring, sweeping of these areas will be conducted as part of routine maintenance activities.

The security fence gates installed at the southwest corner of the Site will be periodically opened to ensure functionality, and all locks will be oiled on an as needed basis. The landfill perimeter areas will be inspected to ensure the asphalt and vegetative cover is maintained.

Unscheduled Maintenance

Significant problems identified by the periodic inspections and requiring unscheduled maintenance will be rectified within one month of their observance, except for items where implementation of repairs are seasonally dependent or where implementation is delayed due to longer lead times for contractor, equipment or materials availability. In such cases, problems will be substantially rectified by the next inspection. Unscheduled maintenance repairs may include the following:

- larger repairs of the asphalt cover;
- repairing damage to the Property fence and gates, guard rails and earthen berm fence;
- reseeding and fertilizing of the vegetative cover or of the earthen berm;
- grading or repair of the Property/Site access roads;
- repairing surficial erosion and sloughing of the earthen berm; and
- repairing damage caused by burrowing wildlife, the presence of deep-rooted weeds, or other foreign vegetation, and wind damage.

The materials and construction requirements, including quality control requirements, for routine maintenance and unscheduled maintenance/repairs will be as specified in the construction Technical Specifications included in Appendix A of the Phase IV RIP (CRA, October 2005).

The maintenance activities will be identified and documented upon completion in the inspection logs (Figure D5.1).

5.1.2.2 STORMWATER FEATURES MAINTENANCE

Regular inspections and routine and unscheduled maintenance activities will be conducted to maintain the E&S controls for the Site stormwater management system. The E&S control features include: soil and asphalt engineered barrier; catchbasins and manholes, and other structures of storm sewers, vegetated soil berm; erosion control blankets on soil cap, vegetated soil berm, and in drainage swales; the perimeter drainage ponds (North and South Ponds, including pond banks and bottoms, flow control devices, and outfalls); vegetated swales; riprap apron; perimeter drainage pond culverts; spillways; and rock check dams.

Inspections

The stormwater features will be visually inspected on a periodic basis to observe and determine the presence of problems with catchbasins, manholes, inlet and outlet structures, swales, and ponds, such as sediment accumulation, erosion, broken covers, and other conditions that require repairs. Stormwater collection system sewer video camera inspections will be performed every ten years to assess the condition of the stormwater sewers, sewer lining, and structures (e.g., catchbasins and manholes). The results of the video inspections will be used to determine if any damage has occurred and if unscheduled maintenance/repairs are required.

Routine Maintenance

Routine maintenance will include cutting of vegetation twice per year (spring and fall) in the two swales and stormwater retention ponds. Routine maintenance will also include the removal of accumulated sediment in swales upstream of rock check dams, from the stormwater retention ponds and stormwater system catchbasins and outfall structures. Sweeping of the asphalt engineered barrier and repairs to the soil engineered barrier will be routinely conducted to reduce suspended solids loading to stormwater collection system and control structures to reduce sediment accumulation (see Section 5.1.2.1).

Unscheduled Maintenance

Significant problems identified by the periodic inspections will be rectified within one month of their observance, except for items where implementation of repairs are seasonally dependent or where implementation is delayed due to longer lead times for contractors, equipment, or materials availability. In such cases, the problems will be substantially rectified by the next inspection. Unscheduled maintenance/repairs may include:

- repair to catchbasins, manholes and covers;
- repairs to lining of storm sewer beneath the former landfill;
- repairs to stormwater system outlets and overflow structures;
- seeding and fertilizing of vegetated swales;
- repair of stone check dams; and
- repair of erosion in retention ponds.

The maintenance activities will be identified and documented upon completion in the inspection logs (Figures D5.2a and D5.2b).

5.1.2.3 MONITORING WELL NETWORK

Inspections

Regular inspection and maintenance of the monitoring wells will include the following:

- condition of the well casing and the lock;
- check for sediment buildup in bottom of well; and
- conditions of concrete collar, paving around the well casing and well protection bollards.

Routine Maintenance

Routine maintenance of the monitoring wells will include the following:

- oiling the lock away from the well or replacement of lock; and
- maintaining access to each well by removing weeds and brush in area surrounding the well, as required.

Unscheduled Maintenance

Significant problems identified by the regular inspections and requiring unscheduled maintenance will be rectified within one month of their observance, except for items where implementation of repairs are seasonally dependent or where implementation is delayed due to longer lead times for contractors, equipment, or materials availability. In such cases, problems will be substantially rectified by the next inspection. Unscheduled maintenance may include:

- repairing damaged monitoring well casings or locks;
- redevelopment of wells; and
- replacement/abandonment of wells.

The maintenance activities will be identified and documented upon completion in the inspection logs (Figure D5.3).

5.2 MONITORING

Monitoring of groundwater, surface water, and sediment will be conducted quarterly for the first year, semi-annually for the next four years, and annually thereafter. Monitoring will include sampling, hydraulic monitoring, and chemical analyses. The frequency, sampling locations, and monitoring parameters can be adjusted based on the evaluation of the results of the monitoring program.

The field sampling plan (FSP) procedures, Quality Assurance Project Plan (QAPP) procedures, and quality assurance/quality control (QA/QC) procedures and HASP provided in the Phase II CSA Work Plan (CRA, September 2004) may be used as the monitoring procedures prior to the transfer of the Site to ADESA.

5.2.1 GROUNDWATER MONITORING PROGRAM

The groundwater monitoring program for the first year will include the sampling of seven Site monitoring wells for metals, volatile organic compounds (VOCs), and semi VOCs (SVOCs). The number of wells to be monitored will be reduced to 5 wells for years 2 to 5 and to 3 wells thereafter. The samples will be submitted to a Massachusetts-licensed analytical laboratory under Chain-of-Custody procedures with a regular turnaround time of ten business days. The groundwater sampling will be conducted by low flow/low purging sampling procedures utilizing a low flow pump. The results will be compared to MCP groundwater quality standards and the Phase II CSA Report to evaluate potential changes to Site conditions. The sampling, chemical analyses and data evaluation will be performed in accordance with current MADEP BWSC regulations, policies and guidelines (e.g., MCP, and QA/QC guidelines). The anticipated sampling frequency, number of locations, and parameters are as follows:

Timeframe (years)	*Number of Wells*	*Sampling Frequency*	*Parameters*
1	7	Quarterly	VOCs, Metals, SVOCs
2-5	5	Semi-annually	Metals, SVOCs
6-30	3	Annually	Metals, SVOCs

5.2.2 SURFACE WATER/SEDIMENT MONITORING PROGRAM

The surface water/sediment monitoring program will include the sampling of up to 3 surface water locations and 3 sediment locations for metals, VOCs, and SVOCs. The

samples will be submitted to a Massachusetts-licensed analytical laboratory under Chain-of-Custody procedures with a regular turnaround time of ten business days. The results will be compared with MADEP surface water standards and screening values and the Phase II CSA Report to evaluate potential changes to Site conditions. The sampling, chemical analyses and data evaluation will be performed in accordance with current MADEP BWSC regulations, policies and guidelines (e.g., MCP, and QA/QC guidelines). The anticipated sampling frequency, number of locations, and parameters are as follows:

Timeframe (years)	*Number of Locations*	*Sampling Frequency*	*Parameters*
1	3	Quarterly	VOCs, Metals, SVOCs
2-5	2	Semi-annually	Metals, SVOCs
6-30	1	Annually	Metals, SVOCs

The sampling locations will be in the storm sewer and stormwater management features.

5.3 REPORTING

The Site OMM activities will be documented in reports filed at the Site

5.3.1 INSPECTION AND MONITORING REPORTS

Inspection and Monitoring Reports that document all inspection, maintenance and monitoring activities should be prepared following the completion of each monitoring round. The Inspection and Monitoring Report will be prepared quarterly for the first year, semi-annually for the following four years and annually thereafter to coincide with the monitoring frequencies. The reports will include the following information:

- the type and frequency of inspection and/or monitoring activities conducted;
- routine maintenance activities conducted;
- unscheduled maintenance activities conducted;
- conditions or problems noted during the inspection and/or monitoring period which are or may be affecting the performance of the remedial action;
- measures taken to correct conditions which are affecting the performance of the remedial action;

- the analytical data and information collected for groundwater, surface water, and sediment as part of the monitoring program and assessment of the data; and
- significant modifications to inspection and/or monitoring program or AUL required or made since the submission of the preceding Inspection and Monitoring Report.

6.0 ACTIVITY AND USE LIMITATION

6.1 NOTICE OF ACTIVITY AND USE LIMITATION

A Notice of AUL has been prepared and implemented for the Site in accordance with the MCP and is included as Appendix K of the As-Built Construction Report. One AUL has been recorded for the portion of the Site which is GM property and one for the portion of the Site which is ADESA property at the time of filing. The AUL requirements are identical for each AUL. Following the submittal of the RAO, GM is proceeding with the sale of their portion of the Site Property to ADESA. The AULs are required for the Site since OHM remains at the Site and the risk characterization used to support the Class A-4 RAO and the RAO are based on restrictions to or limitations of Site activities and uses to maintain a level of NSR. The AULs have been developed in accordance with the MCP and the Guidance on Implementing AULs, Interim Final Policy BWSC 99-300 (MADEP, May 1999) and include the following components for each AUL:

- Form 1075;
- Exhibit A - Site Plan;
- Exhibit B - Sketch Plan;
- Exhibit C – AUL Opinion; and
- BWSC Form 113, 113a and Attachments.

The AULs define permitted and restricted Site uses and activities and outline conditions and obligations associated with future Site activities, which are summarized below.

The permitted activities and uses set forth in the AULs Opinion (Exhibit C) include:

- vehicular parking and vehicular traffic which do not compromise the structural integrity of the asphalt pavement and/or do not disturb contaminated soil located beneath the asphalt cover. To meet this requirement, no more than 3 trucks with a maximum GVW (gross vehicle weight) of 40 tons can use the parking lot in any 24-hour period and no truck with a GVW exceeding 40 tons can use the parking lot;
- excavation associated with emergency or short term (three months or less) underground utility and/or construction work, provided it is conducted in accordance with a Soil Management Plan and a HASP and involves the repair and replacement of the soil and asphalt barrier and storm sewer lining with a comparable barrier immediately following the completion of the project;

- activities and uses which are not identified by the AUL Opinion as being inconsistent with maintaining a condition of No Significant Risk; and
- such other activities and uses which, in the Opinion of an Licensed Site Professional (LSP) shall present no greater risk or harm to health, safety, public welfare, or the environment than the activities and uses set forth in this paragraph.

The following is a summary of the restricted uses and activities at the Site as stated in the AUL Opinion (Exhibit C):

- use of a portion of the property as a residence, school (except adult education), daycare, nursery, recreational area, and/or any other use at which a child's presence is likely;
- any activity including, but not limited to excavation and removal of the soil and asphalt barrier and the storm sewer lining, which is likely to disturb contaminated soil/waste located below the engineered barrier, associated with underground utility and/or construction work, without prior development and implementation of a Soil Management Plan and a HASP; and
- any activity which is likely to disturb contaminated soil/waste located beneath the engineered barrier (asphalt cover and soil cover) and the storm sewer lining, unless such activity is first evaluated by an LSP who renders an Opinion stating such activity is consistent with maintaining a condition of No Significant Risk.

The following is a summary of the obligations and conditions of future Site activities as stated in the AUL Opinion (Exhibit C):

- Continued Operation, Maintenance and Monitoring of the Site remedy must be conducted in accordance with the Final OMM Plan;
- A Health and Safety Plan and a Soil Management Plan must be prepared and implemented prior to the commencement of any excavation and removal of the soil and asphalt barrier which is likely to disturb contaminated soil/waste located below the engineered barrier, associated with underground utility and/or construction work within the AUL area. The Health and Safety and Soil Management plans must be developed and implemented in accordance with the following guidelines:
  - The Soil Management Plan must be prepared and overseen by an LSP and should describe appropriate excavation, handling, waste management, storage, transport and disposal procedures and include a description of engineering controls and air monitoring procedures to ensure that there is no greater risk or harm to health, safety, public welfare, or the environment due to the activities

and uses set forth in this paragraph. On-Site workers must be informed of the requirements of the Soil Management Plan, and the plan must be readily available throughout the course of the project, and

- A Certified Industrial Hygienist must oversee the preparation of the Health and Safety Plan. The plan should clearly identify the location of contamination and specifically identify the types of personal protective equipment, monitoring devices, and engineering controls necessary to ensure that the workers are not exposed to unacceptable levels of contamination in through any routes of exposure. Workers who may come into contact with the contaminated soil/waste must be trained in the requirements of the Health and Safety Plan, and the plan must be available on Site throughout the course of the project; and

- Contaminated soil/waste located below the engineered barrier must remain within the AUL Area and may not be relocated, unless such activity is first evaluated by an LSP who renders an Opinion that such relocation is consistent with maintaining a condition of No Significant Risk.

6.2 FINANCIAL ASSURANCE

The OMM Plan is required to document that one or more financial assurance mechanisms have been established and adequately provide for future monitoring, maintenance, and any necessary replacement of the engineered barrier. Consistent with the Draft Engineered Barrier Guidance (MADEP, November 2002), the amount of funds were determined by the LSP based upon a site-specific, present-worth analysis of funding needs to implement the post-construction activities plan. A Site-specific present worth analysis of the funding required for the OMM Plan activities for a 30-year period was conducted as part of the Phase III Remedial Action Plan (RAP) (CRA, September 2005). The OMM requirements and the associated costs were re-evaluated as part of the preparation of the Final OMM Plan. Based on that analysis, the financial assurance required is estimated to be $925,816 for a 30-year period for the following OMM activities:

- periodic inspections and inspection documentation;
- routine and unscheduled maintenance and repair of the engineered barrier, lined storm sewer, Stormwater Management System, and other Site features and controls; and
- groundwater, surface water, and sediment monitoring and reporting.

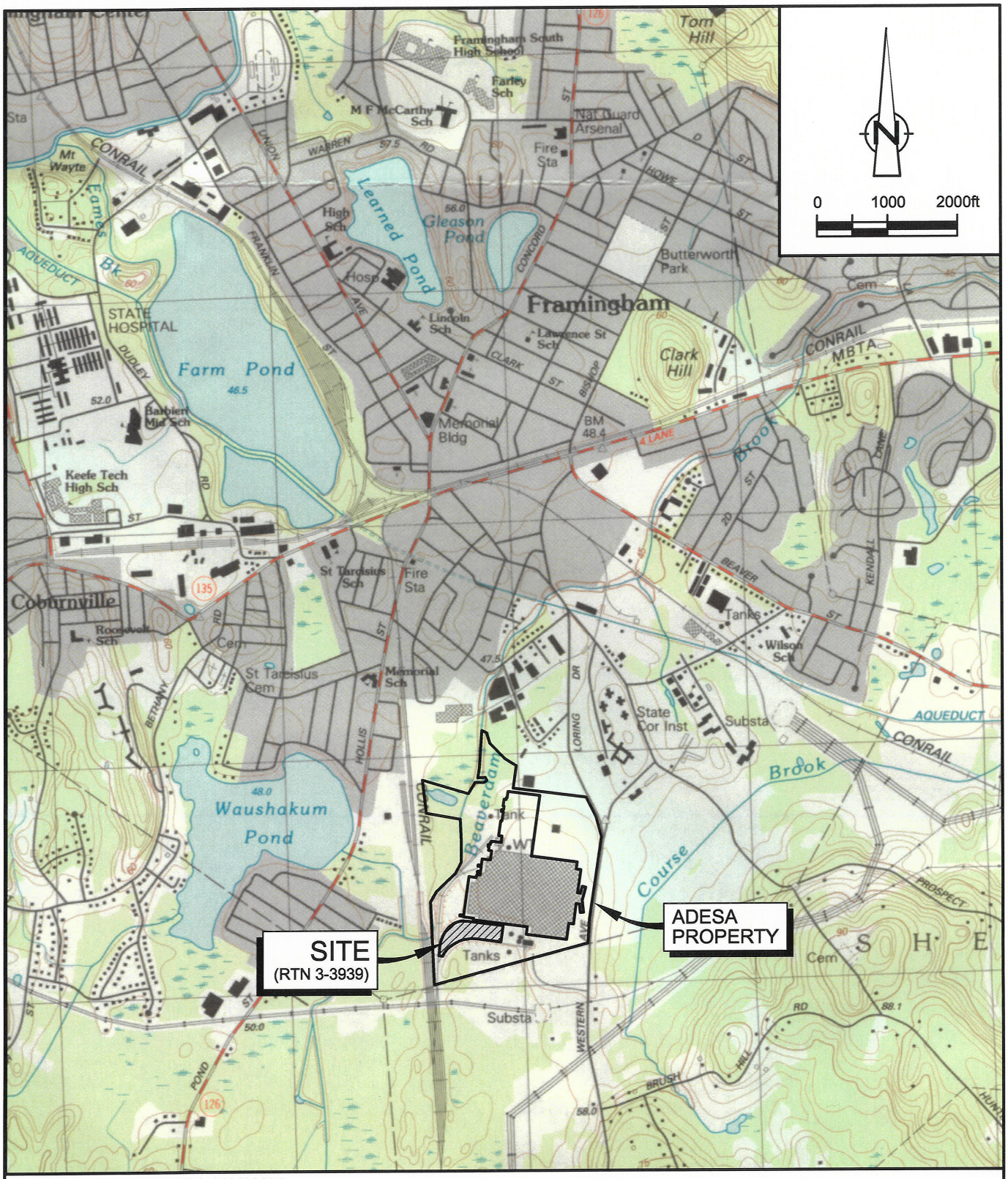
7.0 OMM HEALTH AND SAFETY PLAN

A HASP is required to describe the health and safety procedures to be implemented during the Site OMM activities. The HASP provided in the Phase II CSA Work Plan (CRA, September 2004) may be used for the groundwater, surface water, and sediment monitoring program during the interim period prior to the transfer of ownership of the property to ADESA. ADESA will be responsible for the OMM Plan and the implementation of their HASP once they assume ownership of the Site. Any maintenance activities which involve excavation beneath the engineered barrier or repairs/confined space entry into the storm sewer which transects the Site should be conducted in accordance with the procedures provided by the AUL (i.e., a Soil Management Plan and a HASP to be developed based on the specific maintenance activities to be performed).

The HASP is provided as Attachment B.

8.0 REFERENCE REPORTS

The Comprehensive Response Action investigation, remedial design, remedy implementation plan and construction activities which have been conducted at the Site are presented in various reports. A list of the reports/submittals to MADEP and FCC is provided in Table D8.1. Copies of relevant reports, with respect to current conditions at the Site and the basis and implementation of the RIP components, are in ADESA's files.



SOURCE: USGS QUADRANGLE MAP;
FRAMINGHAM, MASSACHUSETTS

figure D1.1

SITE LOCATION
FORMER LANDFILL SITE
RTN: 3-3939, 63 WESTERN AVENUE
Framingham, Massachusetts

12618-05(033)GN-WA014 JAN 26/2007

LEGEND

- PROPERTY LINE
- RAILWAY
- FENCE
- STORM SEWER
- MANHOLE
- EXTENT OF REFUSE (~5.0 ACRES)
- EXTENT OF REFUSE
- EXTENT OF WETLANDS
- MW3-04 GROUNDWATER MONITORING WELL LOCATION
- APPROXIMATE WETLAND BOUNDARY
- APPROXIMATE (100 FOOT) RIVER FRONT BUFFER ZONE
- APPROXIMATE (125 FOOT) WETLAND BUFFER ZONE
- APPROXIMATE (200 FOOT) RIVER FRONT BUFFER ZONE

0 50 150ft

OUTFALL
M.H. STM-05
54"Ø RCP
M.H. STM-04
48"Ø RCP
C.B.
12"Ø RCP
24"Ø RCP
CONCRETE RET. WALL
60' BEAVER DAM BROOK EASEMENT
HEADWALL
BEDROCK OUTCROP
CONCRETE PAD
M.H. STM-03
36"Ø RCP
M.H. STM-02
MW1-04
MW2-04
MW3-04
MW4-04
MW5-04
MW6-04
MW7-04
FORMER LANDFILL LOT 2
M.H. STM-01
ASPHALT
6"Ø CIP
40' EASEMENT
EXISTING ADESA STRUCTURE
8"Ø CI
M.H.
18"Ø RCP
12"Ø CPP
15"Ø RCP

figure D1.2

SITE FEATURES
FORMER LANDFILL SITE
RTN: 3-3939, 63 WESTERN AVENUE
Framingham, Massachusetts

CRA

12618-05(033)GN-WA017 JAN 26/2007

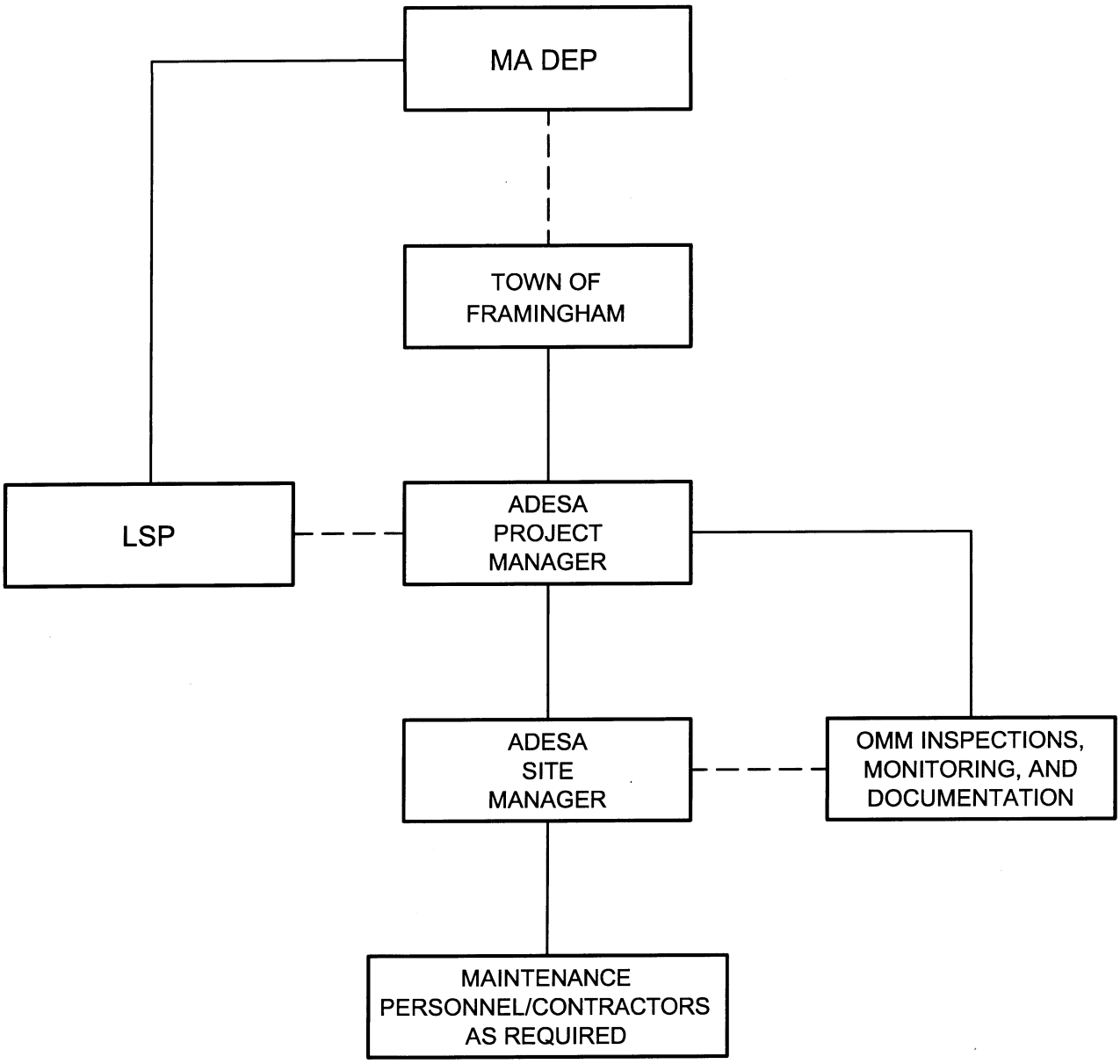


figure D4.1

ORGANIZATIONAL STRUCTURE
OPERATION, MONITORING AND MAINTENANCE
FORMER LANDFILL SITE
RTN: 3-3939, 63 WESTERN AVENUE
Framingham, Massachusetts

12618-05(033)GN-WA011 JAN 26/2007

TEMPERATURE: _____ INSPECTED BY: _____

WEATHER: _____ DATE OF INSPECTION: _____

ITEM	TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	DATE AND NATURE OF ACTIONS COMPLETED
		NO PROBLEMS	CORRECTIVE ACTION REQUIRED		
ENGINEERED BARRIER (ASPHALT COVER) (SOIL COVER)	- ASPHALT COVER (SWEEPING/MAINTANENCE)				
	- PRESENCE OF CRACKS, DIRT, POT HOLES				
	- EROSION CONTROL				
	- LOCALIZED SETTLEMENT/SLUMPING				
	- PONDING OF WATER/DRAINAGE				
	- SEEPAGE				
	- BARE VEGETATION				
PERIMETER FENCE/ BERM FENCE	- CORROSION OR STRUCTURAL DAMAGE TO SUPPORT POSTS AND FENCE FABRIC				
GATES AND LOCK	- CORRISION DAMAGE TO GATE HINGES AND FABRIC				
	- LOCKS STICKING OR CORRODING				
	- CORROSION, VISIBILITY, DAMAGE				
	- MISSING (MARK LOCATION ON AS-RECORDED DRAWING No.)				
ACCESS ROAD	- EROSION				
	- PONDING OF WATER				

figure D5.1

FORMER LANDFILL INSPECTION LOG
FORMER LANDFILL SITE
RTN: 3-3939, 63 WESTERN AVENUE
Framingham, Massachusetts

DATE OF INSPECTION: _____ NAME OF INSPECTOR: _____

TIME OF INSPECTION: _____ WEATHER CONDITIONS: _____

	NO PROBLEM	ACTION REQ'D	DETAIL ACTIONS REQUIRED	DATE AND NATURE OF ACTIONS COMPLETED
NORTH DRAINAGE POND				
VEGETATION	☐	☐		
SEDIMENT BUILDUP/DEPTH	☐	☐		
RIPRAP	☐	☐		
EROSION	☐	☐		
DRAINAGE	☐	☐		
BLOCKAGE	☐	☐		
SOUTH DRAINAGE POND				
VEGETATION	☐	☐		
SEDIMENT BUILDUP/DEPTH	☐	☐		
RIPRAP	☐	☐		
EROSION	☐	☐		
DRAINAGE	☐	☐		
BLOCKAGE	☐	☐		
NORTH DRAINAGE SWALE				
VEGETATION	☐	☐		
SEDIMENT BUILDUP/DEPTH	☐	☐		
ROCK CHECK DAM	☐	☐		
EROSION	☐	☐		
DRAINAGE	☐	☐		
BLOCKAGE	☐	☐		
SOUTH DRAINAGE SWALE				
VEGETATION	☐	☐		
SEDIMENT BUILDUP/DEPTH	☐	☐		
ROCK CHECK DAM	☐	☐		
EROSION	☐	☐		
DRAINAGE	☐	☐		
BLOCKAGE	☐	☐		

GENERAL COMMENTS _____

figure D5.2a

STORMWATER CONTROLS INSPECTION REPORT
FORMER LANDFILL SITE
RTN: 3-3939, 63 WESTERN AVENUE
Framingham, Massachusetts

TEMPERATURE: _____

WEATHER: _____

INSPECTED BY: _____

DATE OF INSPECTION: _____

MANHOLE	STORMWATER FLOW (YES/NO)	COLOR OF STORMWATER	PRESENCE OF SEDIMENT (YES/NO)	CONDITION OF MANHOLE AND LID	DETAILED ACTIONS REQUIRED	DATE AND NATURE OF ACTIONS COMPLETED
STM-01A						
STM-03						
STM-04						
STM-05						

figure D5.2b

STORMWATER CONTROL INSPECTION LOG
FORMER LANDFILL SITE
RTN: 3-3939, 63 WESTERN AVENUE
Framingham, Massachusetts

DATE OF INSPECTION: _____

TIME OF INSPECTION: _____

NAME OF INSPECTOR: _____

WEATHER CONDITIONS: _____

MONITORING WELL	CASING CONDITION	LOCK CONDITION	CONDITION OF SURROUNDINGS	VEGETATION	DETAILED ACTIONS REQUIRED	DATE & NATURE OF ACTION COMPLETED
MW 1-04						
MW 2-04						
MW 3-04						
MW 4-04						
MW 5-04						
MW 6-04						
MW 7-04						

figure D5.3

MONITORING WELL NETWORK INSPECTION LOG
FORMER LANDFILL SITE
RTN: 3-3939, 63 WESTERN AVENUE
Framingham, Massachusetts

TABLE D2.1

FREQUENCY OF OMM ACTIVITIES
FORMER LANDFILL SITE
FORMER GENERAL MOTORS CORPORATION ASSEMBLY PLANT
FRAMINGHAM, MASSACHUSETTS

Inspections

Section in OMM Plan	*Description*	*Inspection Frequency*
5.1.2.1	Engineered Barrier	Regular
	- Pavement condition	
	- Property perimeter fence	
	- Earthen Berm and fence	
	- Vegetated soil condition	
5.1.2.2	Stormwater Features	Regular
	- Catchbasins, manholes	
	- Swales and Ponds	
	- Sediment Accumulation	
	- Video inspection	every 10 years
5.1.2.3	Monitoring Well Network	Regular
	- Well casings and locks	
	- Concrete collar, paving, bollards	

Maintenance

Section in OMM Plan	*Description*	*Maintenance Frequency*
5.1.2.1	Engineered Barrier	
	- Asphalt sweeping	Twice Yearly (Spring and Fall)
	- Snow Management	Winter
	- Repair, sealing, patching	As Required
	- Vegetation/soil erosion repair	As required
5.1.2.2	Stormwater Features	
	- Vegetation mowing	Twice Yearly (Spring and Fall)
	- Removal of accumulated sediment	As Required
	- Repair of damaged control features	As Required
5.1.2.3	Monitoring Well Network	
	- Oil lock and cover-hinge	Twice Yearly (Spring and Fall)
	- Remove vegetation	As Required
	- Paint well casings and bollards	As Required

TABLE D2.1

FREQUENCY OF OMM ACTIVITIES
FORMER LANDFILL SITE
FORMER GENERAL MOTORS CORPORATION ASSEMBLY PLANT
FRAMINGHAM, MASSACHUSETTS

Monitoring Programs

Section in OMM Plan	*Description*	*Monitoring Frequency*
5.2.1	Groundwater	
	- VOCs, SVOCs, Metals	
	- Low Flow / Low Purge	
	Year 1 (7 wells)	Quarterly
	Years 2-5 (5 wells)	Semi-Annually
	Years 6-30 (3 wells)	Annually
5.2.2	Surface Water	
	- VOCs, SVOCs, Metals	
	Year 1 (3 samples)	Quarterly
	Years 2-5 (2 samples)	Semi-Annually
	Years 6-30 (1 sample)	Annually
5.2.2	Sediment	
	- VOCs, SVOCs, Metals	
	Year 1 (3 samples)	Quarterly
	Years 2-5 (2 samples)	Semi-Annually
	Years 6-30 (1 sample)	Annually

TABLE D2.2

WELL COMPLETION DETAILS
FORMER LANDFILL SITE
FORMER GENERAL MOTORS CORPORATION ASSEMBLY PLANT
FRAMINGHAM, MASSACHUSETTS

Location	*Completion Date*	*Ground Elevation* [1] *(ft ASD)*	*Top of Riser Elevation (ft ASD)*	*Screened Interval (ft BGS) Top*	*Screened Interval (ft BGS) Bottom*	*Screened Interval (ft ASD) Top*	*Screened Interval (ft ASD) Bottom*	*Sand Pack Interval (ft BGS) Top*	*Sand Pack Interval (ft BGS) Bottom*	*Sand Pack Interval (ft ASD) Top*	*Sand Pack Interval (ft ASD) Bottom*	*Screened Geologic Material*
MW-01-04	4-Oct-04	166.00	165.90	11.90	21.90	154.10	144.10	9.90	21.90	156.10	144.10	Fill/Silty Sand/Silt
MW-02-04	5-Oct-04	166.40	166.15	11.70	21.70	154.70	144.70	9.70	21.70	156.70	144.70	Fill/Sand/Silt
MW-03-04	5-Oct-04	167.40	166.70	9.10	19.10	158.30	148.30	7.10	19.10	160.30	148.30	Asphalt/Fill/Sand
MW04-04	6-Oct-04	166.50	166.40	8.39	18.39	158.11	148.11	6.39	18.39	160.11	148.11	Fill/Peat/Silt
MW-05-04	6-Oct-04	168.00	170.10	11.76	21.76	156.24	146.24	9.76	21.76	158.24	146.24	Topsoil/Fill/Sandy Silt
MW-06-04	6-Oct-04	169.30	170.70	14.19	24.19	156.51	146.51	12.19	24.19	158.51	146.51	Fill/Peat/Sand
MW-07-04	7-Oct-04	168.10	170.10	10.92	20.92	157.18	147.18	8.92	20.92	159.18	147.18	Topsoil/Fill/Silt/Sand

Notes:

(1)	Ground elevation was raised in December 2005 and April 2006 due to the installation of the landfill engineered barrier and soil berm
ft ASD	Feet above Site Datum, as calculated by Schofield Brothers Surveying (Benchmark Chiseled Square in BP Elev. 169.29 ft)
ft BGS	Feet Below Ground Surface
ND	No data

TABLE D8.1

LIST OF REPORTS AND SUBMITTALS
FORMER FRAMINGHAM ASSEMBLY PLANT
FRAMINGHAM, MA

Type	*Title*	*Date*
Report	Tier II Reclassification Extension Submittal Plan	Aug-04
Report	Phase II Comprehensive Site Assessment (CSA) Notice of Intent Wetlands and Waterways	Aug-04
Report	Phase II CSA Notice of Intent Supplement	Aug-04
Report	Phase II CSA Scope of Work	Sep-04
Letter	FCC/MADEP Phase II Order of Conditions (DEP 158-1033)	Oct-04
Report	Phase II CSA Scope of Work Addendum No. 1	Mar-05
Report	Interim Phase II CSA Report (Wetland Delineation Report) and Phase II CSA Work Plan Addendum No. 2	Apr-05
Letter	Phase IV CRA Notice of Intent Wetlands and Waterways	Jul-05
Report	Interim Phase II CSA Report/Tier 1C Permit Application	Jul-05
Letter	Phase IV CRA Notice of Intent Supplement	Jul-05
Letter	FCC/MADEP Phase IV Order of Conditions (DEP 158-1061)	Aug-05
Report	Final Phase II CSA Report	Aug-05
Letter	MADEP Notification of Permit Approval	Sep-05
Report	Phase III Remedial Action Plan	Sep-05
Report	Phase IV Remedial Implementation Plan	Oct-05
Letter	Request for Certificate of Compliance August 2005 Phase II Order of Conditions	Nov-06
Letter	Notice of Activity and Use Limitations Registrations	Jan-07

ATTACHMENT A

GROUNDWATER MONITORING WELL INSTALLATION LOGS

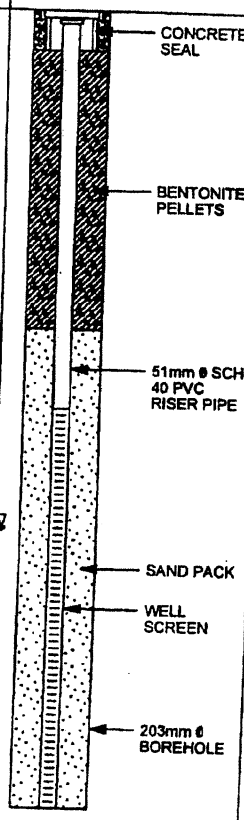
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: PHASE II COMP SITE ASSESSMENT
PROJECT NUMBER: 12618
CLIENT: GM CORPORATION
LOCATION: 63 WESTERN AVE, FRAMINGHAM, MASSACHUSETTS

HOLE DESIGNATION: MW-01-04
DATE COMPLETED: October 4, 2004
DRILLING METHOD: HSA
FIELD PERSONNEL: R. REDMAN

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
0	FILL - silty sand, with pea gravel, with rock chips, compact, fine grained sand, light brown, no odour	
2	- with gravel, dense, dry at 2.0ft BGS	
4	- black at 3.5ft BGS - trace pea gravel, no chips, light brown at 4.0ft BGS	
6	- very silty, with glass chips at 6.0ft BGS	
8	- silty clay, no pea gravel, wood chips (smells like creosol), grayish black plastic at 7.0ft BGS void space	
10	ML/SM - SILTY SAND, with gravel chips, with mica, loose, fine to medium grained sand, reddish brown, dry - increased silt content, relatively dense, grey silt, moist at 10.0ft BGS	9.00
12	- orange sections/bands apparent at 12.0ft BGS	
14	ML - SILT,with mica, dense, low plasticity, grey, saturated, no odour	13.00
16		
18		
20	END OF BOREHOLE @ 20.0ft BGS	19.00
22		
24		
26		
28		

MONITORING WELL



WELL DETAILS
Screened interval:
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 51in
Slot Size: 10
Material: SCH 40 PVC
Seal:
2.00 to 8.00ft BGS
Material: BENTONITE PELLETS
Sand Pack:
8.00 to 20.00ft BGS
Material: #1 SILICA SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
01		75	45	0
02		71	32	1.1
03		33	7	3
04		38	37	10.6
05		88	16	34.2
06		100	26	8.7
07		42	22	0.7
08		42	14	2.2
09		83	17	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 10/4/2004

OVERBURDEN LOG 12618-05.GPJ CRA_CORP.GDT 11/26/04

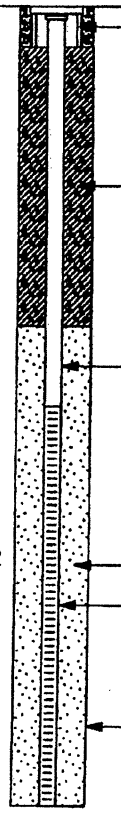
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: PHASE II COMP SITE ASSESSMENT
PROJECT NUMBER: 12618
CLIENT: GM CORPORATION
LOCATION: 63 WESTERN AVE, FRAMINGHAM, MASSACHUSETTS

HOLE DESIGNATION: MW-02-04
DATE COMPLETED: October 5, 2004
DRILLING METHOD: HSA
FIELD PERSONNEL: R. REDMAN

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	FILL - silty sand, with gravel (about 25%), loose, fine grained, light brown/black, dry	
2	- light brown at 2.0ft BGS	
4	- with gravel at 4.0ft BGS	
6	- with gravel, very fine grained sand at 6.0ft BGS	
8	- trace gravel, grey/brown at 8.0ft BGS	
10	- no gravel, moderately dense, some plasticity, grey, moist at 11.0ft BGS	
12	- grey/brown, loose at 12.0ft BGS	
	- PT - PEAT, black organic/peat layer, organic/peat odour from 12.5 to 14.0ft BGS	12.50
14	SM - SAND, trace organic matter, fine, moderately dense, grey, wet	14.80
16	ML - SILT, dense, grey, wet, with mica	
18		
20	END OF BOREHOLE @ 20.0ft BGS	20.00
22		
24		
26		
28		

MONITORING WELL



WELL DETAILS
Screened interval:
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 51in
Slot Size: 10
Material: SCH 40 PVC
Seal:
2.00 to 8.00ft BGS
Material: BENTONITE PELLETS
Sand Pack:
8.00 to 20.00ft BGS
Material: #1 SILICA SAND

SAMPLE

NUMBER	INTERVAL	REC (%)	'N' VALUE
01		75	29
02		13	75
03		63	33
04		71	120
05		46	26
06		75	11
07		92	21
08		88	16
09		83	12
10		71	9

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 10/5/2004

OVERBURDEN LOG 12618-05.GPJ CRA_CORP.GDT 11/26/04

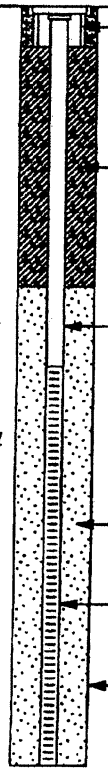
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: PHASE II COMP SITE ASSESSMENT
PROJECT NUMBER: 12618
CLIENT: GM CORPORATION
LOCATION: 63 WESTERN AVE, FRAMINGHAM, MASSACHUSETTS

HOLE DESIGNATION: MW-03-04
DATE COMPLETED: October 5, 2004
DRILLING METHOD: HSA
FIELD PERSONNEL: R. REDMAN

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	ASPHALT	0.30
	FILL - silty sand, with mix of asphalt chips/gravel, fine grained sand, dark brown	
2	concrete slab	
	- loose, fine grained sand, dark brown, dry at 3.0ft BGS	3.00
4		
6		
	- trace gravel at 7.0ft BGS	
8		
	- silt, trace gravel, dense, dark brown, moist at 9.0ft BGS	
10	- increase gravel content, grey/brown at 10.0ft BGS	
	- trace gravel, wet at 11.0ft BGS	
12		
	- loose at 13.0ft BGS	
14		
	SM - SAND, trace silt, loose, fine to medium grained sand, grey/brown, wet	15.00
16	blackish plant matter, trace silt	16.30
	- grey at 17.0ft BGS	
18		
	END OF BOREHOLE @ 19.0ft BGS	19.00
20		
22		
24		
26		
28		

MONITORING WELL



WELL DETAILS
Screened interval:
9.00 to 19.00ft BGS
Length: 10ft
Diameter: 51in
Slot Size: 10
Material: SCH 40 PVC
Seal:
2.00 to 7.00ft BGS
Material: BENTONITE PELLETS
Sand Pack:
7.00 to 19.00ft BGS
Material: #1 SILICA SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
01		21	105	0
02		54	11	42.5
03		42	7	110.5
04		8	5	145.1
05		63	16	14.1
06		63	3	1.5
07		42	3	16.8
			4	786.5
08		100	15	113.8

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 10/5/2004

OVERBURDEN LOG 12618-05.GPJ CRA_CORP.GDT 11/26/04

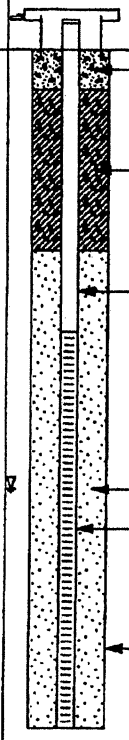
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: PHASE II COMP SITE ASSESSMENT
PROJECT NUMBER: 12618
CLIENT: GM CORPORATION
LOCATION: 63 WESTERN AVE, FRAMINGHAM, MASSACHUSETTS

HOLE DESIGNATION: MW-04-04
DATE COMPLETED: October 6, 2004
DRILLING METHOD: HSA
FIELD PERSONNEL: R. REDMAN

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	FILL - sandy silt, loose, brown, dry, roots	
	- no roots at 0.3ft BGS	
	concrete chips	
	concrete/brick chips	6.00
	- wood debris, moist at 9.0ft BGS	9.00
	- sand, with gravel, loose, fine grained, grey, wet at 9.5ft BGS	
	- silt, trace gravel, loose, grey, wet at 11.5ft BGS	
	PT - PEAT, plant matter, black	12.00
	- trace plant matter, mica at 13.0ft BGS	
	ML - SILT, trace gravel, loose, grey, wet	13.50
	END OF BOREHOLE @ 17.0ft BGS	17.00

MONITORING WELL



WELL DETAILS
Screened interval:
7.00 to 17.00ft BGS
Length: 10ft
Diameter: 51in
Slot Size: 10
Material: SCH 40 PVC
Seal:
2.00 to 5.00ft BGS
Material: BENTONITE PELLETS
Sand Pack:
5.00 to 17.00ft BGS
Material: #1 SILICA SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
01		100	29	0
02		21	44	1.5
03		17	10	0.8
04		33	80	5.1
05		63	4	235.1
06		100	4	1732.1
07		63	14	400
08		54	13	249.7

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 10/6/2004

OVERBURDEN LOG 12618-05.GPJ CRA_CORP.GDT 11/26/04

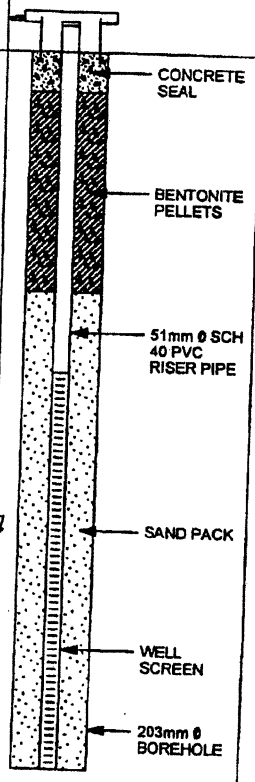
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: PHASE II COMP SITE ASSESSMENT
PROJECT NUMBER: 12618
CLIENT: GM CORPORATION
LOCATION: 63 WESTERN AVE, FRAMINGHAM, MASSACHUSETTS

HOLE DESIGNATION: MW-05-04
DATE COMPLETED: October 6, 2004
DRILLING METHOD: HSA
FIELD PERSONNEL: R. REDMAN

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	TOPSOIL, sandy silt with gravel, grass roots	
2	FILL - silt with gravel, firm, medium grained gravel, reddish brown, dry	2.00
4	- stiff to hard, grey/brown at 5.0ft BGS	
6	- moist at 7.0ft BGS	
8	- trace to no gravel, soft, low plasticity at 9.0ft BGS	
10		
12		
14	silt with vegetative matter, trace gravel, black streaking, wet SM/ML - SANDY SILT, trace mica chips, soft, fine grained, grey, wet	13.40
16		
18	END OF BOREHOLE @ 18.0ft BGS	18.00
20		
22		
24		
26		
28		

MONITORING WELL



WELL DETAILS
Screened interval:
8.00 to 18.00ft BGS
Length: 10ft
Diameter: 51in
Slot Size: 10
Material: SCH 40 PVC
Seal:
2.00 to 6.00ft BGS
Material: BENTONITE PELLETS
Sand Pack:
6.00 to 18.00ft BGS
Material: #1 SILICA SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE
01		17	13
02		38	97
03		58	30
04		50	10
05		71	17
06		25	4
07		54	17
08		71	9
09		83	11

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 10/6/2004

OVERBURDEN LOG 12618-05.GPJ CRA_CORP.GDT 11/26/04

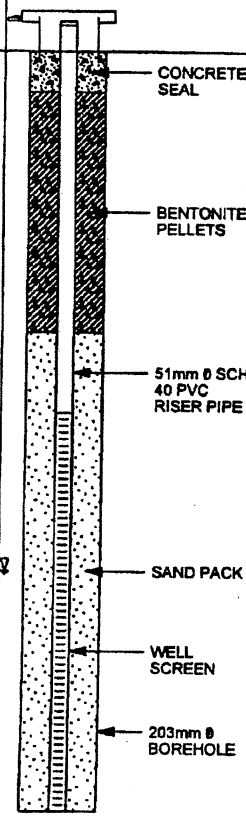
STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: PHASE II COMP SITE ASSESSMENT
PROJECT NUMBER: 12618
CLIENT: GM CORPORATION
LOCATION: 63 WESTERN AVE, FRAMINGHAM, MASSACHUSETTS

HOLE DESIGNATION: MW-06-04
DATE COMPLETED: October 6, 2004
DRILLING METHOD: HSA
FIELD PERSONNEL: R. REDMAN

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	FILL - fine grained gravel, slag, black	
	- sandy silt, dense, reddish brown, dry at 0.8ft BGS	
	- trace gravel at 2.0ft BGS	
	augering through obstruction, no recovery	
	- silt, trace gravel, firm, grey/brown, dry at 5.0ft BGS	5.00
	- silty sand, trace gravel, fine grained sand, compact to dense, grey/brown, dry at 7.0ft BGS	
	PT - PEAT, trace silt, black, moist, plant/vegetative matter	10.50
	SM - SAND, trace silt, loose to compact, very fine grained, grey, wet	13.00
	- orange/grey at 17.0ft BGS	
	END OF BOREHOLE @ 19.0ft BGS	19.00

MONITORING WELL



WELL DETAILS
Screened interval:
9.00 to 19.00ft BGS
Length: 10ft
Diameter: 51in
Slot Size: 10
Material: SCH 40 PVC
Seal:
2.00 to 7.00ft BGS
Material: BENTONITE PELLETS
Sand Pack:
7.00 to 19.00ft BGS
Material: #1 SILICA SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE
01		42	18
02		17	19
03		21	21
04		63	30
06		83	10
07		83	15
08		100	14
09		100	5
10		100	8

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 10/6/2004

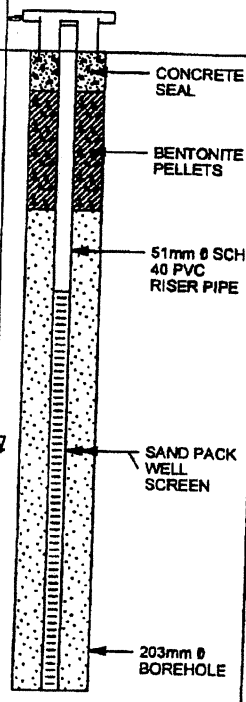
OVERBURDEN LOG 12618-05.GPJ CRA_CORP.GDT 11/26/04

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: PHASE II COMP SITE ASSESSMENT
PROJECT NUMBER: 12618
CLIENT: GM CORPORATION
LOCATION: 63 WESTERN AVE, FRAMINGHAM, MASSACHUSETTS

HOLE DESIGNATION: MW-07-04
DATE COMPLETED: October 7, 2004
DRILLING METHOD: HSA
FIELD PERSONNEL: R. REDMAN

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS
	TOPSOIL, grass, roots	0.50
2	FILL - sandy silt, trace gravel, firm, fine grained sand, light brown, dry	
	gravel, slag, fine grained, black	1.50
	- silt, trace gravel, compact, light brown, dry at 1.5ft BGS	
4	- silt with coarse grained sand, trace fine grained gravel at 4.0ft BGS	
	- grey at 5.0ft BGS	
6	- red streaks at 6.0ft BGS	
	PT/ML - SILT, with sand, firm, fine grained sand, black with grey/brown, plant/vegetative matter	7.00
8	SM - SAND, loose, fine grained, light brown, moist	8.80
10	- grey/brown, saturated at 10.0ft BGS	
12	- very fine grained at 12.0ft BGS	
14	- compact to dense, fine to medium grained at 14.0ft BGS	
	ML - SILT, with fine grained gravel, firm to stiff, low plasticity, grey	15.50
16	END OF BOREHOLE @ 16.0ft BGS	16.00
18		
20		
22		
24		
26		
28		



WELL DETAILS
Screened interval:
6.00 to 16.00ft BGS
Length: 10ft
Diameter: 51in
Slot Size: 10
Material: SCH 40 PVC
Seal:
2.00 to 4.00ft BGS
Material: BENTONITE PELLETS
Sand Pack:
4.00 to 16.00ft BGS
Material: #1 SILICA SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE
01		42	13
02		63	48
03		54	28
04		60	14
05		71	11
06		92	16
07		100	16
08		100	75

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 10/7/2004

OVERBURDEN LOG 12618-05.GPJ CRA_CORP.GDT 11/26/04

ATTACHMENT B

OMM HEALTH AND SAFETY PLAN

SITE HEALTH AND SAFETY PLAN FOR THE PHASE II COMPREHENSIVE SITE ASSESSMENT

RTN: 3-3939 FORMER LANDFILL
RTN: 3-4356 BEAVERDAM BROOK
RTN: 3-3940 FORMER SETTLING LAGOON

FORMER GENERAL MOTORS CORPORATION ASSEMBLY PLANT
FRAMINGHAM, MASSACHUSETTS

SEPTEMBER 2004
REF. NO. 12618 (1) APPA
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ATTACHMENT B	DAILY SAFETY MEETING LOG

1.0 INTRODUCTION

The Health and Safety Plan (HASP) presented herein describes the health and safety procedures and emergency response guidelines to be implemented during the Phase II Comprehensive Site Assessment (CSA) at the Former General Motors Corporation (GM) Assembly Plant (Property) located in Framingham, Massachusetts. Figures 1.1 and 1.2 present the Site Location and Site Plan, respectively.

The environmental investigations are being conducted to provide information and data to assess the extent of environmental remediation activities that may be required to address the Former Landfill Site, the Beaverdam Brook (Brook) Site, and the Former Settling Lagoon Site. The scope of work to be completed during the Phase II CSA includes the following work activities:

i) mobilization and demobilization of labor, materials, and equipment to and from the Site;

ii) installation of new groundwater monitoring wells and the refurbishment of some existing wells;

iii) soil sampling activities;

iv) groundwater sampling activities;

v) surface water and sediment sampling activities;

vi) installation of test pits;

vii) installation of erosion controls; and

viii) decontamination activities.

During a portion of these activities, personnel may come in contact with soils, sediments, surface water, and groundwater which may contain hazardous substances. This HASP has been developed to minimize direct contact by Site personnel with materials potentially having chemical presence by ensuring:

i) that Site personnel are not adversely exposed to the compounds of concern;

ii) that public health and the environment are not adversely impacted by materials with elevated chemical presence which may potentially migrate off Site during work activities at the Site;

iii) compliance with applicable governmental and non-governmental (American Conference of Governmental Industrial Hygienists [ACGIH]) regulations and guidelines. In particular, the amended rules of the Occupational Safety and

Health Administration (OSHA) for Part 1926 (Title 29 Code of Federal Regulations [CFR] Part 1926.65) will be implemented for all Site work; and

iv) initiation of proper emergency response procedures to minimize the potential for any adverse impact to Site workers, the general public, or the environment.

For the purpose of this HASP, activities performed on Site involving contact with materials with potentially elevated chemical presence will be considered contaminated operations requiring Personal Protective Equipment (PPE). A detailed description of the PPE required is presented in Section 6.1.

The applicability of this Project HASP extends to all personnel who will be on Site, including State and Federal Agency personnel, contractors, subcontractors, and visitors to the Site. Contractors who will work at the Site will be required to prepare and implement a Project HASP for their Site personnel.

All project activities at the Site will be conducted in accordance with the provisions of an approved Project HASP. A copy of this HASP and employer-specific Standard Operating Procedures (SOPs) will be maintained on Site whenever activities are in progress.

1.1 PROJECT ORGANIZATION

The project activities will be organized as follows. Conestoga-Rovers & Associates (CRA) will direct the field activities, and various environmental Contractors may assist with project activities as necessary.

Each Contractor working on Site will provide both a Supervisor who will direct the day-to-day activities of the ongoing work and an on-Site Health and Safety Officer (HSO) who will be responsible for ensuring compliance with the Project HASP. This may be the same person if so qualified. CRA will be one of the Contractors working on Site. They will be conducting sampling activities. The name of CRA's HSO is presented in Section 14.2.

2.0 SITE CHARACTERIZATION AND POTENTIALLY HAZARDOUS COMPOUNDS

2.1 GENERAL

The Former GM Assembly Plant operated from the 1940s to 1994 when GM sold the Property to Adesa Auctions - Boston (ADESA). As part of the sale, GM retained the responsibility for addressing certain environmental issues, including the three sites that are the focus of this investigation. Prior to and after the sale, GM conducted environmental investigation and remediation activities at the sites and other areas of the Property. GM retained ownership of certain parcels to assist in environmental activities.

A description of the background for each site is provided in Section 2.0 of the Work Plan.

Previous investigations have detected the presence of chemicals on Site. Table A2.1 presents a list of the potential chemical compounds of concern in Site media. The exposure routes and regulatory time weighted average (TWA) exposure levels for these compounds of concern are listed in Table A2.2. These levels are set to protect the health of workers.

3.0 BASIS FOR DESIGN

Regulations set forth by OSHA in Title 29, Code of Federal Regulations, Parts 1910 and 1926 (29 CFR 1910 and 1926) form the basis of this HASP. Emphasis is placed on Sections 1926.65 (Hazardous Waste Operations and Emergency Response), 1910 Subpart I (Personal Protective Equipment), and 1910 Subpart Z (Toxic and Hazardous Substances). In addition, current Threshold Limit Values (TLVs) formulated by the ACGIH have been considered in the development of the selection of PPE. Some of the specifications within this section are in addition to the OSHA regulations, and reflect the positions of the United States Environmental Protection Agency (USEPA), the National Institute for Occupational Safety and Health (NIOSH), and the United States Coast Guard (USCG) regarding safe operating procedures at hazardous waste sites.

The health and safety of the public and Site personnel and the protection of the environment will take precedence over cost and schedule considerations for all project work.

4.0 RESPONSIBILITIES AND ADMINISTRATION

The HSO shall be responsible for all decisions regarding operations and work stoppage due to health and safety considerations. The HSO will have prior experience in working at hazardous waste sites.

The on-Site HSO responsibilities include:

i) supervision and enforcement of safety equipment usage, including the required use of extra equipment if appropriate;

ii) supervision and inspection of equipment cleaning;

iii) supervision of decontamination;

iv) conduct the on-Site personnel safety indoctrination session for potential hazards, personal hygiene principles, confined space entry procedures, all other SOPs, safety equipment usage, emergency procedures, and location of first aid kits and identification of personnel trained in first aid and cardiopulmonary resuscitation (CPR);

v) maintain Exclusion Zone (EZ) and Contaminant Reduction Zone (CRZ) work areas;

vi) review and modify the HASP as more information becomes available or conditions warrant;

vii) issue confined space entry and hot work permits as required;

viii) authority to suspend work activity due to unsafe working conditions;

ix) coordination of emergency procedures;

x) be responsible for performing air monitoring;

xi) ensure that all on-Site personnel have obtained the required medical examination prior to arrival at the Site, have met the OSHA training requirements, and have been fit tested for the respiratory equipment they may use;

xii) maintain the on-Site Hazard Communication Program including copies of Material Safety Data Sheets (MSDSs);

xiii) conduct brief daily safety meetings;

xiv) administer the accident prevention program; and

xv) provide instruction to Site personnel regarding operating, procedures, hazards, and safeguards of tools and equipment when necessary to perform their job.

5.0 WORKER TRAINING AND EDUCATION

Prior to commencing Site activities, a Health and Safety/Site Indoctrination Session will be presented. Attendance is mandatory for all personnel who will be or who are expected to be involved with project activities.

The training program will stress the importance that each attendee understands the basic principles of personnel protection and safety, be able to perform their assigned job tasks in a safe and environmentally responsible manner, and be prepared to respond in an appropriate manner to any emergency which may arise. A brief history of the Site will be included and the various components of the project HASP will be presented followed by an opportunity to ask questions to ensure that each attendee understands the HASP. Personnel not successfully completing this training program will not be permitted to enter or work in potentially contaminated areas of the Site. Personnel successfully completing this training program shall sign an acknowledgement form, a copy of which is presented in Attachment A. In addition, daily "tailgate" safety meetings will take place each day prior to beginning the day's work. All Site personnel will attend these safety meetings. The safety meetings will be documented with written sign-in sheets containing a list of topics discussed. Attachment B presents the form that will be used for this purpose.

This training will be given in addition to the basic training required under OSHA and is not intended to meet the requirements of 29 CFR 1926.65. Prior to working in or entering an EZ environment (as defined in Section 6.0), all personnel will be required to provide documentation to the HSO indicating successful completion of the training requirements of 29 CFR 1926.65.

6.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

This section of the HASP describes the requirements for PPE and the specific levels of protection required for each work task to be conducted at the Site during project activities. Basic PPE in all Site areas will consist of hard hats, safety glasses, and safety boots/shoes.

6.1 PROTECTION LEVELS

Personnel will wear protective equipment when project activities involve potential exposure to chemicals from vapors, gases, or particulates that may be generated on Site or when direct contact with potentially hazardous substances may occur. Chemical resistant clothing protects the skin from contact with skin-destructive and absorbable chemicals. Respirators protect lungs, the gastrointestinal tract, and if a full-face respirator is worn, the eyes, against airborne toxicants. Respiratory protection levels will be based on the real-time air monitoring results and the action levels that are presented in Section 6.5.

Protection levels are selected based upon the following:

i) measured concentrations of the Site chemicals and expected concentrations in the ambient atmosphere compared to allowable exposure levels (Table A2.1);

ii) potential for exposure to chemicals in air, splashes of liquids, or other contact due to the nature of work tasks; and

iii) Site chemical toxicity, route of exposure, and chemical matrix.

The specific protection levels to be employed at the Site for each work task are listed in Table A6.1. All project activities conducted at the Site will require the use of one of the following levels of PPE.

Level B (not expected to be worn)

i) supplied air respirator (Mine Safety and Health Administration [MSHA]/NIOSH approved). Respirators may be positive pressure-demand, self-contained breathing apparatus (SCBA) or positive pressure-demand airline respirator (with escape bottle for Immediately Dangerous to Life and Health [IDLH] or potential for IDLH atmosphere);

ii) polycoated tyvek® or saranex® coveralls;

iii) steel toe work boots and disposable boot covers or rubber boots;

iv) disposable nitrile inner gloves;

v) outer nitrile gloves;

vi) hearing protection as necessary;

vii) personal floatation device or reflective safety vest as necessary; and

viii) hard hat.

Level C

i) tyvek® coveralls (polycoated tyvek® when handling or working with liquids [e.g., decontamination]);

ii) steel toe work boots and disposable boot covers or rubber boots;

iii) disposable nitrile inner gloves;

iv) outer nitrile gloves;

v) half-face or full-face air purifying respirator (APR), equipped with combination cartridges that provide protection against organic vapors and particulates;

vi) hearing protection as necessary;

vii) personal floatation device or reflective safety vest as necessary; and

viii) hard hat.

Modified Level D

i) tyvek® coveralls (polycoated tyvek® when handling or working with liquids);

ii) steel toe work boots;

iii) disposable nitrile inner gloves;

iv) outer nitrile gloves;

v) safety glasses;

vi) splash shields as necessary;

vii) hearing protection as necessary;

viii) personal floatation device or reflective safety vest as necessary; and

ix) hard hat.

Level D

i) standard work uniform or coveralls;

ii) steel toe work boots;

iii) gloves as necessary;

iv) safety glasses;

v) splash shield as needed;

vi) hearing protection as necessary;

vii) personal floatation device or reflective safety vest as necessary; and

viii) hard hat.

PPE will be maintained in a clean sanitary condition and ready for use. Disposable coveralls shall be discarded when torn and as an employee leaves the EZ. Hard hats shall be thoroughly cleaned after leaving the EZ. Respirators shall be cleaned after each day's use and cartridges discarded. A sufficient quantity of potable water shall be supplied for washing, cleaning PPE, and drinking. A potable water supply for washing and cleaning PPE will be maintained adjacent to the decontamination area described in Section 9.0. Fresh potable water for drinking will be supplied on a daily basis and be maintained at a location removed from the active work area.

6.2 REASSESSMENT OF PROTECTION LEVELS

Protection levels provided by PPE selection shall be upgraded or downgraded based upon a change in Site conditions or the review of the results of air monitoring.

When a significant change occurs, the hazards shall be reassessed. Some indicators of the need for reassessment are:

i) commencement of a new work phase;

ii) change in job tasks during a work phase;

iii) change of season/weather;

iv) when temperature extremes or individual medical considerations limit the effectiveness of PPE;

v) chemicals other than those expected to be encountered are identified;

vi) change in ambient levels of chemicals; and

vii) change in work scope, which effects the degree of contact with areas of potentially, elevated chemical presence.

All proposed changes to protection levels and PPE requirements will be reviewed and approved prior to their implementation by the HSO.

6.3 DURATION OF WORK TASKS

The duration of project activities involving the usage of PPE will be established by the HSO or his designee based upon ambient temperature and weather conditions, the capacity of personnel to work in the designated level of PPE (heat stress and cold stress, see Section 12.3 - Environmental Control), and limitations of the protective equipment (i.e., ensemble permeation rates, life expectancy of air-purifying respirator cartridges, etc.). As a minimum, rest breaks will be observed at the following intervals:

i) 15 minutes midway between shift startup and lunch;

ii) 1/2 hour for lunch; and

iii) 15 minutes in the afternoon, between lunch and shift end.

All rest breaks will be taken in a clean area (e.g., support zone) after full decontamination and PPE removal. Additional rest breaks will be observed, based upon the heat stress monitoring guidelines presented in the REALM/ENCORE Health and Safety Operating Guidelines (HSOGs).

6.4 LIMITATIONS OF PROTECTIVE CLOTHING

PPE ensembles designated for use during project activities have been selected to provide protection against chemicals at known or anticipated concentrations in the soil and groundwater. However, no protective garment, glove, or boot is chemical-proof, nor will it afford protection against all chemical types. Permeation of a given chemical through PPE is a complex process governed by the chemical concentrations, environmental conditions, physical condition of the protection garment, and the resistance of a garment to a specific chemical; chemical permeation may continue even after the source of the chemical has been removed from the garment.

In order to obtain optimum usage from PPE, the following procedures are to be followed by all Site personnel using PPE:

i) when using disposable coveralls, don a clean, new garment after each rest break or at the beginning of each shift;

ii) inspect all clothing, gloves, and boots both prior to and during use for:

  a) imperfect seams,

  b) non-uniform coatings,

  c) tears,

  d) poorly functioning closures; and

iii) inspect reusable garments, boots, and gloves both prior to and during use for:

  a) visible signs of chemical permeation,

  b) swelling,

  c) discoloration,

  d) stiffness,

  e) brittleness,

  f) cracks,

  g) any sign of puncture, and

  h) any sign of abrasion.

Reusable gloves, boots, or coveralls exhibiting any of the characteristics listed above will be discarded. PPE used in areas known or suspected to exhibit elevated concentrations of chemicals will not be reused.

Additional PPE usage guidelines are as follows:

i) ankles/wrists will be secured tightly with the use of duct tape;

ii) prescription eyewear used on Site shall be safety glasses equipped with side shields when full-face respirators are not required. Contact lenses shall not be used;

iii) all EZ workers will have received training in the usage of full-face air purifying respirators and SCBA which may be required in an emergency;

iv) steel toe leather footwear shall be covered with neoprene overboots prior to entering the EZ and immediately upon entering the CRZ; and

v) safety footwear and hard hats are to be worn by Site personnel at all times.

EZ personnel also carry certain responsibilities for their own health and safety, and are required to observe the following safe work practices:

i) familiarize themselves with this HASP;

ii) use the "buddy system" when working in a contaminated operation;

iii) use the safety equipment in accordance with training received, labeling instructions, and common sense;

iv) maintain safety equipment in good condition and proper working order;

v) refrain from activities that would create additional hazards (i.e., smoking, eating, etc., in restricted areas, leaning against dirty, contaminated surfaces);

vi) smoking, eating, and drinking will be prohibited except in designated areas. These designated areas may change during the duration of the project to maintain adequate separation from the active work area(s). Designation of these areas will be the responsibility of the HSO; and

vii) soiled disposable outerwear shall be removed and placed into a covered container prior to washing hands and face, eating, using lavatory facilities, or leaving the Site.

6.5 RESPIRATORY PROTECTION PROGRAM

Prior to arriving at the Site, all on-Site personnel will have received training in the use of, and have been fit tested for the air purifying respirator that they may need to wear. All on-Site personnel will be required to comply with their employer specific written respiratory protection program developed in accordance with OSHA 29 CFR 1910.134.

Respiratory protection may be required during some of the project activities. This is to ensure worker protection from potentially contaminated particulates and VOCs. A photoionization detector (PID) will be used to determine if organic vapors are present. A background reading will be established prior to commencing work activities at each active work area.

Real-time instrument action levels for organic vapors to determine the level of respiratory protection necessary during Project activities are based on the concentration of the Site chemicals measured within the breathing zone. The action levels and appropriate respiratory protection for these Site activities are as follows:

Sustained Organic Vapor Reading Above Background Within Worker Breathing Zone in Parts Per Million (ppm)	*Action Taken*
0 or Background	Half- or Full-Face Respirator Available
1 - 10	Wear Half- or Full-Face Respirator
10 - 50	Wear Full-Face Respirator
>50	Must Wear Supplied Air Respirator/ Implement Additional Engineering Controls

All efforts will be made to implement additional engineering controls to minimize the need to wear a supplied air respirator. If the ambient concentrations of organic vapors are due to identifiable substances, the level of respiratory protection may be altered by the HSO.

The appropriate air purifying respirator cartridge to be used at the Site is a combination organic vapor and P-100 particulate cartridge. The cartridge used must be of the same manufacturer as the respiratory face piece.

6.6 SITE CONTROL

Designated work areas will be set up as appropriate inside the fence during the Site field activities, as required. A temporary fence may be installed to prevent unauthorized access to the project work areas. The purpose of these procedures is to limit access to areas with potentially elevated chemical presence, and prevent the migration of potentially hazardous materials into adjacent clean areas. These areas are described in the following:

i) The Exclusion Zone (EZ) is the area immediately surrounding the active work area. Sufficient area will be provided for efficient movement of personnel and equipment as well as chemical control. Boundaries are modifiable depending on operational requirements. The HSO will be responsible for maintaining the boundaries of this area. Personnel entering this area are required to wear the PPE as defined previously. A wind direction indication device (i.e., flagging, windsock, etc.) will be mounted in the area of any EZ during Site activities.

   All personnel (including visitors) entering the EZ or CRZ using respiratory protection must have successfully passed a respirator fit test in accordance with OSHA 29 CFR 1910.134. Documentation of fit testing is the responsibility of each employer.

In the event that unauthorized personnel enter the EZ, work will stop. Work will not resume until the unauthorized personnel have been removed from the EZ or have been moved to an acceptable on-Site area. A log of all visitors to the Site, including those entering the EZ, will be maintained.

ii) The Contaminant Reduction Zone (CRZ) will provide a location for removal of PPE which has contacted material with elevated chemical presence and final removal and decontamination of personnel and equipment. Supplemental safety equipment, such as fire extinguishers, portable eyewash, and extra quantities of PPE may be stored in this area. The order in which safety equipment is to be donned is as follows:

a) tyvek® suit;

b) rubber boot;

c) gloves;

d) respirator (if required); and

e) hard hat.

The following order applies when removing safety equipment:

a) wash off boots and outer gloves prior to removal;

b) tyvek® suit;

c) hard hat;

d) respirator; and

e) inner gloves.

iii) The Support Zone (SZ) is situated in clean areas where there is a minimal risk of encountering hazardous materials or conditions. PPE beyond standard construction safety equipment is therefore not required.

7.0 ACTIVITY HAZARD/RISK ANALYSIS

This section identifies the general hazards associated with specific project activities and presents the documented or potential health and safety hazards that exist at the Site. Every effort will be made to reduce or eliminate these hazards. Those which cannot be eliminated must be guarded against by use of engineering controls and/or PPE. Table A7.1 presents the anticipated hazards/risks and hazard controls.

In addition to the chemical hazards presented in Section 2.0 of this HASP, physical hazards including: uneven terrain, steep slopes, slippery surfaces, potential confined spaces, the use of drilling and heavy equipment, the use of decontamination equipment, hazards from working in and around water, biological hazards, and potential heat and cold stress exist at the Site. It will be the responsibility of each on-Site contractor and their personnel to identify the physical hazards posed by the various Site project activities and implement preventative and corrective action.

Working in and or around water presents a potential for drowning. As such, at a minimum, all project personnel working on or in water will wear a personal floatation device.

7.1 CHEMICAL EXPOSURE

Preventing exposure to toxic chemicals is a primary concern. Chemical substances can enter the unprotected body by inhalation, skin absorption, ingestion, or through a puncture wound (injection). A contaminant can cause damage at the point of contact or can act systematically, causing a toxic effect at a part of the body distant from the point of initial contact.

Chemical exposures are generally divided into two categories: acute and chronic. Symptoms resulting from acute exposures usually occur during or shortly after exposure to a sufficiently high concentration of a chemical. The concentration required to produce such effects varies widely from chemical to chemical. The term "chronic exposure" generally refers to exposures to "low" concentrations of a contaminant over a long period of time. The "low" concentrations required to produce symptoms of chronic exposure depend upon the chemical, the duration of each exposure, and the number of exposures. For a given chemical, the symptoms of an acute exposure may be completely different from those resulting from chronic exposure.

For either chronic or acute exposure, the toxic effect may be temporary and reversible, or may be permanent (disability or death). Some chemicals may cause obvious symptoms such as burning, coughing, nausea, tearing eyes, or rashes. Other chemicals may cause health damage without any such warning signs (this is a particular concern for chronic exposures to low concentrations). Health effects such as cancer or respiratory disease may not become manifest for several years or decades after exposure. In addition, some toxic chemicals may be colorless and/or odorless, may dull the sense of smell, or may not produce any immediate or obvious physiological sensations. Thus, a worker's senses or feelings cannot be relied upon in all cases to warn of potential toxic exposure.

The effects of exposure not only depend on the chemical, its concentration, route of entry, and duration of exposure, but may also be influenced by personal factors such as the individual's smoking habits, alcohol consumption, medication use, nutrition, age, and sex.

An important exposure route of concern at the Site is inhalation. The lungs are extremely vulnerable to chemical agents. Even substances that do not directly affect the lungs may pass through lung tissue into the bloodstream, where they are transported to other vulnerable areas of the body. Some toxic chemicals present in the atmosphere may not be detected by human senses (i.e., they may be colorless, odorless, and their toxic effects may not produce any immediate symptoms). Respiratory protection is therefore extremely important if there is a possibility that the work Site atmosphere may contain such hazardous substances. Chemicals also can enter the respiratory tract through punctured eardrums. Where this is a hazard, individuals with punctured eardrums should be medically evaluated specifically to determine if such a condition would place them at an unacceptable risk and preclude their working at the task in question.

Direct contact of the skin and eyes by hazardous substances is another important route of exposure. Some chemicals directly injure the skin. Some pass through the skin into the bloodstream where they are transported to vulnerable organs. Skin absorption is enhanced by abrasions, cuts, heat, and moisture. The eye is particularly vulnerable because airborne chemicals can dissolve in its moist surface and be carried to the rest of the body through the bloodstream (capillaries are very close to the surface of the eye). Wearing protective equipment, not using contact lenses in chemical atmospheres (since they may trap chemicals against the eye surface), keeping hands away from the face, and minimizing contact with liquid and solid chemicals can help protect against skin and eye contact.

Although ingestion should be the least significant route of exposure at the Site, it is important to be aware of how this type of exposure can occur. Deliberate ingestion of

chemicals is unlikely, however, personal habits such as chewing gum or tobacco, drinking, eating, smoking cigarettes, and applying cosmetics at the Site may provide a route of entry for chemicals.

The last primary route of chemical exposure is injection, whereby chemicals are introduced into the body through puncture wounds (i.e., by stepping or tripping and falling onto contaminated sharp objects). Wearing safety shoes, avoiding physical hazards, and taking common sense precautions are important protective measures against injection.

8.0 AIR MONITORING

During the progress of project activities, monitoring of organic vapors will be taken by the HSO. Additionally, oxygen and combustible gas levels will need to be taken if personnel enter into any confined space.

The following air monitoring instrumentation will be used for this purpose:

i) a PID detector; and

ii) a combination oxygen/combustible gas instrument.

All monitoring equipment will be calibrated on a daily basis in accordance with the manufacturer's guidelines, and such calibrations will be recorded in the Site daily logbook. Results of all daily air monitoring also will be recorded in the Site daily logbook.

Air monitoring will be conducted hourly in the breathing zone of workers in the EZ or as deemed necessary by the HSO based on Site-specific conditions. Background measurements immediately upwind of the EZ will be taken before activities commence. Respiratory action levels for organic vapors are discussed in Section 6.5.

Immediately upon identifying sustained elevated levels of organic vapors (greater than 50 ppm within the Work Zone, the air monitoring results will be reported to the Site Superintendent and work activities will be shut down. The HSO will determine the cause of the sustained elevated levels of organic vapors and alternate work methods or engineering controls will be implemented to rectify the release of elevated concentrations of organic vapors, or upgrade levels of PPE as required.

Monitoring for oxygen and combustible gas levels will be continuous according to the confined space entry permit if personnel have to enter into any confined space.

9.0 DECONTAMINATION PROCEDURES

In general, everything that enters the EZ at the Site must either be decontaminated or properly discarded upon exit from the EZ. All personnel, including any State and local officials, must enter and exit the EZ through the decontamination area. Prior to demobilization, potentially contaminated equipment will be decontaminated and inspected by the HSO before it is moved into the clean zone.

The type of decontamination solution to be used is dependent on the type of chemical hazards. The decontamination solution for this Site is Liquinox (soap) for equipment and for any reusable PPE.

9.1 EQUIPMENT DECONTAMINATION PROCEDURES

All equipment must be decontaminated within the CRZ or on the decontamination pad by a pressure washer upon exit from the EZ. The drilling Contractor will erect a temporary decontamination pad. Decontamination procedures should include: knocking soil/mud from machines; water rinsing using a solution of water and Liquinox; scraping and brushing to remove remaining soils and a final water rinse. Personnel shall wear Level C protection when decontaminating equipment. Runoff will be collected and stored until appropriate disposal arrangements are made. Following decontamination and prior to equipment removal from the Site, the HSO shall be responsible for ensuring that the equipment has been properly cleaned. This inspection shall be included in the Site logbook.

9.2 PERSONNEL DECONTAMINATION PROCEDURES

Personnel decontamination will be completed in accordance with the REALM/ENCORE HSOG for personnel decontamination.

10.0 GENERAL SAFETY AND PERSONAL HYGIENE

1. Eating at the Site is prohibited except in specifically designated areas. Designation of eating areas will be the responsibility of the HSO. The location of these areas may change during the duration of the project to maintain adequate separation from the active work area(s).
2. Smoking at the Site is prohibited except in specifically designated areas.
3. Individuals getting wet to the skin with effluent from the washing operation must wash the affected area immediately. If clothes in contact with skin are wet, then these must be changed.
4. Hands must be washed with soap and water before eating, drinking, smoking, and before using toilets.
5. All disposable coveralls and soiled gloves will be placed in covered containers at the end of every shift or sooner, if deemed necessary by the HSO. Wastes will be stored until proper disposal arrangements have been made.
6. Personnel working on Site will not be permitted to wear facial hair that interferes with the mask-to-face seal on air-purifying respirators.

11.0 MEDICAL SURVEILLANCE

In accordance with the requirements detailed in 29 CFR 1926.65 and 29 CFR 1910.134, all Site personnel who will come in contact with materials with potentially elevated chemical presence will have received, within 1 year prior to starting field activities, medical surveillance by a licensed physician or physician's group.

Medical records for all on-Site personnel will be maintained by their respective employers. The medical records will detail the tests that were taken and will include a copy of the consulting physician's statement regarding the tests and the employee's suitability for work.

The medical records will be available to the employee or his/her designated representative upon written request, as outlined in 29 CFR 1910.1020.

Each employer will provide certifications to the HSO that its personnel involved in Site activities will have all necessary medical examinations and will have obtained medical certification prior to commencing work, which requires respiratory protection or potential exposure to hazardous materials. Personnel not obtaining medical certification will not perform work within the CRZ and EZ.

Interim medical surveillance will be completed if an individual exhibits poor health or high stress responses due to any Site activity or when accidental exposure to elevated concentrations of chemicals occur.

12.0 ENVIRONMENTAL CONTROL PROGRAM

This section of the HASP outlines measures to be implemented at the Site to prevent hazards associated with environmental conditions.

12.1 WEATHER MONITORING

The HSO be responsible for checking weather forecasts for the next day and week of work to provide advance notification of any severe weather conditions. Severe weather conditions (e.g., heavy rains) may cause unsafe conditions at the Site and in some situations work may have to be stopped.

12.2 RAIN AND SNOW

Excessive amounts of precipitation may cause potential safety hazards for all work tasks. The hazards would be most commonly associated with slipping, tripping, or falling due to slippery surfaces and further hazards are detailed by work task (Table A7.1).

Severe weather conditions will result in work stoppage and the implementation of further emergency measures, as described in the REALM/ENCORE HSOG.

12.3 TEMPERATURE

The project activities are expected to be conducted during the fall. Low and high temperatures may be experienced which require measures to be implemented to prevent health and safety hazards from occurring. Potential hazards arising from temperature extremes are heat stress and cold exposure.

The potential hazard due to worker heat stress is particularly important if high protection levels of PPE are in use (e.g., respirators). A detailed monitoring program and prevention measures to implement to reduce heat stress are detailed in REALM/ENCORE HSOG. It is the responsibility of the HSO to determine which measures are appropriate to implement to prevent heat stress; these will depend largely on daily site conditions.

Exposure to cold is similar to heat stress in that the HSO must determine the appropriate preventative measures to implement. Some of the measures which may be implemented include: more frequent breaks, additional clothing, and partial enclosure of work areas. Detailed cold exposure prevention measures are also included in REALM/ENCORE HSOGs.

12.4 WIND

High winds may be encountered at the Site and these can cause hazards that may affect Site personnel health and safety. Preventative measures that will be implemented if necessary are as follows:

i) restricted Site activity;

ii) battening down light equipment or building materials;

iii) partially enclosing work areas; and

iv) reduction or stoppage of work activities.

13.0 CONFINED SPACE ENTRY PROCEDURE

A confined space provides the potential for unusually high concentrations of contaminants, explosive atmospheres, oxygen deficient atmospheres, limited visibility, and restricted movement. This section establishes requirements for safe entry into, continued work in, and safe exit from confined spaces. Additional information regarding confined space entry can be found in 29 CFR 1926.21, 29 CFR 1910.146, and NIOSH-106. Entry into a confined space will only be undertaken after remote methods have been tried and found not to be successful. If confined space entry is required, such work will only be undertaken following the guidelines presented in the REALM/ENCORE HSOGs.

14.0 EMERGENCY RESPONSE

It is essential that Site personnel be prepared in the event of an emergency. Emergencies can take many forms; illnesses or injuries, chemical exposure, fires, explosions, spills, leaks, releases of harmful contaminants, or sudden changes in the weather. The following sections outline the general procedures for emergencies. Emergency information should be posted as appropriate.

14.1 EMERGENCY CONTACTS

Fire: *911*

Police: *911*

Ambulance: *911*

Hospital: Tenet Metro West Medical Center *508-383-1000*
115 Lincoln Street, Framingham, MA 01701

Directions to the Hospital: Go north on Western Avenue towards Leland Street by turning left. Western Avenue becomes Irving Street becomes Concord Street. Turn left onto Union Avenue. Turn right onto Beech Street and then turn left onto Lincoln Street. Figure 14.1 provides the route to the Hospital.

14.2 ADDITIONAL EMERGENCY NUMBERS

CRA Accident Reporting Number	866-529-4886
National Response Center (NRC)	800-424-8802
Agency for Toxic Substances and Disease Registry	404-488-4100 (24 Hours)
Massachusetts Poison Control Center	800-682-9211
USEPA Emergency Response	800-424-8802
Underground Utilities Location Service - Dig Safe Massachusetts	888-344-7233
ADESA Contact - Jack Neshe	508-626-7000
General Motors Contact - Vince Dziechiarz	248-753-5593
CRA Project Manager - Randy Moore	519-884-0510
CRA Project Coordinator - Dan Clowater	519-884-0510
CRA Licensed Site Professional – Fred Taylor	519-884-0510
CRA Health and Safety Officer - Jason Rice	519-820-3812
Framingham Conservation Commission Contact - Michelle Grzenda	508-628-1302

14.3 EMERGENCY EQUIPMENT AVAILABLE ON SITE

Communication Equipment	*Location*
Emergency Alarms/Horns	CRZ
Medical Equipment	
OSHA Approved First Aid Kit Sized for a Minimum of 20 people Portable Emergency Eyewash	CRZ or Support Zone
Fire Fighting Equipment Two 20-Pound ABC Type Dry Chemical Fire Extinguishers Two SCBAs	CRZ

14.4 PROJECT PERSONNEL RESPONSIBILITIES DURING EMERGENCIES

HEALTH AND SAFETY OFFICER (HSO)

As the administrator of the HASP, the HSO has primary responsibility for responding to and correcting emergency situations. The HSO will:

i) take appropriate measures to protect personnel, including withdrawal from the EZ, total evacuation and securing of the Site or upgrading or downgrading the level of protective clothing and respiratory protection. Figure 14.2 provides the Emergency Evacuation Routes;

ii) take appropriate measures to protect the public and the environment including isolating and securing the Site, preventing runoff to surface waters and ending or controlling the emergency to the extent possible;

iii) ensure that appropriate Federal, State, and local agencies are informed, and emergency response plans are coordinated. In the event of fire or explosion, the local fire department should be summoned immediately. In the event of an air release of toxic materials, the local authorities should be informed in order to assess the need for evacuation. In the event of a spill, sanitary districts and drinking water systems may need to be alerted;

iv) ensure that appropriate decontamination treatment or testing for exposed or injured personnel is obtained;

v) determine the cause of the incident and make recommendations to prevent the recurrence; and

vi) ensure that all required reports have been prepared.

14.5 MEDICAL EMERGENCIES

Any person who becomes ill or injured in the EZ must be decontaminated to the maximum extent possible. If the injury or illness is minor, full decontamination should be completed and first aid administered prior to transport. If the patient's condition is serious, at least partial decontamination should be completed as much as possible without causing further harm to the patient. First aid should be administered while awaiting an ambulance or paramedics. All injuries and illnesses must immediately be reported to the HSO.

Any person transporting an injured/exposed person to a clinic or hospital for treatment should take with them directions to the hospital and a listing of the contaminants of concern to which they may have been exposed.

Any vehicle used to transport contaminated personnel will be cleaned or decontaminated as necessary.

14.6 FIRE OR EXPLOSION

In the event of a fire or explosion, the local fire department should be summoned immediately. Upon their arrival, the HSO or designated alternate will advise the fire commander of the location, nature, and identification of the hazardous materials on Site.

If it is safe to do so, Site personnel may :

i) if hazardous, report to the Agency On-Scene Coordinator and/or Project Manager;

ii) use fire fighting equipment available on Site; or

iii) remove or isolate flammable or other hazardous materials which may contribute to the fire.

15.0 RECORDKEEPING

The HSO shall establish and maintain records of all necessary and prudent monitoring activities as described below:

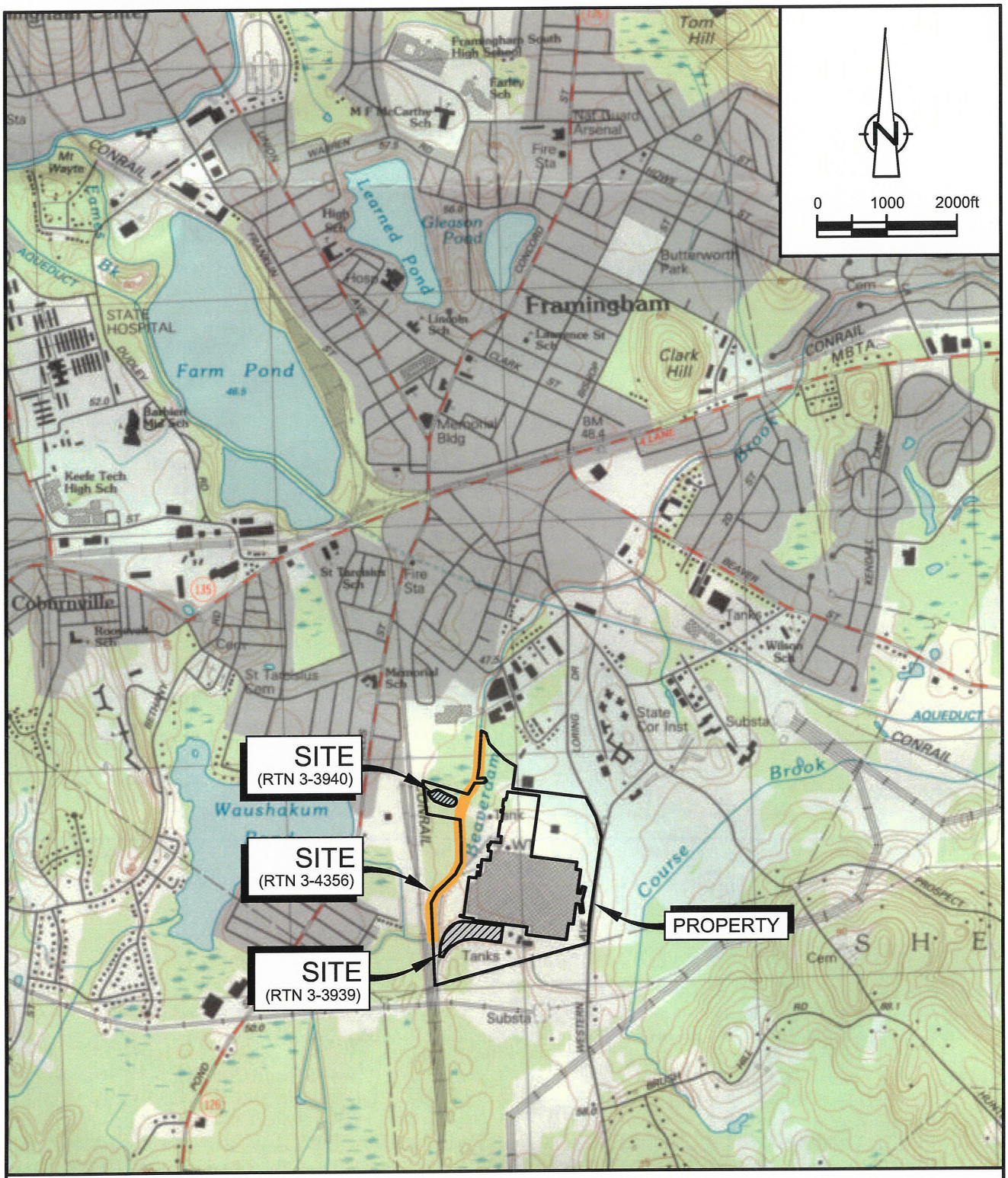
i) name and job classification of the employees involved on specific tasks;

ii) records of qualitative fit testing and physical examination results for Site personnel;

iii) records of all OSHA training certification for Site personnel;

iv) records of training acknowledgment forms; and

v) emergency reports describing any incidents or accidents.



SOURCE: USGS QUADRANGLE MAP;
FRAMINGHAM, MASSACHUSETTS

MASSACHUSETTS

CRA

figure 1.1

SITE LOCATION
FORMER GENERAL MOTORS PLANT
Framingham, Massachusetts

12618-00(009)GN-WA001 SEP 21/2004

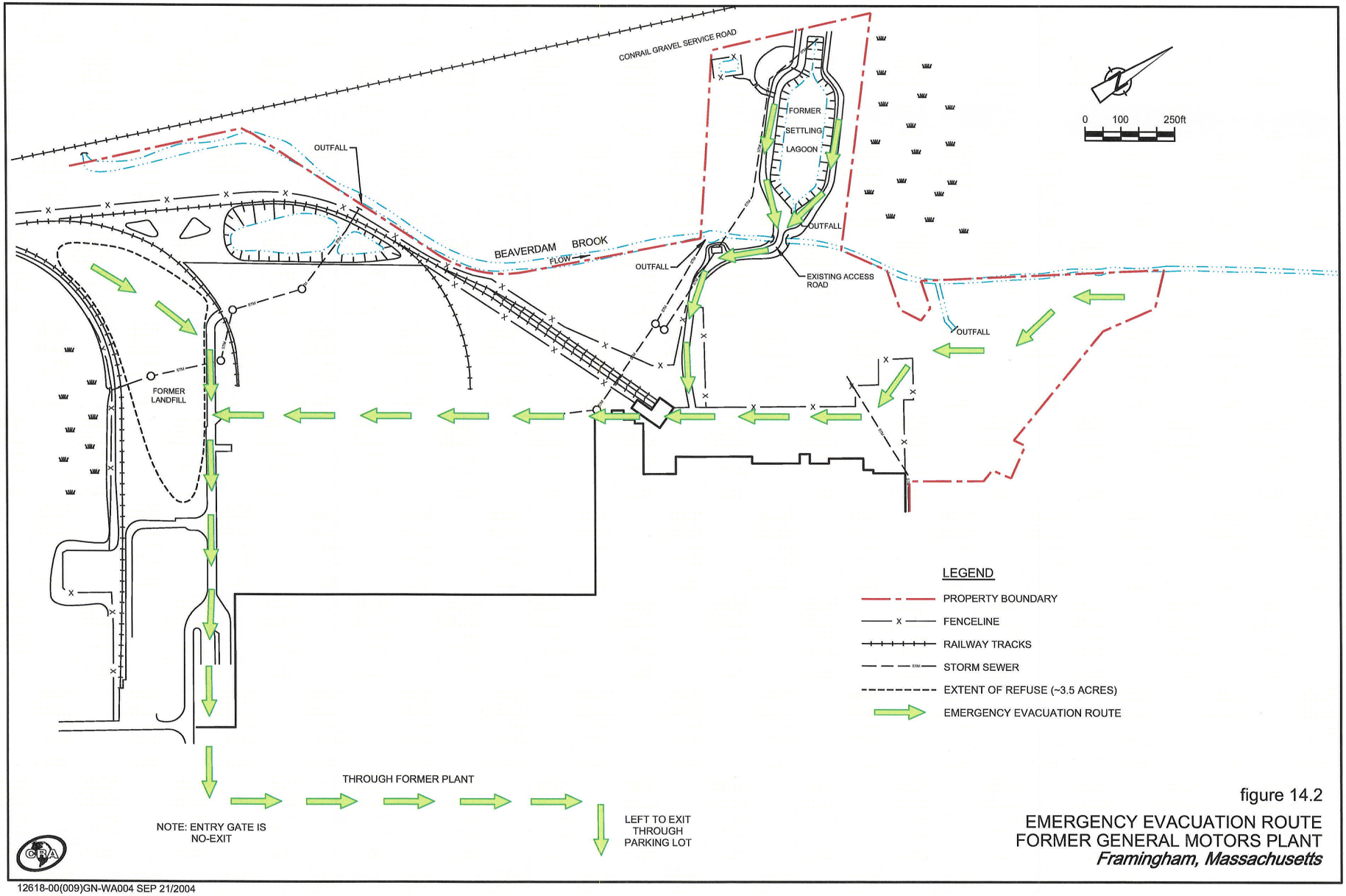
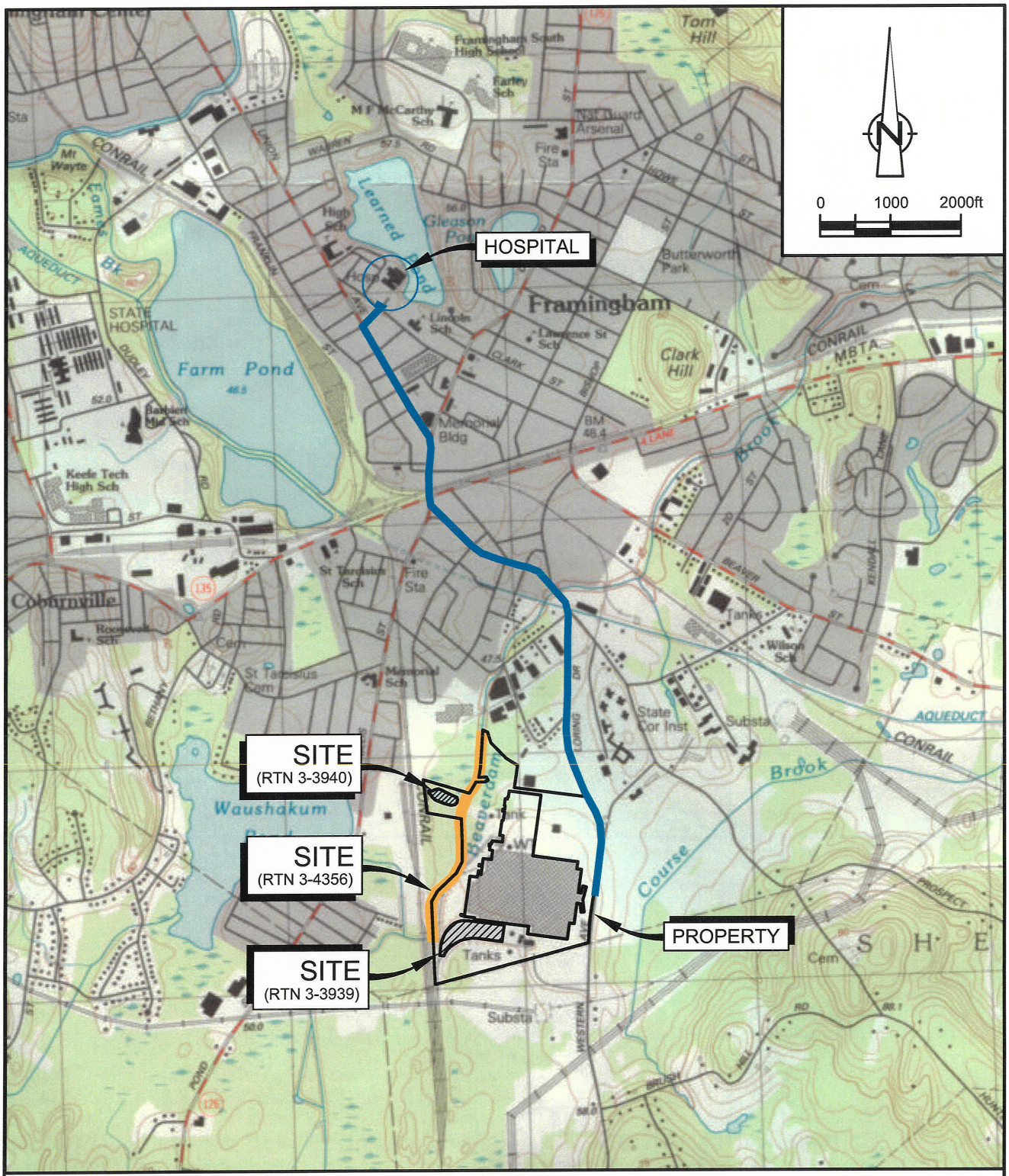


figure 14.2

EMERGENCY EVACUATION ROUTE
FORMER GENERAL MOTORS PLANT
Framingham, Massachusetts

12618-00(009)GN-WA004 SEP 21/2004



SOURCE: USGS QUADRANGLE MAP;
FRAMINGHAM, MASSACHUSETTS

figure 14.1

EMERGENCY HOSPITAL ROUTE
FORMER GENERAL MOTORS PLANT
Framingham, Massachusetts

12618-00(009)GN-WA003 SEP 21/2004

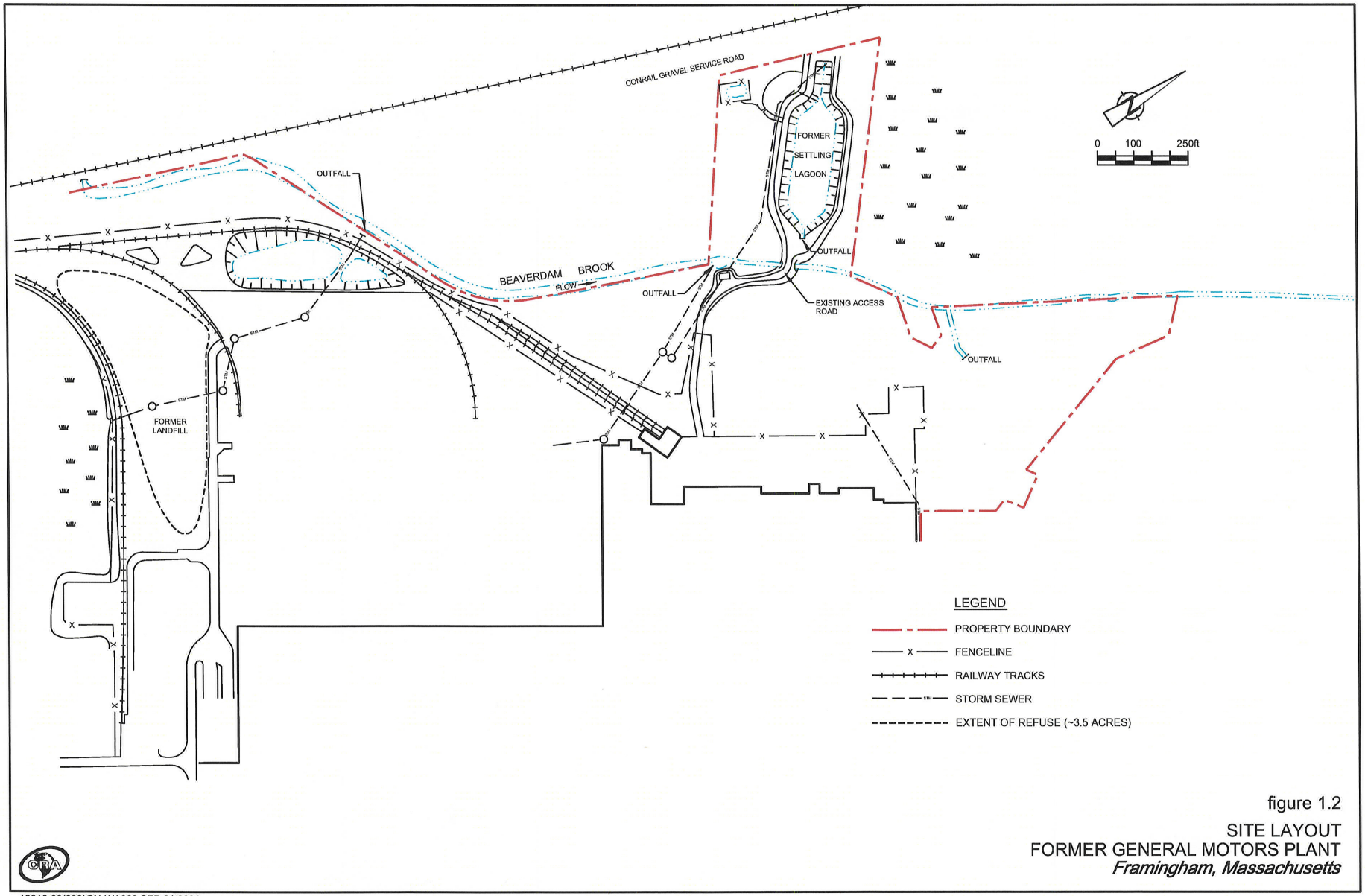


figure 1.2

SITE LAYOUT
FORMER GENERAL MOTORS PLANT
Framingham, Massachusetts

12618-00(009)GN-WA002 SEP 21/2004

TABLE A2.1

POTENTIAL CHEMICAL COMPOUNDS OF CONCERN IN SITE SOILS AND SEDIMENTS
PHASE II COMPREHENSIVE SITE ASSESSMENT
FORMER ASSEMBLY PLANT
FRAMINGHAM, MASSACHUSETTS

Chemical Compound	*Maximum Detected Concentration in Soil and Sediments (mg/kg)*
Volatile Organic Compounds	
1,1,2,2-Tetrachloroethane	0.002
2-Butanone	0.1
2-Hexanone	0.006
4-Methyl-2-Pentanone	6.5
Acetone	94
Benzene	0.34
Carbon Disulfide	0.002
Dichloromethane	0.41
Ethylbenzene	82
Tetrachloroethene	.003
Toluene	81
Trichloroethene	0.002
Xylene, Total	440
Semi-Volatile Organic Compounds	
2-Methylnaphthalene	4.4
2-Methylphenol	0.085
4-Chloro-3-Methylphenol	0.18
4-Methylphenol	0.14
Acenaphthene	1.23
Acenapthylene	0.4
Anthracene	1.675
Benzo [a] Anthracene	2.3
Benzo [a] Pyrene	2.3
Benzo [b] Fluoranthene	2.2
Benzo [g,h,i] Perylene	1.4
Benzo [k] Fluoranthene	2.9
Bis(2-Ethylhexyl)phthalate	610,000
Butylbenzylphthalate	810
Carbazole	1.41
Chrysene	3.2
Di-n-Butylphthalate	5
Di-n-Octylphthalate	0.31
Dibenzo [a,h] Anthracene	0.72
Dibenzofuran	1.125
Diethylphthalate	1.725
Fluoranthene	5.4
Fluorene	1.25
Indeno [1,2,3-cd] Pyrene	1.7
Naphthalene	3.7

TABLE A2.1

POTENTIAL CHEMICAL COMPOUNDS OF CONCERN IN SITE SOILS AND SEDIMENTS
PHASE II COMPREHENSIVE SITE ASSESSMENT
FORMER ASSEMBLY PLANT
FRAMINGHAM, MASSACHUSETTS

Chemical Compound	*Maximum Detected Concentration in Soil and Sediments (mg/kg)*
Pentachlorophenol	0.16
Semi-Volatile Organic Compounds - Continued	
Phenanthrene	5.4
Pyrene	4.6
4-4'-DDD	0.019
4-4'-DDE	0.035
4-4'-DDT	0.05
Aldrin	0.046
Alpha-BHC	0.0009
Alpha-Chlordane	0.041
Aroclor-1254	0.18
Beta-BHC	0.0001
Delta-BHC	0.052
Dieldrin	0.0086
Endosulfan I	0.0083
Endosulfan II	0.04
Endosulfan Sulfate	0.06
Endrin	0.0043
Endrin Aldehyde	0.0082
Endrin Ketone	0.072
Gamma-Chlordane	0.058
Heptachlor	0.041
Heptachlor Epoxide	0.15
Methoxychlor	0.17
Metals	
Arsenic	69.5
Cadmium	60.1
Chromium	577
Copper	497
Lead	18,300
Mercury	0.22
Zinc	45,600
Total Petroleum Hydrocarbons	1,864

TABLE A2.2

**EXPOSURE ROUTES AND EXPOSURE LEVELS
FOR THE CHEMICAL COMPOUNDS OF CONCERN
PHASE II COMPREHENSIVE SITE ASSESSMENT
FORMER ASSEMBLY PLANT
FRAMINGHAM, MASSACHUSETTS**

Chemical Compound	*Ionization Potential*	*Exposure Routes*	*Acceptable Exposure Levels in Air*
Benzene	9.2	Inhalation, Ingestion, Skin Absorption, Human Carcinogen	0.5 ppm (1) 1 ppm (2) 5 ppm (4) 500 ppm (3)
Trichloroethene	9.5	Inhalation, Ingestion	50 ppm (1) 100 ppm (2) 1000 ppm (3) 300 ppm (5)
Tetrachloroethene	9.3	Inhalation, Ingestion, Animal Carcinogen	25 ppm (1) 100 ppm (2) 150 ppm (3)
Carbon Disulfide	10.1	Inhalation, Ingestion, Skin Absorption	10 ppm (1) 20 ppm (2) 500 ppm (3)
4-Methyl-2-Pentanone	9.3	Inhalation, Ingestion	50 ppm (1) 100 ppm (2) 500 ppm (3)
Xylene	8.5	Inhalation, Ingestion	100 ppm (1) 100 ppm (2) 900 ppm (3)
Toluene	8.8	Inhalation, Ingestion, Skin Absorption	50 ppm (1) 200 ppm (2) 500 ppm (3) 500 ppm (6)
Acetone	9.7	Inhalation, Ingestion	50 ppm (1) 1000 ppm (2) 2500 ppm (3)
1,1,2,2-Tetrachloroethane	11.1	Inhalation, Ingestion, Skin Absorption	1 ppm (1) 5 ppm (2) 100 ppm (3)
4-Hexanone	NI	Inhalation, Ingestion	NE
Ethylbenzene	8.8	Inhalation, Ingestion	100 ppm (1) 100 ppm (2) 800 ppm (3)

TABLE A2.2

**EXPOSURE ROUTES AND EXPOSURE LEVELS
FOR THE CHEMICAL COMPOUNDS OF CONCERN
PHASE II COMPREHENSIVE SITE ASSESSMENT
FORMER ASSEMBLY PLANT
FRAMINGHAM, MASSACHUSETTS**

Chemical Compound	*Ionization Potential*	*Exposure Routes*	*Acceptable Exposure Levels in Air*
Methylene Chloride	11.3	Inhalation, Ingestion, Animal Carcinogen	50 ppm (1) 25 ppm (2) 2300 ppm (3)
2-Butanone	9.5	Inhalation, Ingestion	200 ppm (1) 200 ppm (2) 3000 ppm (3)
Acenaphthene	NA	Inhalation, Ingestion	NE
Benzo(a)Fluorene	NA	Inhalation, Ingestion	NE
Anthracene	NA	Inhalation, Ingestion	NE
Benzo(a)Anthracene	NA	Inhalation, Ingestion	NE
Chrysene	NA	Inhalation, Ingestion, Human Carcinogen	0.2 mg/m^3 (1) 0.2 mg/m^3 (2) 80 mg/m^3 (3)
2-Methylnaphthalene	NA	Inhalation, Ingestion	NE
2-Methylphenol	NA	Inhalation, Ingestion	NE
4-Chloro-3-Methylphenol	NA	Inhalation, Ingestion	NE
4-Methylphenol	NA	Inhalation, Ingestion	NE
Acenapthylene	NA	Inhalation, Ingestion	NE
Butylbenzylphthalate	NA	Inhalation, Ingestion	NE
Carbazole	NA	Inhalation, Ingestion	NE
Di-n-Butylphthalate	NA	Inhalation, Ingestion	5 mg/m^3 (1) 5 mg/m^3 (2) 4000 mg/m^3 (3)
Di-n-Octylphthalate	NA	Inhalation, Ingestion	5 mg/m^3 (2)
Dibenzo [a,h] Anthracene	NA	Inhalation, Ingestion	NE
Dibenzofuran	NA	Inhalation, Ingestion	NE
Diethylphthalate	NA	Inhalation, Ingestion	NE

TABLE A2.2

**EXPOSURE ROUTES AND EXPOSURE LEVELS
FOR THE CHEMICAL COMPOUNDS OF CONCERN
PHASE II COMPREHENSIVE SITE ASSESSMENT
FORMER ASSEMBLY PLANT
FRAMINGHAM, MASSACHUSETTS**

Chemical Compound	*Ionization Potential*	*Exposure Routes*	*Acceptable Exposure Levels in Air*
Fluoranthene	NA	Inhalation, Ingestion	NE
Fluorene	NA	Inhalation, Ingestion	NE
Naphthalene	8.12	Inhalation, Ingestion, Skin Absorption	10 ppm (1) 10 ppm (2) 250 ppm (3)
Pentachlorophenol	8.5	Inhalation, Ingestion, Skin Absorption, Animal Carcinogen	0.5 mg/m^3 (1) 0.5 mg/m^3 (2) 2.5 mg/m^3 (3)
4-4'-DDD	NA	Inhalation, Ingestion	NE
4-4'-DDE	NA	Inhalation, Ingestion	NE
4-4'-DDT	NA	Inhalation, Ingestion, Skin Absorption	1 mg/m^3 (1) 1 mg/m^3 (2) 500 mg/m^3 (3)
Aldrin	NA	Inhalation, Ingestion, Skin Absorption, Animal Carcinogen	0.25 mg/m^3 (1) 0.25 mg/m^3 (2) 25 mg/m^3 (3)
Alpha-BHC	NA	Inhalation, Ingestion	NE
Alpha-Chlordane	NA	Inhalation, Ingestion	NE
Aroclor-1254	NA	Inhalation, Ingestion, Skin Absorption, Suspected Human Carcinogen	0.5 mg/m^3 (1) 0.5 mg/m^3 (2) 5 mg/m^3 (3)
Beta-BHC	NA	Inhalation, Ingestion	NE
Delta-BHC	NA	Inhalation, Ingestion	NE
Dieldrin	NA	Inhalation, Ingestion, Skin Absorption	.25 mg/m^3 (1) .25 mg/m^3 (2) 50 mg/m^3 (3)
Endosulfan I	NA	Inhalation, Ingestion, Skin Absorption	0.1 mg/m^3 (1)
Endosulfan II	NA	Inhalation, Ingestion	NE

TABLE A2.2

**EXPOSURE ROUTES AND EXPOSURE LEVELS
FOR THE CHEMICAL COMPOUNDS OF CONCERN
PHASE II COMPREHENSIVE SITE ASSESSMENT
FORMER ASSEMBLY PLANT
FRAMINGHAM, MASSACHUSETTS**

Chemical Compound	*Ionization Potential*	*Exposure Routes*	*Acceptable Exposure Levels in Air*
Endosulfan Sulfate	NA	Inhalation, Ingestion	NE
Endrin	NA	Inhalation, Ingestion, Skin Absorption	0.1 mg/m^3 (1) 0.1 mg/m^3 (2) 2 mg/m^3 (3)
Endrin Aldehyde	NA	Inhalation, Ingestion	NE
Endrin Ketone	NA	Inhalation, Ingestion	NE
Gamma-Chlordane	NA	Inhalation, Ingestion	NE
Heptachlor	NA	Inhalation, Ingestion, Skin Absorption, Animal Carcinogen	0.05 mg/m^3 (1) 0.5 mg/m^3 (2) 35 mg/m^3 (3)
Heptachlor Epoxide	NA	Inhalation, Ingestion, Skin Absorption, Animal Carcinogen	0.05 mg/m^3 (1) 0.5 mg/m^3 (2) 35 mg/m^3 (3)
Methoxychlor	NA	Inhalation, Ingestion	10 mg/m^3 (1) 15 mg/m^3 (2) 5000 mg/m^3 (3)
Fluoranthene	NA	Inhalation, Ingestion	NE
Benzo(a) & (b)Fluoranthene	NA	Inhalation, Ingestion, Suspected Human Carcinogen	NE
Benzo(k)Fluoranthene	NA	Inhalation, Ingestion	NE
bis(2-Ethylhexyl)Phthalate	NA	Inhalation, Ingestion	NE
Benzo(g,h,i)Perylene	NA	Inhalation, Ingestion	NE
Phenanthrene	NA	Inhalation, Ingestion	NE
Pyrene	NA	Inhalation, Ingestion	NE
Benzo(a)Pyrene	NA	Inhalation, Ingestion, Suspected Human Carcinogen	0.2 mg/m^3 (2)
Indeno(1,2,3cd)Pyrene	NA	Inhalation, Ingestion	NE

TABLE A2.2

EXPOSURE ROUTES AND EXPOSURE LEVELS FOR THE CHEMICAL COMPOUNDS OF CONCERN PHASE II COMPREHENSIVE SITE ASSESSMENT FORMER ASSEMBLY PLANT FRAMINGHAM, MASSACHUSETTS

Chemical Compound	*Ionization Potential*	*Exposure Routes*	*Acceptable Exposure Levels in Air*
Lead	NA	Inhalation, Ingestion, Animal Carcinogen	0.05 mg/m^3 (1) 0.05 mg/m^3 (2) 100 mg/m^3 (3)
Arsenic	NA	Inhalation, Ingestion, Human Carcinogen	0.01 mg/m^3 (1) 0.01 mg/m^3 (2) 10 mg/m^3 (3)
Cadmium	NA	Inhalation, Ingestion, Suspected Human Carcinogen	0.01 mg/m^3 (1) 0.005 mg/m^3 (2) 9 mg/m^3 (3)
Chromium	NA	Inhalation, Ingestion	0.5 mg/m^3 (1) 0.5 mg/m^3 (2) 250 mg/m^3 (3)
Copper	NA	Inhalation, Ingestion	1 mg/m^3 (1) 1 mg/m^3 (2) 100 mg/m^3 (3)
Zinc	NA	Inhalation, Ingestion	NE
Mercury	NA	Inhalation, Ingestion, Skin Absorption	0.025 mg/m^3 (1) 0.1 mg/m^3 (4) 10 mg/m^3 (3)

Notes:

(1) 2004 Values, American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs).
(2) Federal Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL).
(3) Immediately Dangerous to Life and Health (IDLH).
(4) Federal OSHA 15 minute ceiling standard.
(5) Federal OSHA 5 minute exposure limit.
(6) Federal OSHA 10 minute exposure limit.
mg/m^3 Milligrams per Cubic Meter.
NA Not Applicable.
NE Not Established.
ppm Parts Per Million.

TABLE A6.1

SPECIFIC PERSONAL PROTECTION LEVELS
PHASE II COMPREHENSIVE SITE ASSESSMENT
FORMER ASSEMBLY PLANT
FRAMINGHAM, MASSACHUSETTS

Work Task	*Maximum Protection Level* [1]	*Alternate Protection Level* [2]
Mobilization and Demobilization of Labor, Materials, and Equipment to and from the Site	Modified D	D
Installation of New Groundwater Monitoring Wells and the Refurbishment of Some Existing Wells	Level C	Modified D
Soil Sampling Activities	Level C	Modified D
Groundwater, Surface Water, and Sediment Sampling Activities	Level C	Modified D
Installation of Test Pits	Level C	Modified D
Installation of Erosion Controls	Modified D	D
Decontamination Activities	Level C	Modified D

Notes:

Specific requirements for protection levels are detailed in Section 6.1.

(1) Level C: To be worn when the criterion for using air purifying respirators (APRs) are met and a lesser level of skin protection is needed.
Modified D: To be worn when dermal protection is required, however, no respiratory hazards are present. It provides minimal protection against chemical hazards.

(2) Alternate protection levels will be used if monitoring indicates that conditions are appropriate or the HSO determines that there is a reduced potential of exposure.

TABLE A7.1

TASK-SPECIFIC HEALTH AND SAFETY RISK ASSESSMENT (TSHSRA)
PHASE II COMPREHENSIVE SITE ASSESSMENT
FORMER ASSEMBLY PLANT
FRAMINGHAM, MASSACHUSETTS

Activity	*Anticipated Hazards/Risks*	*Appropriate Precautions*
1. Mobilization and Demobilization Activities	• slip/trip/fall hazards • potential back injuries from lifting heavy objects • potential heat or cold stress • severe weather • electrical hazards from power source • moving or backing vehicles • cuts to hands from working with sharp objects • biological hazards (i.e., deer ticks, poison ivy, poison oak, etc.)	• Modified D or Level D personal protection • practice safe lifting techniques • participate in on-site training programs • practice good personal hygiene principles • use a spotter around moving or backing equipment • work activities will be reduced or suspended during severe weather conditions • ground fault circuit interrupters (GFCIs) should be used to reduce the hazard of electrical shock. Do not stand in water when handling equipment. Electrical equipment will be approved. • keep first aid supplies readily available • wear leather gloves when working with sharp objects
2. Installation of New Groundwater Monitoring Wells and the Refurbishment of Some Existing Wells, Soil Sampling Activities, Groundwater, Sediment, and Surface Water Sampling Activities, Installation of Test Pits, Installation of Erosion Controls, and Decontamination Activities	• slip/trip/fall hazards • potential back injuries from lifting heavy objects • potential heat or cold stress • severe weather • electrical hazards from power sources • moving or backing vehicles and equipment • personnel injuries from sharp objects, falling debris, or pinch points • direct contact with potentially contaminated soils and groundwater	• Level C, Modified D, and Level D based on real time air monitoring or established protection levels (see Table 6.1) • practice safe lifting techniques • participate in all on-site training programs • be trained with all appropriate equipment SOPs • wear leather gloves when working with sharp objects • practice good personal hygiene principles • take proper precautions in unsafe areas

TABLE A7.1

TASK-SPECIFIC HEALTH AND SAFETY RISK ASSESSMENT (TSHSRA)
PHASE II COMPREHENSIVE SITE ASSESSMENT
FORMER ASSEMBLY PLANT
FRAMINGHAM, MASSACHUSETTS

Activity	*Anticipated Hazards/Risks*	*Appropriate Precautions*
	• hazards presented by the use of drilling and heavy equipment • overhead and underground hazards (i.e., electrical lines, gas, or water lines) • potential burns from hot equipment • hazards presented by the use of specialized equipment (e.g., decontamination equipment) • hazards presented by entry into a confined space (i.e., oxygen deficient, working in small tight areas, and falling overhead objects) • reduced field of vision from wearing full-face respirators • potential for drowning from working in, on, or near the water • biological hazards (deer ticks, poison ivy, poison oak, etc.)	• use the "Buddy System" • perform an underground utilities location search • only essential personnel allowed in work areas • if performing confined space entry work, make sure permit system is in place, if required, and workers have participated in a training program • use a spotter around moving or backing equipment • identify all high temperature objects or equipment • work activities will be reduced or suspended during severe weather conditions • GFCIs should be used to reduce the hazard of electrical shock. Do not stand in water when handling equipment. Electrical equipment will be approved. • keep first aid supplies readily available • wear personal floatation device when working in, on, or near water

ATTACHMENT A

TRAINING ACKNOWLEDGEMENT FORM

TRAINING ACKNOWLEDGEMENT FORM

I have been instructed in and understand the Site Safety Plan. I have been informed whom to contact if I have any questions and know where to report any additional health and safety hazards. I agree to work to the safety plan guidelines and understand that failure to do so could result in removal from the site.

Date	*Printed Name*	*Signature*	*Company*

ATTACHMENT B

DAILY SAFETY MEETING LOG

DAILY SAFETY MEETING LOG

PROJECT: _____ LOCATION: _____

DATE/TIME: _____

Safety Issues or Topics Discussed:

Signatures of Attendees:	

PERFORMANCE BOND

Date bond executed: 12/21/2006

Effective date: 12/21/2006
Principal: General Motors Corporation
P.O. Box 300, Detroit, MI 48265-3000

Type of organization: Corporation

State of incorporation: Delaware
Surety (ies): Westchester Fire Insurance Company
436 Walnut Street, Philadelphia, PA 190103

Former General Motors Landfill RTN: 3-3939
63 Western Avenue
Framingham, MA 01702
Engineered Barrier Monitoring and Maintenance

Total penal sum of bond: $925,816.00

Surety's bond number: K07593867

Know All Persons By These Presents, That we, the Principal and Surety (ies) hereto, are firmly bound to the Department of Environmental Protection, hereinafter called the Department, in the above penal sum, for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety (ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum 'jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal has, pursuant to M.G.L. c. 21E and 310 CMR 40.000, a Permit to achieve a Response Action Outcome (RAO) for the disposal site identified above, and

Whereas said Principal is required to provide financial assurance for monitoring, maintenance, and any necessary replacement of the barrier as a condition of the permit and Class A-4 RAO, and

Whereas, as a condition of the Permit and Class A-4 RAO, said Principal requires a surety bond to be used to provide such financial assurance;

Whereas said Principal is required to provide financial assurance for a minimum period of 30 years, following the construction of the engineered barrier or until an engineered barrier is no longer required at the site to maintain a condition of No Significant Risk, of monitoring, maintenance, and any necessary replacement of the barrier as a condition of the Permit and Class A-4 RAO and consistent with the provisions of 310 CMR 30.633 and 310 30.592B(3).

Principal intends to transfer the Site property and the disposal site to a new owner within one year of the RAO Statement and one condition of the transfer shall be to have the new owner obtain financial assurance to replace the Principal's financial assurance and the Principal shall terminate this surety bond.

Now, therefore, the conditions of this obligation are such that if the Principal shall faithfully perform post-RAO response actions, whenever required to do so, of the Site for which this bond guarantees monitoring, maintenance, and any replacement of the barrier, in accordance with the approved RAO Statement and Operation, Monitoring, and Maintenance (OMM) Plan, and all applicable requirements of the RAO Statement, and OMM Plan, as such statement, and plan may be amended from time to time, and M.G.L. c. 21E and 310 CMR 40.000, as may be amended from time to time; and if the Principal shall faithfully perform post-RAO OMM for which this bond guarantees post-RAO OMM , in accordance with the approved RAO Statement and OMM Plan and all applicable requirements of the RAO Statement, and OMM Plan, as such statement and plan may be amended, and pursuant to M.G.L. c. 21C and 310 CMR30.000, as may be amended from time to time,

The Surety (ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the Department that the Principal has failed to conduct OMM in accordance with 310 CMR 40.0996 (4), the surety shall become liable on the bond obligation to:

1. Perform OMM as guaranteed by the bond; or

2. Deposit the total penal sum of the bond into a trust fund or other financial instrument as directed by the Department.

The Surety (ies) hereby waive(s) notification of amendments to RAO Statements, the OMM Plan, permits, applicable laws, statutes, rules, and regulations and agree(s) that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety (ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety (ies) hereunder exceed the amount of said penal sum.

The Surety (ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the Department, provided, however, that cancellation shall not take effect until at least 120 days after the date of receipt of the notice of cancellation by both the Principal and the Department, as shown by the later return receipt.

In Witness Whereof, The Principal and Surety (ies) have executed this Performance Bond and have affixed their seals on the date set forth above.

The individuals whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety (ies) and that the wording of this surety bond is identical to the wording specified in 310 CMR 30.909(3) except as appropriately modified to meet the requirements of 310 CMR 40.0996 (4), as in effect on the date this bond was executed.

Principal: General Motors Corporation

[Name(s)] Frederick A. Henderson

[Title(s)] Vice Chairman and CFO

[Corporate seal]

Corporate Surety (ies)
Westchester Fire Insurance Company
436 Walnut Street, Philadelphia, PA 19103

State of incorporation: New York
Liability limit: $ 925,816.00

Sandra Martinez, Attorney-in-Fact

Corporate seal:

Bond premium: $ 4,166.00

ACKNOWLEDGEMENT BY SURETY

STATE OF ILLINOIS
COUNTY OF COOK

On this 21st day of December, 2006, before me, Chris P. Troha, a Notary Public, within and for said County and State, personally appeared Sandra Martinez to me personally known to be the Attorney-in-Fact of and for Westchester Fire Insurance Company and acknowledged that she executed the said instrument as the free act and deed of said Company.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, at my office in the aforesaid County, the day and year in this certificate first above written.

Notary Public in the State of Illinois
County of Cook

OFFICIAL SEAL
CHRIS P. TROHA
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES JUNE 29,2009

Power of Attorney

174016

WESTCHESTER FIRE INSURANCE COMPANY

1182499

Know all men by these presents: That **WESTCHESTER FIRE INSURANCE COMPANY**, a corporation of the State of New York, having its principal office in the City of Atlanta, Georgia, pursuant to the following Resolution, adopted by the Board of Directors of the said Company on November 8, 1999, to wit:

"RESOLVED, that the following Rules shall govern the execution for the Company of bonds, undertakings, recognizances, contracts and other writings in the nature thereof:

(1) That the President, any Senior Vice President, any Vice President, and Assistant Vice President, or any Attorney-in-Fact, may execute for and on behalf of the Company any and all bonds, undertakings, recognizances, contracts and other writings in the nature thereof, the same to be attested when necessary by the Corporate Secretary, or any Assistant Corporate Secretary, and the seal of the Company affixed thereto; and that the President, any Senior Vice President, any Vice President or any Assistant Vice President may appoint and authorize any other Officer (elected or appointed) of the Company, as Attorneys-In-Fact to so execute or attest to the execution of all such writings on behalf of the Company and to affix the seal of the Company thereto.

(2) Any such writing executed in accordance with these Rules shall be as binding upon the Company in any case as though signed by the President and attested to by the Corporate Secretary.

(3) The signature of the President, or a Senior Vice President, or a Vice President, or an Assistant Vice President and the seal of the Company may be affixed by facsimile on any power of attorney granted pursuant to this Resolution, and the signature of a certifying Officer and the seal of the Company may be affixed by facsimile to any certificate of any such power, and any such power or certificate bearing such facsimile signature and seal shall be valid and binding on the Company.

(4) Such other Officers of the Company, and Attorneys-In-Fact shall have authority to certify or verify copies of this Resolution, the By-Laws of the Company, and any affidavit or record of the Company necessary to the discharge of their duties.

(5) The passage of this Resolution does not revoke any earlier authority granted by Resolutions of the Board of Directors."

Does hereby nominate, constitute and appoint CRAIG T. TAGLIAMONTE, ROBERT E. DUNCAN, GEOFFREY E. HEEKIN, THOMAS J. JOSLIN, KAREN DANIEL, LINDA ISER, KATHLEEN J. MAILES, SANDRA MARTINEZ, SUSAN J. PREIKSA, SUSAN A. WELSH, MARCIA K. CESAFSKY, JOELLEN M. MENDOZA, CHRISTOPHER P. TROHA and PATRICIA M. DOYLE all of the City of Chicago, State of Illinois, each individually if there be more than one named, its true and lawful attorney-in-fact, to make, execute, seal and deliver on its behalf, and as its act and deed any and all bonds, undertakings, recognizances, contracts and other writings in the nature thereof in penalties not exceeding Twenty Five Million Dollars ($25,000,000) and the execution of such writings in pursuance of these presents shall be as binding upon said Company, as fully and amply as if they had been duly executed and ackowledged by the regularly elected officers of the Company at its principal office.

IN WITNESS WHEREOF, the said Stephen M. Haney, Vice-President, has hereunto subscribed his name and affixed the corporate seal of the said **WESTCHESTER FIRE INSURANCE COMPANY** this 28th day of November 2006.

WESTCHESTER FIRE INSURANCE COMPANY

Stephen M. Haney, Vice President

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF PHILADELPHIA ss.

On this 28th day of November, A.D. 2006, before me, a Notary Public of the Commonwealth of Pennsylvania in and for the County of Philadelphia came Stephen M. Haney, Vice-President of the **WESTCHESTER FIRE INSURANCE COMPANY** to me personally known to be the individual and officer who executed the preceding instrument, and he acknowledged that he executed the same, and that the seal affixed to the preceding instrument is the corporate seal of said Company; that the said corporate seal and his signature were duly affixed by the authority and direction of the said corporation, and that Resolution, adopted by the Board of Directors of said Company, referred to in the preceding instrument, is now in force.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal at the City of Philadelphia the day and year first above written.

NOTARIAL SEAL
Kathleen Tirri, Notary Public
Philadelphia, Philadelphia County
My commission expires September 22, 2007

Notary Public

I, the undersigned Secretary of **WESTCHESTER FIRE INSURANCE COMPANY**, do hereby certify that the original POWER OF ATTORNEY, of which the foregoing is a substantially true and correct copy, is in full force and effect.

In witness whereof, I have hereunto subscribed my name as Secretary, and affixed the corporate seal of the Corporation, this 21st day of December 2006.

George D. Mulligan, Secretary

THIS POWER OF ATTORNEY MAY NOT BE USED TO EXECUTE ANY BOND WITH AN INCEPTION DATE AFTER November 28, 2008.

FORM NO. 8800S

THE BACK OF THIS DOCUMENT LISTS VARIOUS SECURITY FEATURES THAT WILL PROTECT AGAINST COPY COUNTERFEIT AND ALTERATION.