



AS-BUILT CONSTRUCTION AND RESPONSE ACTION OUTCOME REPORT

**FORMER GENERAL MOTORS LANDFILL
FRAMINGHAM, MASSACHUSETTS**

**VOLUME I
TEXT, TABLES, FIGURES, AND APPENDICES A THROUGH G**

**Prepared For:
General Motors Corporation**

**JANUARY 2007
REF. NO. 012618 (33)**

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TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
1.1 BACKGROUND	2
1.2 RESPONSE ACTION OBJECTIVES.....	4
1.3 ORGANIZATION	5
2.0 CONCEPTUAL SITE MODEL	6
2.1 SITE BACKGROUND	6
2.1.1 PHYSICAL SETTING.....	6
2.1.2 ENVIRONMENTAL SETTING	7
2.1.3 SITE HISTORY	8
2.2 NATURE AND EXTENT OF CONTAMINATION.....	8
2.3 TRANSPORT OF COPCS.....	11
2.3.1 HHRA EXPOSURE PATHWAYS	11
2.3.2 ERA EXPOSURE PATHWAYS.....	12
2.4 RECEPTORS.....	12
2.4.1 HUMAN	12
2.4.2 ECOLOGICAL	13
2.5 SUMMARY OF RISKS	13
2.5.1 HUMAN HEALTH	13
2.5.2 PUBLIC WELFARE	15
2.5.3 SAFETY.....	16
2.5.4 ENVIRONMENT.....	16
2.6 REMEDIAL ACTION	18
2.7 ACTIVITY AND USE LIMITATION	20
3.0 RIP REQUIREMENTS AND AS-RECORDED DRAWINGS	21
3.1 REQUIREMENTS.....	21
3.1.1 DESIGN OBJECTIVES/BASIS.....	21
3.1.2 DESIGN CRITERIA.....	21
3.2 AS-RECORDED DRAWINGS	22
3.3 TECHNICAL SPECIFICATIONS.....	23
4.0 CONSTRUCTION ACTIVITIES.....	25
4.1 REMEDIAL CONSTRUCTION ACTIVITIES.....	25
4.2 REMEDIAL CONSTRUCTION SCHEDULE	27
4.3 WINTER EROSION AND SEDIMENT CONTROLS	27
4.4 SPRING REPAIR ACTIVITIES	28
4.5 REMEDIAL DESIGN CHANGES	28
4.5.1 SUBBASE/ASPHALT CHANGES.....	28
4.5.2 STORMWATER SEWER	28
4.5.3 NORTH POND ACTIVITIES.....	30

TABLE OF CONTENTS

	<u>Page</u>
4.6	WASTE DISPOSAL 31
4.6.1	SITE DEBRIS 31
4.6.2	STORMWATER SEWER CLEANING AND LINING WASTEWATER....31
4.6.3	STORMWATER SEWER CLEANING DEBRIS AND SEDIMENT 32
5.0	REMEDIAL CONSTRUCTION QUALITY
	CONTROL AND QUALITY ASSURANCE 33
5.1	REMEDIAL CONSTRUCTION PROJECT ORGANIZATION 33
5.2	CONSTRUCTION QUALITY CONTROL 34
5.3	CONSTRUCTION QUALITY ASSURANCE 35
5.4	CONSTRUCTION QUALITY CONTROL AND QUALITY
	ASSURANCE RESULTS, ISSUES AND RESOLUTIONS 36
5.4.1	SUBMITTALS.....37
5.4.1.1	CONSTRUCTION MEETING MINUTES 37
5.4.1.2	TRANSPORTATION ROUTES 37
5.4.1.3	AGGREGATE AND RIPRAP MATERIAL PROPERTIES 37
5.4.1.4	PROGRESS SUBMITTALS FOR FLEXIBLE PAVEMENT 38
5.4.2	SPOILS LAYER 38
5.4.2.1	MATERIAL PROPERTIES.....39
5.4.2.2	MATERIAL PLACEMENT 40
5.4.3	COMMON FILL AND ASPHALT SUBBASE LAYER 41
5.4.3.1	MATERIAL PROPERTIES.....42
5.4.3.2	MATERIAL PLACEMENT 43
5.4.3.3	STRUCTURAL REINFORCEMENT GEOTEXTILE 44
5.4.4	ASPHALT BASE LAYER.....45
5.4.4.1	MATERIAL PROPERTIES.....45
5.4.4.2	MATERIAL PLACEMENT 46
5.4.5	ASPHALT BINDER COURSE 46
5.4.5.1	JOB MIX FORMULA.....46
5.4.5.2	BINDER COURSE PLACEMENT 47
5.4.5.3	IN-PLACE QA/QC 48
5.4.5.4	SPRING 2006 OBERVATIONS AND REPAIRS.....48
5.4.5.5	ASPHALT BASE COURSE REPAIRS QA/QC 49
5.4.5.6	DEFICIENCIES IN QC AND QA FREQUENCY TESTING 50
5.4.6	STORMWATER SEWER LINING.....50
5.4.7	ASPHALT LEVELING COURSE 51
5.4.7.1	JOB MIX FORMULAS.....51
5.4.7.2	LEVELING COURSE PLACEMENT 51
5.4.7.3	IN-PLACE QC/QA 52
5.4.7.4	DEFICIENCIES IN QC AND QA FREQUENCY TESTING 52
5.4.8	ASPHALT TOP COURSE.....53
5.4.8.1	MATERIAL PLACEMENT 53

TABLE OF CONTENTS

	<u>Page</u>
5.4.8.2 ASPHALT WARRANTY	54
5.5 PAVEMENT STRUCTURAL NUMBER AND LOADING.....	55
5.6 OMM CONSIDERATIONS.....	56
5.7 CONSTRUCTION QUALITY CONTROL AND QUALITY ASSURANCE SUMMARY	57
6.0 FCC ORDERS OF CONDITIONS/SITE INSPECTIONS.....	58
6.1 OCTOBER 2004 ORDER OF CONDITIONS	58
6.2 AUGUST 2005 ORDER OF CONDITIONS.....	58
6.3 PRE-FINAL SITE INSPECTION.....	59
6.4 FINAL 2007 SITE INSPECTION	59
7.0 HEALTH AND SAFETY	61
8.0 NOTICE OF ACTIVITY AND USE LIMITATION AND OMM PLAN	63
8.1 NOTICE OF ACTIVITY AND USE LIMITATION	63
8.1.1 PERMITTED USES AND ACTIVITIES	63
8.1.2 RESTRICTED USES AND ACTIVITIES.....	64
8.1.3 OBLIGATIONS AND CONDITIONS.....	64
8.2 FINAL OMM PLAN	65
8.2.1 AUL FINANCIAL ASSURANCE	65
9.0 RESPONSE ACTION OUTCOME STATEMENT	67

LIST OF FIGURES
(Following Text)

FIGURE 1.1	SITE LOCATION
FIGURE 1.2	SITE FEATURES
FIGURE 2.1	CROSS-SECTION LOCATION MAP
FIGURE 2.2	CROSS-SECTION A-A'
FIGURE 2.3	CROSS-SECTION B-B'
FIGURE 2.4	CROSS-SECTION C-C'
FIGURE 2.5	HUMAN HEALTH EXPOSURE SITE MODEL SCHEMATIC
FIGURE 2.6	ECOLOGICAL EXPOSURE SITE MODEL SCHEMATIC
FIGURE 5.1	PROJECT ORGANIZATION

LIST OF TABLES
(Following Text)

TABLE 1.1	CHRONOLOGY OF EVENTS
TABLE 2.1	SUMMARY OF RISK ASSESSMENT COPCs
TABLE 5.1	SUBMITTAL TRACKING LOG
TABLE 5.2	IMPORTED MATERIAL QUANTITIES
TABLE 5.3	SUMMARY OF QUALITY CONTROL AND QUALITY ASSURANCE TESTING FOR IMPORTED MATERIAL PROPERTIES
TABLE 5.4	SUMMARY OF QUALITY CONTROL AND QUALITY ASSURANCE TESTING FOR MATERIAL PLACEMENT

LIST OF APPENDICES

APPENDIX A	BWSC FORMS AND PUBLIC NOTIFICATION LETTERS
APPENDIX B	RESPONSE ACTION OUTCOME STATEMENT
APPENDIX C	NOTICES OF ACTIVITY AND USE LIMITATIONS
APPENDIX D	OPERATION, MAINTENANCE, AND MONITORING PLAN
APPENDIX E	FRAMINGHAM CONSERVATION COMMISSION PHASE IV AUGUST 2005 ORDER OF CONDITIONS DOCUMENTATION
APPENDIX F	AS-RECORDED DRAWINGS
APPENDIX G	REMEDATION CONSTRUCTION SCHEDULES
APPENDIX H	OFF-SITE DISPOSAL DOCUMENTATION (BOLS)
APPENDIX I	CRA SUPERINDENT DAILY LOGS
APPENDIX J	SOIL LAYERS GEOTECHNICAL LABORATORY REPORTS
APPENDIX K	SOIL LAYERS GEOTECHNICAL FIELD REPORTS
APPENDIX L	SOIL LAYERS ANALYTICAL CHEMISTRY REPORTS AND COMPLIANCE ASSESSMENTS
APPENDIX M	AGGREGATE INDUSTRIES ASPHALT JOB MIX FORMULAS
APPENDIX N	ASPHALT LAYERS GEOTECHNICAL AND FIELD LABORATORY REPORTS
APPENDIX O	SEVENSON/AGGREGATE INDUSTRIES ASPHALT WARRANTY
APPENDIX P	CRA ASPHALT REPAIR MEMORANDUM (APRIL 25, 2006)
APPENDIX Q	INSITUFORM STORM SEWER LINING FAILURE REPORT (MARCH 7, 2006)

LIST OF ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
ACCUTEST	Accutest Laboratories of New England
ACEC	Areas of Critical Environmental Concern
ACOP	Administrative Consent Order Without Penalty
ADESA	ASSET Holdings III LP or ADESA Boston, Inc.
ASTM	American Society for Testing and Materials
ATC	ATC Associates, Inc.
AUL	Activity and Use Limitation
bgs	Below Ground Surface
BOL	Bill of Lading
Briggs	Briggs Engineering & Testing
BWSC	Bureau of Waste Site Cleanup
CBR	California Bearing Ratio
CCTV	Closed-Circuit Television
CIPP	Cured In-Place Pipe
CMR	Commonwealth of Massachusetts Regulations
Conrail	The Consolidated Rail Corporation
COPC	Chemical of potential concern
CQAP	Construction Quality Assurance Plan
CRA	Conestoga-Rovers & Associates, Inc.
CSA	Comprehensive Site Assessment
CSM	Conceptual Site Model
CY	Cubic Yard
DQOs	Data Quality Objectives
DWSA	Drinking Water Source Area
E&S	Erosion and Sediment
EPH	Extractable Petroleum Hydrocarbons
ERA	Ecological Risk Assessment
ESAL	Equivalent Single Axle Load
FCC	Framingham Conservation Commission

LIST OF ACRONYMS

ft	Feet or Foot
Funari	Funari Trucking
GM	General Motors Corporation
GVW	Gross Vehicle Weight
GZA	GZA Geoenvironmental, Inc.
HASP	Health and Safety Plan
HHRA	Human Health Risk Assessment
HI	Hazard Index
HSO	Sevenson's Health and Safety Officer
Insituform	Insituform Technologies Inc.
JMF	Job Mix Formula
Kimball	Kimball Sand Company, Inc.
LF	Linear Feet
LSP	Massachusetts Licensed Site Professional
MADEP	Massachusetts Department of Environmental Protection
MCP	Massachusetts Contingency Plan
NIOSH	National Institute for Occupational Safety and Health
NSR	No Significant Risk
OHM	Oil and/or Hazardous Material
OMM	Operation, Maintenance, and Monitoring
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorobiphenyl
PG	Performance Grade
PPE	Personal Protective Equipment
Property	63 Western Avenue
PSI	Pounds per Square Inch
QA	Quality Assurance
QC	Quality Control
RAM	Release Abatement Measures
RAO	Response Action Outcome

LIST OF ACRONYMS

RAP	Remedial Action Plan
RC	Remedial Construction
RCRA	Resource Conservation and Recovery Act
RIP	Remedial Implementation Plan
RME	Reasonable Maximum Exposure
RTN	Release Tracking Number
Sevenson	Sevenson Environmental Services, Inc.
Site	Former Landfill Site (RTN: 3-3939)
SF	Square feet
SVOCs	Semi-volatile Organic Compounds
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TAL	Target Analyte List
TECs	Threshold Effect Concentrations
TSR	Tensile Strength Ratio
TSS	Total Suspended Solids
UCL	Upper Concentration Limit
VMA	Voids in mineral aggregate
VOCs	Volatile Organic Compounds
WQC	USEPA 2002 Ambient Water Quality Criteria

1.0 INTRODUCTION

Conestoga-Rovers & Associates Inc. (CRA) has prepared this As-Built Construction and Response Action Outcome (RAO) Report for the comprehensive response activities completed for the Former Landfill (Site), assigned Massachusetts Department of Environmental Protection (MADEP) Bureau of Waste Site Cleanup (BWSC) Release Tracking Number (RTN) 3-3939, on behalf of General Motors Corporation (GM). The Site location is presented on Figure 1.1 and the Site features are presented on Figure 1.2.

This Report has been prepared in accordance with 310 Commonwealth of Massachusetts Regulations (CMR) 40.0000 [Massachusetts Contingency Plan (MCP)] and other applicable MADEP regulations, policies, and guidance. The As-Built Construction Report documents the Phase IV remedial construction (RC) activities completed as part of the comprehensive response actions including the tests and measurements and provides the as-recorded or as-built engineering drawings of the RC activities. The response actions included the construction of an engineered barrier and related activities based on the Phase III Remedial Action Plan (RAP) (CRA, September 2005) and the Phase IV Remedy Implementation Plan (RIP) (CRA, October 2005).

BWSC Form 108 (Comprehensive Response Action Transmittal Form and Phase IV Completion Statement) and BWSC Form 104 (RAO Statement) were submitted electronically to the MADEP on January 25, 2007, and copies of the edep Transaction Records are provided in Appendix A. Copies of BWSC Form 122 (Public Notification Form) and the appropriate public notification notices are also included in Appendix A.

This Report provides an RAO Statement prepared in support of the Class A-4 RAO achieved for the Site. The RAO Statement is provided as Appendix B. The Class A-4 RAO requires a Notices of Activity and Use Limitations (AUL) to be registered on the property titles as part of the response action. Two AUL's were registered on the Site on January 16, 2007, and the BWSC Forms 113 (AUL Transmittal Form) and BWSC Form 113a (AUL Opinion Form) were submitted electronically to the MADEP on January 25, 2007. Copies of the registered AUL's, the registered AUL Plan, receipt of payment from the registry of deeds and copies of the edep Transaction Records for BWSC Forms 113 and 113a are provided herein as Appendix C.

The final Operation, Maintenance, and Monitoring (OMM) Plan required as part of the AUL to maintain the integrity of the class A-4 RAO and the condition of No Significant Risk (NSR) for the Site is provided as Appendix D. A chronology of the significant Site background and comprehensive response actions completed to January 2007 is provided in Table 1.1.

The Framingham Conservation Commission (FCC) has issued two Orders of Conditions for the Site; one in October 2004 for Phase II Comprehensive Site Assessment (CSA) investigative activities and the second in August 2005 for remedial construction activities which are provided in Appendix E. The requirements of both Orders of Conditions have been fully complied with throughout the comprehensive response actions. A request for a Certificate of Compliance will be submitted to the FCC upon completion of the Former Settling Lagoon/Beaverdam Brook Phase II CSA Activities to closeout the October 2004 Phase II CSA Order of Conditions. In November 2006, a request for Certificate of Compliance was submitted to the FCC to closeout the August 2005 Phase IV Order. Based a Final Inspection by the FCC and the Site Licensed Site Professional (LSP), an additional inspection is required in the Spring of 2007 to confirm adequate establishment of vegetation and to address any substantive further erosion that occurred over the winter months as documented in a technical memorandum from the FCC. Copies of the November 2006 request for Certificate of Compliance, the final inspection memorandum and the documentation from the FCC are provided in Appendix E (See Sections 7.3 and 7.4).

1.1 BACKGROUND

The Property is located at 63 Western Avenue in the Town of Framingham, Middlesex County, Massachusetts (Figure 1.1) and is approximately 90 acres in size. The Property is a former GM assembly plant that was sold to ASSET Holdings III LP or ADESA Boston, Inc. (ADESA) in 1994. The Site consists of an approximately six-acre parcel in the area of the Former Landfill located on the southwest side of the Property that is primarily on property currently owned by GM. The surface topography in the area of the Former Landfill is relatively flat. Larger vegetation is present along the western boundary of the Site. An approximately 3 foot (ft) diameter storm sewer transects the central portion of the Former Landfill, generally from south to north. The storm sewer provides a hydraulic connection from Wetland A, which is approximately 30-acres in size and is located to the south of the Site to Beaverdam Brook.

Land uses surrounding the Property include commercial, industrial and residential areas. Industrial, commercial and residential properties border the Property to the north. The Beaverdam Brook disposal site (RTN 3-4356) is managed by GM and borders the Property to the west and this disposal site includes Wetland A located to the south of the Site. The Former Settling Lagoon disposal site (RTN 3-3940) is managed by GM and is located to the west of Beaverdam Brook on the northwest side of the Property. ADESA owns approximately 0.2 acres of the property located within the approximately

six-acre Site as well as the property to the north, west, and east of the Site. GM is transferring the remaining Site ownership to ADESA upon achievement of this RAO. The Consolidated Rail Corporation (Conrail), owned by CSX Corporation, owns properties located to the west of Beaverdam Brook near the Site.

The Phase II CSA activities that have been completed were documented in the following submittals to MADEP:

1. Phase II CSA Work Plan (CRA, September 2004);
2. First Interim Phase II CSA Report (Wetland Delineation) (CRA, March 2005);
3. Second Interim Phase II CSA Report (Site Characterization) (CRA, July 2005);
4. Phase II CSA Work Plan Addendum No. 1 (CRA, July 2005);
5. Final Phase II CSA Report (Risk Characterization) (CRA, August 2005);
6. Phase III RAP (CRA, September 2005); and
7. Phase IV RIP Report (CRA, October 2005).

The Site history, background, nature and extent of oil and/or hazardous material (OHM), environmental setting, wetlands delineation, geology and hydrogeology, and other Site characterization information were presented in the First, Second Interim and Final Phase II CSA Reports. A Tier Reclassification for the Site and a Tier 1C Permit Application were also submitted with the Second Interim Phase II CSA Report. On September 26, 2005, MADEP issued confirmation of the Tier 1C Permit governing the response actions. The Final Phase II CSA Report provided MCP Method 3 Human Health and Environmental Risk Characterizations and updated/final conclusions regarding the Phase II CSA activities for the Site.

The Phase II CSA investigation activities also were completed in accordance with an Order of Conditions issued by the FCC in October 2004. The Phase IV RIP activities also were conducted in accordance with a second Order of Conditions issued by the FCC in August 2005.

On May 4, 2006, MADEP and GM entered into an Administrative Consent Order Without Penalty (ACOP), ACOP-NE-05-3A004, for the completion of MCP comprehensive response actions for the Site. The submittal of the As-Built Construction Report and RAO Statement, including the AUL and other documentation provided herein provides full compliance with Section VII (Disposition and Order) of the ACOP. No further actions are required with respect to the ACOP.

The approximately six-acre portion of the Site and one acre not within the Site boundary will be transferred from GM to ADESA upon completion of the transfer of the property. ADESA has the responsibility of maintaining the AUL for the Site to maintain a condition of NSR.

1.2 RESPONSE ACTION OBJECTIVES

The following response action objectives were developed based on the presence of Site-related OHM, and the results of the Phase II CSA to achieve a condition of NSR for the current and anticipated future uses of the Site. These response action objectives were presented in the Phase III RAP (CRA, September 2005):

1. Approximately 170,000 CY of soil, fill, and solid waste containing OHM are present in the Former Landfill, of which approximately one-half of the volume is below the groundwater table. The selected remedy should prevent contact with, contain, reduce, and/or detoxify the impacted materials to ensure a condition of NSR is maintained for the Site;
2. Address the level of Significant Risk [i.e., cumulative hazard index (HI) of 2.7] at the Site for future construction workers and lower risk for trespassers posed by exposure to OHM present in surface and subsurface soil, and groundwater within the Former Landfill;
3. Address the exceedance of the upper concentration limit (UCL) for lead in soils within the Former Landfill;
4. Ensure that OHM present in sediment and surface water within the storm sewer which transects the Site and potential OHM infiltration into the storm sewer from Site soil and groundwater does not result in unacceptable human health and/or ecological risk levels;
5. Ensure that OHM present in the soil, fill, and waste material and groundwater within the Former Landfill does not migrate to surface water and wetlands resulting in unacceptable human health and/or ecological risks; and
6. Address the potential impacts to receptors of Site-related OHM present in sediment in the off-Site stormwater management North Pond.

1.3 ORGANIZATION

The As-Built Construction Report and RAO Statement is organized as follows:

- i) Section 1.0 - presents background, response action objectives, chronology and the organization of the report;
- ii) Section 2.0 - presents the final Conceptual Site Model (CSM) for the Site;
- iii) Section 3.0 - provides the Phase IV RIP engineering design objectives/basis and criteria, presents the As-Built Drawings and describes the technical specifications;
- iv) Section 4.0 - presents the RC activities, schedule, design changes, and waste disposal;
- v) Section 5.0 - presents the remedial construction project organization, quality control (QC) and submittals, quality assurance (QA) including data assessments and QA/QC issues and resolutions;
- vi) Section 6.0 - provides details of the pre-final and final inspections, and the FCC Orders of Conditions;
- vii) Section 7.0 - presents a summary of the Phase IV health and safety activities;
- viii) Section 8.0 - presents the AULs including permitted and restricted uses and activities, obligations and conditions, financial assurance and the Final OMM Plan; and
- ix) Section 9.0 - provides support for the RAO Statement.

contact, and inhalation (i.e., airborne particulate and/or vapors). Potential exposure routes associated with Site groundwater and surface water include incidental ingestion, direct dermal contact, and particulate/vapor inhalation. Potential exposure routes associated with Site sediment in the stormwater management system include incidental ingestion and direct dermal contact.

As the current and future use of the Site is industrial/commercial, the ingestion of biota that has contact with contaminated media is not considered a primary pathway.

A flowchart showing the primary sources, release mechanisms, secondary sources, exposure routes and receptor characterization of the human health exposure is shown on Figure 2.5.

2.3.2 ERA EXPOSURE PATHWAYS

The OHM may be released directly to soil from waste, through sediment suspension, percolation and leaching from soil and waste to groundwater, via wind erosion and ground disturbance to other areas, and via runoff of storm water to offsite surface water bodies by surface runoff and through the storm sewer system. Direct discharge, surface runoff, and groundwater discharge to surface water may affect surface water and sediment. OHM present in the soils onsite or transported to offsite wetlands and surface water bodies may come into contact with ecological receptors through direct contact or direct or incidental ingestion of prey, sediment, soil, and water. The food ingestion pathway at the Site is considered secondary relative to the other pathways since the limited size and isolation of the habitat limits utilization by ecological receptors. An additional secondary pathway, incidental ingestion of groundwater/surface water, sediment, and soil, may be important for receptors during feeding or drinking activities or other behaviors such as preening. A flowchart showing the primary sources, release mechanisms, direct and indirect exposure pathways, exposure routes and ecological receptors/assessment endpoints is shown on Figure 2.6.

2.4 RECEPTORS

2.4.1 HUMAN

The current potentially exposed population includes industrial/commercial workers, utility workers, construction workers, and adolescents who may infrequently trespass at

2.0 CONCEPTUAL SITE MODEL

2.1 SITE BACKGROUND

2.1.1 PHYSICAL SETTING

The Property is located at 63 Western Avenue in the Town of Framingham, Middlesex County, Massachusetts. The Property can be accessed by Western Avenue located on the east border through the entrance of the east parking lot. There is security with guard patrols present on the Property 24 hours a day, seven days a week.

The Former Landfill Site consists of an approximately five-acre area located within an approximately six-acre parcel currently owned by GM on the southwest side of the Property. ADESA owns an approximately 0.2 acre portion of the Site. A 6 ft high chain link perimeter fence topped with three strands of barbed wire restricts access to the Site. Former railroad tracks run along the Site boundaries on the west, north, and south sides and provide both physical and hydraulic barriers to the potential migration of OHM.

Conrail owns properties located to the west of Beaverdam Brook near the Site. Approximately 32,000 square feet (SF) of the Site is located within the 100 to 200 ft Riverfront Area located along the east side of Beaverdam Brook.

Extensive Site characterization was completed as part of the Phase II CSA activities. Groundwater monitoring was completed up-gradient, across and down-gradient of the Site to assess OHM impact on groundwater quality. Surface water and sediment impacts also were delineated and assessed and potential air emissions were assessed as part of the Human Health Risk Assessment (HHRA).

According to the MADEP Site Scoring Map, Interim Phase II CSA (CRA, July 2005), there are no Protected Open Spaces, Areas of Critical Environmental Concern (ACEC), Drinking Water Sources Areas (DWSA), Potentially Productive Aquifers, or Sole Source Aquifers in the area of the Site.

There are a number of wetlands in the area of the Site as described in the Interim Phase II CSA Report – Wetland Delineation Report (CRA, March 2005). There is an approximately 30-acre wetland (Wetland A) located adjacent to the south side of the Site. Wetland areas B and C were located within the Site and total approximately 4,440 SF (0.1 acres) in size. Wetlands B and C were replicated in an area located on the north west side of the Property as part of a separate ADESA wetland replication project. Additionally, Wetlands D and E are located within the North Pond, a managed

stormwater feature not within the Site boundary, and are considered incidental and non-jurisdictional wetlands.

Site stormwater runoff drains primarily by sheet flow to a historic stormwater retention pond (North Pond) located to the northwest of the Site and to a stormwater retention pond (South Pond) located to the southeast of the Site. The South Pond was permitted by ADESA primarily to control stormwater drainage from a paved area located to the east of the Site.

There is some stormwater sheet flow from the Site and stormwater discharge through the stormwater sewer that transects the Site to the west through the North Pond, to Beaverdam Brook. There are no known historic or current discharges to municipal sewers, wastewater treatment plants, or any other disposal or treatment facility associated with the Site.

A 3 to 4 ft diameter storm sewer transects the central portion of the Site, generally from south to north, and hydraulically connects wetlands located south of the Site to Beaverdam Brook. It is believed that the stormwater sewer was installed to maintain the drainage connection from the wetland to the Brook that existed prior to historic waste disposal and to prevent both on and off-Site flooding.

2.1.2 ENVIRONMENTAL SETTING

The surface topography in the area of the Former Landfill is relatively flat. There was some larger vegetative growth in the central area of Former Landfill, in the vicinity of a storm sewer manhole. Larger vegetation is also present along the western boundary of the Site and in Wetland A.

The horizontal and vertical extent of OHM impacted soil and waste were delineated as part of the Phase II CSA activities and the horizontal extent was determined to be approximately 4.8 acres. Stratigraphic cross-sections are presented on Figures 2.1 through 2.4, and show the estimated limits of waste. The subsurface conditions in perimeter areas of the Site generally consist of from 4 to 14 ft of granular fill comprised of fine to coarse sand with varying amounts of silt, gravel and clay. The underlying waste materials vary in thickness from 0 ft to approximately 20 ft. A peat layer approximately 2 ft thick underlies a portion of the waste materials, consistent with the historical presence of water in a low-lying area. A medium dense sand and silt deposit underlies most of the waste material to a thickness ranging from approximately 15 to 25 ft below the peat layer. Bedrock underlies the sand and silt deposit.

Shallow groundwater was historically encountered at approximate depths ranging from 3.4 to 14 ft below ground surface (bgs) depending on location and seasonal fluctuations. Shallow groundwater ranges from 7 to 14 ft bgs based on 2004 and 2005 hydraulic monitoring. Shallow groundwater generally flows towards the stormwater sewer that transects the Site connecting Wetland A to Beaverdam Brook.

2.1.3 SITE HISTORY

There were no historical buildings and there are no current buildings at the Site. Land uses surrounding the Property are primarily industrial and commercial with some residential use. Prior to Phase IV RIP activities, the Site was generally vacant with paved portions on the perimeter of the Site and was intermittently used for temporary parking of vehicles to be auctioned. The Site will continue to be used for industrial/commercial purposes in the foreseeable future. The Site also is not located within a DWSA or a Potential DWSA and municipal water supply is available.

Two railroad spurs bound the south, west and north sides of the Site and were installed when the Former GM Assembly Plant was constructed in the 1940s. Between 1947 and 1970, waste material from the Former GM Assembly Plant was placed into a depression in the ground between two rail spurs ranging from approximately 12 ft deep at the eastern end to level with the ground surface at the western end. Between 1947 and 1964, waste materials deposited in the Former Landfill were reported to be burned. The use of the Former Landfill for waste disposal was discontinued in 1970. In 1992 the Site was covered with a layer of low permeability soil.

2.2 NATURE AND EXTENT OF CONTAMINATION

Based on previous environmental investigations, the nature of the waste at the Site is ash fill, and debris over an approximately 5.0 acre area to a typical depth of up to 20 ft. Approximately 170,000 CY of soil, fill, and solid waste containing OHM are present in the Former Landfill, of which approximately one-half of the volume is below the groundwater table. The nature of the waste materials was solid waste that was typical of wastes generated from automotive assembly manufacturing operations and related activities. During a portion of the period of historic waste disposal some of the wastes were burnt as part of the disposal practices. The types of waste materials included: ash fill; fractured glass; fractured brick; refractory brick; asphalt; fractured railroad ties; corroded, rusty, crushed 55-gallon drums; fractured concrete slab; fractured 5-gallon

pails; wood; plastic bottles; plastic bags; various paint waste; railroad slag; metal wires and pipes; cloth; metal drum lids; rebar; car parts; ceramics; and newspaper.

Metals, petroleum hydrocarbons, semi-volatile organic compounds (SVOCs), and volatile organic compounds (VOCs) were detected in the soils, groundwater, sediment and surface water at the Site as presented in the Phase II CSA. Compounds exceeding MADEP numerical standards were generally polynuclear aromatic hydrocarbons (PAHs) and metals. There were detections of PAHs and petroleum hydrocarbons in samples collected on the southeast side of the Site on ADESA property. Pesticides and polychlorobiphenyls (PCBs) were also detected in a few samples at low or estimated concentrations.

Impacted media at the Site includes surficial and subsurface soil, groundwater, ambient air (potentially impacted), surface water, and sediment. Zero to three feet is used to evaluate exposures associated with surface soil; zero to fifteen feet for exposures associated with excavation scenarios such as utility installation and repair and building construction. Air is also considered a potentially impacted medium based on releases to ambient air from soil and groundwater impacts.

Based on the groundwater information determined for the Site including the current land use, the groundwater in the area of the Site is categorized as GW-3. Based on the current frequency and intensity of use and on potential accessibility, the soil is categorized as S-2 or S-3. The surficial soil at the Site from 0-3 ft bgs is considered accessible, and therefore would be categorized as S-2, while the subsurface soil is considered potentially accessible and therefore would be categorized as S-3. Sediment sample results are compared to the consensus-based threshold effect concentrations (TECs) for the 28 chemicals listed in MacDonald et al. (MacDonald et al., 2000) for use in screening freshwater sediment for risk to benthic organisms. A list of the TECs is provided in 'Freshwater Sediment Screening Benchmarks for Use Under the Massachusetts Contingency Plan', Office of Research and Standards, May 2002. Surface water sample results were compared to the Massachusetts Surface Water Standards/USEPA 2002 Ambient Water Quality Criteria (WQC) (freshwater aquatic).

The Phase II CSA activities indicated that the surface and subsurface soil within the horizontal and vertical extent of the Former Landfill is impacted with OHM. Chemical analyses indicated that soils below the approximately 12-inch cover material have concentrations of lead and benzo (a) pyrene at concentrations that exceed the S-3/GW-3 and/or the S-2/GW-3 numerical standards, and lead exceeds its UCL. In subsurface soils, chemical analyses indicated that antimony, arsenic, benzo (a) pyrene, chrysene, lead, total chromium, and zinc were present at concentrations above S-3/GW-3 and/or

S-2/GW-3 numerical standards, and lead exceeds its UCL. For the purposes of the risk characterization the entire horizontal and vertical extent of waste/impacted soil were characterized as impacted with OHM above numerical standards.

Xylene was detected in one monitoring well in 2004 at a concentration exceeding the GW-3 numerical standard. In 2005, groundwater quality monitoring did not indicate any exceedances of GW-3 numerical standards. Analysis of the historical and current groundwater data indicates that OHM were detected at concentrations below the GW-3 numerical standards or were not detected. The two rounds of current groundwater monitoring completed as part of Phase II CSA activities were considered sufficient for Site characterization due to the historical groundwater quality results, soil, surface water, and sediment characterization results, non-detect or low concentrations of OHM, since the OHM contaminants of concern are low solubility chemicals that typically do not partition into groundwater,, the representativeness of the ground water data, and the groundwater classification.

Chemical analysis indicated that sediment samples from the stormwater sewer had PAHs (benzo (a) anthracene, benzo (a) pyrene, fluoranthene, fluorene, phenanthrene and pyrene), arsenic, lead, and zinc at concentrations exceeding the freshwater sediment screening benchmark values. The surface soil sample analyses for the samples collected in the off-Site North Pond indicated that metals and PAHs were present at concentrations exceeding S-2/GW-3 and S-3/GW-3 numerical standards.

Surface water/stormwater analyses indicated that concentrations of total and dissolved aluminum, copper, iron, lead, and zinc exceeded the Massachusetts Surface Water Standards/USEPA Water Quality Criteria.

For the HHRA and Ecological Risk Assessment (ERA) certain chemicals were identified as Chemicals of Potential Concern (COPCs) based on the detected concentrations being above potentially applicable criteria, MADEP background levels or professional judgement. COPCs considered for the HHRA include certain metals, SVOCs, VOCs, pesticides, PCBs, and petroleum products. COPCs considered for the ERA include metals and SVOCs (primarily PAHs) and one VOC for sediment only. A summary of the COPCs for both the HHRA and ERA is presented in Table 2.1.

2.3 TRANSPORT OF COPCS

The primary potential migration mechanisms for OHM present in soil, waste, groundwater, surface water and sediment at the Site are as follows:

- Soil erosion and sediment migration by stormwater runoff and surface water flow;
- Infiltration to the Site storm sewer and discharge off-site; and
- Soil particle or sediment suspension or leaching to groundwater from soil/waste.

The concentration and distribution of COPCs in the environment are constantly subject to change due to dispersal by wind and water, and chemical and biological degradation by microorganisms. Once released to the environment, COPCs can partition between air, water, sediment, soil, and biota, and may be subsequently subjected to one or more of the following processes:

1. transportation (e.g., convection by wind or water or stormwater runoff);
2. physical transformation (e.g., volatilization, precipitation);
3. chemical transformation (e.g., photolysis, hydrolysis, oxidation, reduction);
4. biological transformation (e.g., biodegradation, metabolization by plants or animals); and
5. accumulation in one or more media.

Several transport mechanisms, such as advection and dispersion, are controlled primarily by the physical characteristics of the Site, and thus are essentially the same for all COPCs. However, other transport and transformation processes, such as volatilization, sorption, and biodegradation, depend on certain physical and chemical properties, and therefore vary for each COPC. The primary COPCs for the Site are certain metals and PAHs which preferentially adsorb to soil and generally have low water solubility and low volatility and, therefore, do not significantly migrate by leaching, dissolution, and groundwater transport or volatilization into air.

2.3.1 HHRA EXPOSURE PATHWAYS

Humans can be exposed to a variety of contaminated media, including soil, groundwater, surface water, sediment, air, and biota that has contact with contaminated media. Based on the physical conditions of the Site, potential exposure routes associated with Site surface soil and subsurface soil include incidental ingestion, direct dermal

the Site. The future potentially exposed population also includes industrial/commercial workers, utility workers, construction workers, and trespassers.

2.4.2 ECOLOGICAL

In general, the terrestrial habitat found at the Site and adjacent areas is represented in cover type by plant species common in urban environments. The majority of the area encompassed by the Site is bare, disturbed land that does not provide habitat for ecological receptors and much of the area to the north and east of the Site is paved. There are small patches of sparse vegetation on the Site that may provide limited habitat for foraging receptors such as small mammals and songbirds. However, these areas are small and isolated in nature, and would represent a fraction of the foraging range for a receptor such as a songbird, so they do not represent critical habitat for ecological receptors.

2.5 SUMMARY OF RISKS

The human health, public welfare, safety, and environmental risk characterizations included potential exposures of impacted OHM in surface and subsurface soil, sediment, groundwater, and surface water and are summarized below. The human health, public welfare, safety, and environmental risk characterizations included potential exposures of impacted OHM in surface water and sediment in Wetland A. Further comprehensive response actions for the Wetland A impacts will be addressed as part of RTN No. 3-4356 (Beaverdam Brook). The risks identified below have all been fully addressed by the implementation of the Phase IV RIP activities.

2.5.1 HUMAN HEALTH

A condition of NSR of harm to human health was not achieved at the Site prior to the implementation of the engineered barrier and associated Phase IV RIP activities including an AUL since the following conditions were not met:

1. *The Exposure Point Concentration of oil or hazardous material is greater than an applicable or suitably analogous public health standard.*

MCP numerical standards were used to evaluate soil concentrations and exceedances are present. The groundwater on Site is not used for potable purposes [i.e., DWSA or Potential DWSA] and is designated as GW-3; as a result

there are no applicable or suitably analogous public health standards for comparison of groundwater exposure point concentrations (see also Public Welfare evaluation conclusions regarding Drinking Water). There are no applicable or suitably analogous health standards for comparison of soil, surface water, or sediment exposure point concentrations. Surface water at or in the vicinity of the Site is not used as a potable water source and therefore, Massachusetts Surface Water Standards/USEPA Ambient Water Quality Criteria were used to evaluate exposure.

2. *No Cumulative Receptor Non-cancer risk is greater than the Cumulative Receptor Non-cancer Risk Limit.*

A method 3 HHRA was conducted and indicates that cumulative non-cancer risk limit (HI) is greater than 1.0 for the trespasser exposure to surface soils, sediment, and surface water and construction worker exposure to soils and groundwater during potential future construction activities.

The Reasonable Maximum Exposure (RME) cumulative HI of 1.1 for the trespasser primarily results from exposure to antimony, arsenic, manganese, and nickel in sediment through the ingestion and dermal contact exposure routes. Antimony, arsenic, manganese, and nickel account for approximately 9 percent, 13 percent, 20 percent, and 12 percent, respectively, for a total contribution of 54 percent of the cumulative HI. However, the HI for each these COPCs is well below 1.0 and cumulative HI for the target organs are all below 1.0, therefore there is likely a lower hazard for the trespasser associated with the COPCs in the surface soil, sediment, and surface water.

The RME cumulative HI of 2.7 for the construction worker primarily results from exposure to antimony, cadmium, lead, manganese, and zinc in soil through the ingestion, dermal contact, and inhalation exposure routes. Cadmium, lead, manganese, and zinc account for approximately 15 percent, 37 percent, 14 percent, and 7 percent, respectively, for a total contribution of 73 percent of the cumulative HI.

All other current and future receptors including the industrial/commercial worker, and utility worker, had cumulative non-cancer risk limits (HIs) below the cumulative HI of 1.0.

All current and future receptors including the trespasser, industrial/commercial worker, utility worker, and construction worker had cumulative cancer risk values below the excess lifetime cancer risk of 10^{-5} for exposure to impacted soil, sediment, surface water, and groundwater.

2.5.2 PUBLIC WELFARE

A condition of NSR to Public Welfare does currently and for the foreseeable future exist at the Site since the following conditions are met:

(a) *No nuisance conditions exist or will result from the release or threat of release of oil or hazardous material, or the remedial alternative, including:*

1. *The breathing zone of ambient and indoor air are currently and will, in the reasonably foreseeable future, remain free from persistent, noxious odors.*

There are no buildings at the Site (closest industrial/commercial building is 325 ft from Site) currently, there are no buildings planned for the Site in the foreseeable future and there are minimal low concentrations of VOCs in soil and groundwater, therefore, ambient air and indoor air will remain free of persistent and noxious odors. No persistent or noxious odors were observed at the Site and ambient levels of VOCs were measured to be non-detect or the same as background levels based on organic vapor monitoring conducted during the Phase II CSA activities.

2. *There is accessible drinking water that is and will, in the reasonably foreseeable future, remain free from noxious taste and odors.*

The Site is not located in a current DWSA or a potential DWSA and is, therefore, classified as GW-3. The adjacent property and the Town of Framingham are serviced by a municipal water supply. The nearest current DWSA is in the vicinity of Lake Cochituate which is located approximately three miles downstream (on Beaverdam Brook) of the Site. Therefore, Site groundwater will not impact drinking water with noxious taste and odors.

3. *Livestock is and will remain, in the reasonably foreseeable future, free from harmful effects. No specific evaluation of livestock is required if it is reasonable to conclude that the human health and environmental risk characterizations conducted for the site are also protective of livestock exposures.*

There are no livestock in the immediate area of the Site that will be impacted by the Site..

(b) *No community that is currently affected and/or community for which it is reasonably foreseeable to conclude that it could be affected by the release experiences significant adverse impacts as set forth as the factors to be considered in 40.0994(2).*

The current property owners do not consider the Site to contribute adverse impacts, including the existence of nuisance conditions, loss of active or passive

property use(s), and any non-pecuniary effects not otherwise considered in the characterization of risk of harm to health and safety.

- (c) *The requirements of 310 CMR 40.0996 concerning the Upper Concentration Limits are met.*

The Upper Concentration Limit for lead in soil was exceeded based on the arithmetic average of the Site data.

2.5.3 SAFETY

A condition of NSR of Harm to Safety does currently and for the foreseeable future exist at the Site since the conditions at the Site which are related to a release of OHM do not currently and will not in the foreseeable future pose a threat of physical harm or bodily injury to people. Such release-related conditions include, but are not limited to:

- (a) *The presence of rusted or corroded drums or containers, open pits, lagoons or other dangerous structures.*

There are no visible rusted or corroded drums or containers, open pits, lagoons or other dangerous structures at the Site.

- (b) *Any threat of fire or explosion, including the presence of explosive vapors resulting from a release of oil and/or hazardous material.*

There is no threat of fire or explosion, including the presence of explosive vapor resulting from a release of OHM based on the nature and type of OHM at the Site and the results of the organic vapor screening.

- (c) *Any uncontained materials which exhibit the characteristics of corrosivity, reactivity or flammability described at 310 CMR 40.0347.*

There are no uncontained materials at the Site that exhibit these characteristics.

2.5.4 ENVIRONMENT

The results of the wetland delineation, habitat assessment, evidence of harm, and effects-based screening were integrated into the ERA for the Site and adjacent areas. Habitat is extremely limited at the Site and of low environmental quality in the wetlands and North Pond in the vicinity of the Site. Extensive industrial, commercial, and urban development in the vicinity of the Property has resulted in severe terrestrial habitat fragmentation. This limits wildlife corridors to those suitable for small birds and mammals that are common in urban environments. No rare plants or animals are

known to occur in the vicinity of the Site or Property and there are no ACECs or Protected Open Spaces in the vicinity of the Site.

The MCP specifies four criteria that must be met in order to demonstrate that a condition of "no significant risk of harm to the environment" exists (310 CMR 40.0995):

1. *There is no physical evidence of a continuing release of oil and/or hazardous material at or from the disposal site to surface waters and/or wetlands which significantly affects environmental receptors.*

The disposal of waste in the Former Landfill was terminated in 1970 and some cover soil was placed over the waste in 1990. There is no physical evidence of an ongoing release of OHM to surface waters and/or wetlands. There is the potential for stormwater runoff from the surface of the Site to be impacted with OHM as well as stormwater that discharges through the stormwater sewer that transects the Site. Based on the Stage I Environmental Screening conducted as part of the ERA, there is some potential risk of harm to surface water and/or wetlands.

2. *There is no evidence of biologically significant harm known or believed to be associated with current or foreseeable future exposure of wildlife, fish, shellfish, or other aquatic biota to oil and/or hazardous material at or from the site.*

There is no evidence of biologically significant harm to environmental receptors due to current or future exposure from OHM associated with the Site.

3. *Concentrations of oil and/or hazardous material at or from the disposal site do not and are not likely to exceed Massachusetts Surface Water Quality Standards as promulgated at 314 CMR 4.00 (and as amended) at current and reasonably foreseeable exposure points.*

Surface water/stormwater analyses indicated that concentrations of total and dissolved aluminum, copper, iron, lead, and zinc exceeded the Massachusetts Surface Water Standards for the protection of aquatic life.

4. *There is no indication of the potential for biologically significant harm to environmental receptors, considering their location and the fate and transport characteristics of the oil and/or hazardous material at or from the site, currently or for any foreseeable period of time.*

Limitations associated with the size and quality of ecological habitat preclude any significant exposure of ecological receptors to OHM in surface soil or other media present at the Site. There is no indication of the potential for biologically significant harm to environmental receptors from the Site considering the

location and the fate and transport characteristics of OHM, currently or in the foreseeable future.

For the stormwater retention basin (North Pond) located outside of and to the northwest of the Site, analytical data for OHM indicate exceedances of Stage I soil screening criteria. Further actions (e.g., a Stage II ERA or remedial actions) are required to address the North Pond sediment since it is believed that the major source of sediment impacts were due to the historic runoff from the Site. Although OHM present in the soil in the North Pond exceeds the soil screening criteria, which may have been caused by stormwater runoff from the Site, the habitat is of low ecological value since it is a historical stormwater management feature. Therefore, a condition of "no significant risk of harm to the environment" does not currently or for the foreseeable future exist for the soil in the North Pond.

In accordance with 310 CMR 40.0995 (2)(b)3, a Stage II Environmental Risk Characterization is required for the sediment and surface water in Wetland A because there is not enough information to determine whether or not a condition of NSR of harm exists, and therefore these media are considered to present "potentially significant exposures". Potential ecological effects to surface water and sediment associated with Wetland A will be evaluated and addressed the comprehensive response actions for the Beaverdam Brook Site. This approach is being taken since Wetland A and Beaverdam Brook are hydraulically connected and there are similar wetlands, habitat, biota and OHM.

2.6 REMEDIAL ACTION

Based on the evaluation conducted for the Phase III RAP, the appropriate remedial action alternative for the Site was the construction of an engineered barrier over the Former Landfill and an AUL which collectively achieves a permanent solution/Class A-4 RAO. The constructed engineered barrier extends to four feet beyond the defined limit of OHM impacted soil/waste consistent with MADEP guidance. The engineered barrier was constructed over the Site to achieve the following objectives:

- prevent direct human and ecological exposure to OHM impacted soil and waste;
- reduce infiltration into the impacted soil and waste to minimize potential impacts to surface water and groundwater;

- construct an equivalent engineered barrier separation layer around the storm sewer transecting the Site by lining the sewer; and
- maintain a long-term condition of NSR with the engineered barrier, AUL and OMM Plan.

The Site was covered and graded with non-impacted fill soil from on-Site and off-Site sources. Two different engineered barriers were constructed over the Site at the limit of waste and extending 4 ft horizontally beyond the limit of waste. An asphalt engineered barrier consisting of a spoils layer, definition layer, 1 ft of common fill, structural geotextile, 8 inches of subbase material, 4 inches of base material and approximately 5.75 inches of asphalt was then constructed over approximately 5.65 acres of the Site. A soil engineered barrier consisting of a 12 inches of soil cover, defining layer, approximately 30 inches of common fill, 6 inches of topsoil, vegetation and an erosion control blanket was constructed over 0.2 acres of the Site. The asphalt portion of the barrier is used by ADESA for temporary parking of automobiles prior to auctioning.

Stormwater management features also were constructed or improved as part of the remedial actions. Additionally, the stormwater sewer system beneath the Site was cleaned to remove debris and impacted material and double lined prevent infiltration and the potential migration of OHM. The lining is at least equivalent to and provides a more effective hydraulic and physical barrier than an asphalt or soil engineered barrier.

A vegetated soil berm was constructed with at least 4 ft of soil cover along the southern perimeter of the Site, adjacent to Wetland A. The soil berm overlaps the asphalt barrier and also has a 4 ft high wire mesh fence installed on the top of the berm. The berm is part of the separation layer constructed four feet beyond the limit of waste and then it slopes at a 3 horizontal to 1 vertical (3H: 1V) grade to match the existing embankment slope. The soil berm is designed to minimize potential impacts to buffer zone/wetland areas. The engineered barrier was contoured to direct surface water run-off towards existing stormwater management features/ponds and away from Wetland A.

Long-term OMM activities will be conducted as provided for by the Phase IV RIP, including inspections and maintenance, groundwater, surface water, and sediment monitoring, and a snow management plan.

2.7 ACTIVITY AND USE LIMITATION

An AUL is required for the Site since lead exceeding UCLs remain at the Site and to ensure the ongoing attainment of a condition of NSR for the engineered barrier/Class A-4 RAO.

The AULs define permitted and restricted Site uses and activities and provide conditions and obligations associated with future Site activities (Section 9.0).

3.0 RIP REQUIREMENTS AND AS-RECORDED DRAWINGS

3.1 REQUIREMENTS

The following section presents the requirements specified for the comprehensive response actions as provided in the Phase IV RIP (CRA, October 2005).

3.1.1 DESIGN OBJECTIVES/BASIS

The design objectives/basis for the remedial action that was completed were as follows:

- prevent direct human and ecological exposure to OHM impacted soil and waste;
- reduce infiltration into the impacted soil and waste to minimize potential impacts to surface water and groundwater;
- construct an engineered barrier separation layer over the Site;
- construct an equivalent engineered barrier separation layer in the storm sewer transecting the Site by lining the sewer; and
- maintain a long-term condition of NSR with the engineered barrier, AUL, and OMM.

3.1.2 DESIGN CRITERIA

Based on the results of the Phase II CSA investigations, applicable MA DEP regulations, guidance and policies, detailed technical evaluations, discussions, Site visits, and permitting with the FCC, and ADESA's input, the following design criteria were established:

- clearing and grubbing of existing cover;
- removal of non-impacted cover soil, regrading, and replacement of cover soil;
- proof rolling of the Site prior to barrier construction;
- 100 percent replication of 4,400 SF of on Site Wetlands B and C to be destroyed;
- minimum 2 ft thick soil and minimum 4-inch thick asphalt engineered barrier separation layer;
- upgrading and use of existing Site and Property stormwater management features;
- minimize impacts to Riverfront Areas and wetland Buffer zones;

- no net increase in post construction stormwater runoff peak flow discharges from the Site for the 2, 10, and 25-year 24-hour return storm events;
- consider the 100-year 24-hour return storm event and prevent flooding of on and off-Site areas;
- construction of a vegetated earthen berm along the south side of the Site boundary between the Site and the adjacent Wetland A to protect the wetlands;
- at least 80 percent total suspended solids removal from stormwater prior to discharge from the Site;
- minimize soil erosion and sediment migration both during and after RC activities;
- placement of excavated soils within the limits of the engineered barrier; and
- development and implementation of a snow management plan as part of OMM activities.

The major components of the Phase IV RIP to be implemented were as follows:

1. Soil Erosion and Sediment Control;
2. Grading/Contour Design;
3. Stormwater Management;
4. Engineered Barrier; and
5. Stormwater Sewer Rehabilitation.

3.2 AS-RECORDED DRAWINGS

A set of As-Recorded Drawings for the Phase IV remedial action were prepared based on the Phase IV RIP Design Drawings and surveying during remedial action activities. The Response Action As-Recorded Drawings are enclosed in Appendix F and are as follows:

- Drawing 1 Pre-Construction Conditions;
- Drawing 2 Site Works;
- Drawing 3 Spoils Placement;
- Drawing 4 Grading;
- Drawing 5 Cap Sections;
- Drawing 6 Cap Details;

- Drawing 7 Stormwater and Fence Details;
- Drawing 8 North Pond Grading;
- Drawing 9 North and South Pond Details; and
- Drawing 10 Storm Water Alignment.

The As-Recorded Drawings were prepared based on surveying conducted by a Massachusetts licensed surveyor and QC/QA field measurements and verifications. The As-Recorded Drawings were reviewed by professional engineers and LSP of record.

3.3 TECHNICAL SPECIFICATIONS

In addition to the Design Drawings, engineering Technical Specifications were developed to detail specific requirements, technical details, regulatory and other requirements for the implementation of the RC activities. The Technical Specifications were developed and provided as Appendix D Part 2 of the Phase IV RIP and included the following sections:

- Section 01100 Summary;
- Section 01200 Price And Payment Procedures;
- Section 01300 Administrative Requirements;
- Section 01351 Health And Safety;
- Section 01400 Quality Requirements;
- Section 01500 Temporary Facilities And Controls;
- Section 01571 Temporary Soil Erosion And Sediment Control;
- Section 01600 Product Requirements;
- Section 01700 Execution Requirements;
- Section 02117 Material Handling And On-Site Transportation;
- Section 02120 Loading, Off-Site Transportation, And Disposal;
- Section 02161 Solidification And Stabilization;
- Section 02200 Site Preparation;
- Section 02316 Fill;
- Section 02317 Excavation;
- Section 02370 Permanent Erosion And Sedimentation Control;
- Section 02740 Flexible Pavement;

- Section 02821 Fences and Gates;
- Section 02841 Guide Rail;
- Section 02921 Hydroseeding; and
- Section 02957 Sewer Rehabilitation.

4.0 CONSTRUCTION ACTIVITIES

4.1 REMEDIAL CONSTRUCTION ACTIVITIES

The following major RC activities were completed by the remedial contractor, Severson Environmental Services, Inc. (Severson), between September 2005 and June 2006, as part of comprehensive response actions:

1. Project startup, including mobilization.
2. Development, implementation, and maintenance of a Site-specific Health and Safety Plan (HASP).
3. Provision and maintenance of temporary construction facilities and controls.
4. Completion of QC/QA geotechnical and chemical analysis on imported materials.
5. Installation and maintenance of upgraded stormwater and Erosion and Sediment (E&S) controls including:
 - a) silt fences, hay bales, and stone check dams,
 - b) upgrading of two stormwater management ponds, including:
 - 1) pond expansion,
 - 2) inlet and outlet structures,
 - 3) overflow spillway, and
 - c) surface water diversion ditches.
6. Clearing and grubbing of work areas.
7. Excavation and removal of railroad ties and miscellaneous debris.
8. Monitoring well extensions.
9. Site regrading prior to cap construction.
10. Excavation, stockpile and replacement of approximately 210,220 SF with the depth ranging from 0 to 2.5 feet bgs, of soil from within the limits of the former landfill.
11. Construction of a 22,430 SF (0.5 acre) multi-layer engineered soil cap in the southwest corner of the former landfill area, over the limit of waste plus four feet, consisting of the following layers from bottom to top, above the existing waste and approximate 12 inch soil cover:
 - a) geotextile definition layer;

- b) approximately 30-inch thick layer of imported common fill layer to meet grading requirements;
 - c) 6-inch thick topsoil layer; and
 - f) a vegetative cover.
12. Construction of a multi-layer engineered berm and soil berm fence along the southern border of the former landfill area, exceeding the limit of waste which consisted of the following layers from bottom to top, above the existing waste and approximate 12 inch soil cover:
- a) geotextile definition layer;
 - b) approximately 30 inch thick layer of imported common fill layer to meet grading requirements;
 - c) 6-inch thick topsoil layer; and
 - f) a vegetative cover.
13. Construction of an approximately 209,600 SF (4.8 acres) multi-layer engineered barrier separation layer or asphalt cap consisting of the following layers above the existing limit of waste plus four feet:
- a) spoils layer consisting of stabilized sediment and bank material from the north pond to make appropriate grades;
 - b) geotextile definition layer;
 - c) 12-inch thick layer of common fill consisting of stockpiled fill and imported common fill;
 - d) geotextile structural reinforcement layer,
 - e) 8-inch thick subbase layer of gravel borrow material;
 - f) 4-inch thick base layer of crushed stone material;
 - g) 2.5-inch binder course asphalt layer;
 - h) 1.5-inch leveling course asphalt layer; and
 - i) 1.75-inch top course asphalt layer.
14. Rehabilitation of 463 linear feet (LF) of storm sewer including:
- a) video inspections;
 - b) high pressure cleaning;
 - c) catchbasin and manhole repair and abandonment; and
 - d) two applications of epoxy resin slip lining of sewer pipes and catchbasins and manholes.
15. Fertilizing and seeding the soil cap topsoil layer.

16. Installing erosion control blanket over the completed soil cap.
17. Installation of perimeter guard rail, fencing and access gate.
18. Mitigation of wetland impacts.
19. Completion of as-built surveying.
20. Demobilization and closeout.

Photographs were taken throughout the construction activities and are maintained in the Site/project files.

4.2 REMEDIAL CONSTRUCTION SCHEDULE

Sevenson provided a proposed RC at the pre-Construction meeting in September 2005 and the actual RC schedule was provided after completion of the RC activities in 2006. The proposed and actual construction schedules for RC activities are provided in Appendix G.

4.3 WINTER EROSION AND SEDIMENT CONTROLS

Sevenson temporarily demobilized from the Site on December 22, 2005 for the winter months. A Winterization E&S Controls Plan was implemented, including the following major activities:

1. installation of a geotextile structural reinforcing layer over the majority of the engineered barrier areas to stabilize wet conditions and allow barrier construction to be completed to stabilize the Site for winter months;
2. installation of additional granular subbase material to address wet conditions and provide additional support for barrier construction;
3. installation of hay bales, silt fence, and erosion control blanket to repair/reinforce existing structures and provide additional protection; and
4. installation of 2.5-inch thick binder course asphalt base layer instead of the 2-inch thickness specified.

4.4 SPRING REPAIR ACTIVITIES

Based on pre-final inspections completed in the spring of 2006, and it was determined that a number of repair activities were required. The spring repair activities commenced on April 4, 2006 and were completed by May 4, 2006 and consisted of the following activities:

1. regrading of soil cap and perimeter areas;
2. repair/reconstruction of the drainage swale (i.e., repair of erosion rills, installation of additional hay bales, and silt fence);
3. cleaning of sediment from riprap; and
4. repair of asphalt binder course.

As part of the spring repair activities, certain additional QC and QA activities were completed (see Section 5.0).

4.5 REMEDIAL DESIGN CHANGES

The following subsections outline activities that were completed differently than as proposed in the Phase IV RIP, or were completed in addition to the specifications of the Phase IV Rip based on actual Site conditions related to the stormwater sewer and the North Pond.

4.5.1 SUBBASE/ASPHALT CHANGES

A structural enforcement geotextile was used to allow installation of the binder course before the end of 2005 construction activities during wet and cold conditions. The binder course thickness also was increased from 2 to 2.5 inches. Additional quantities of subbase granular and a leveling asphalt course also were installed and these were not specified.

4.5.2 STORMWATER SEWER

Based on actual Site conditions, a video inspection, cleaning, and a post-cleaning video inspection, it was determined that additional storm sewer rehabilitation activities were

required. The results of these investigation and rehabilitation activities are described below.

Initial Storm Sewer Video Inspections

Storm sewer features that transect the Site and connect Wetland A with Beaverdam Brook were inspected by Underground Technologies on July 15, 2005. Due to the accumulation of concrete fragments, large gravel and stone, and sediment within the storm sewer, the track-mounted video equipment could not pass through all sewer system reaches. Groundwater infiltration was identified at all joints, and a lateral round concrete pipe was identified in storm manhole STM-01A.

Storm Sewer Cleaning

The Site storm sewers were cleaned of accumulated sediment, rocks, rubble, and debris by National Water Main Cleaning Co. from November 9 to December 16, 2005. The storm sewer cleaning included approximately 956 feet of storm sewer pipe between manholes STM-05, STM-04, STM-03, STM-02, STM-01A, STM-01, and the headwall at Wetland A. The sediment, rocks, rubble, and debris in the storm sewer were removed by a combination high pressure water jet and vacuum truck. Approximately 231,000 gallons of storm sewer water from the cleaning activities were temporarily collected in 20,000-gallon portable tanks and disposed of at a permitted off-Site disposal facility (See Section 4.6).

Post-Cleaning Storm Sewer Video Inspections

Once the storm sewer pipe sections were dewatered and cleaned, storm sewer features that transect the Former Landfill and connect Wetland A with Beaverdam Brook were video inspected by National Water Main Cleaning Co. on November 18 and 29, 2005. The closed-circuit television (CCTV) inspection included storm sewer pipes between manholes STM-05, STM-04, STM-03, STM-02, STM-01A, STM-01, and the storm headwall at Wetland A. National Water Main Cleaning Co. provided a sewer line video and measurement of approximate sewer length from the storm manholes. The results of these activities are detailed in National Water Main Cleaning Co.'s CCTV Inspection of Sewers Report dated November 18 and 29, 2005. Groundwater infiltration was identified at all joints.

Storm Sewer Grouting and Manhole Lining

Sewer manhole abandonment activities for STM-01 and STM-02 were completed by D'Allessandro Corporation on January 27 and 30, 2006. D'Allessandro Corporation constructed a brick wall in front of the 56-inch lateral in sewer manhole STM-01A and bulkheads for the injection of grout into the annular space between the concrete sewer pipe and the cured in-place pipe (CIPP) liner from STM-02 to STM-01A and STM-01A to the Wetland A headwall. Grouting of the storm sewer annular space and the storm manholes was completed by Tresca Trucking & Grouting on January 31, 2006. Guerin Concrete Pumping Company provided approximately 86 CY of grout mix.

Sevenson extended storm sewer manhole STM-01 to surface grade of the engineered barrier with concrete cinder block and cement grout. Lining of storm sewer manhole STM-01A was completed by National Water Main Cleaning Co. on April 18, 2006. The existing manhole walls were pressure washed with water, all joints were patch sealed with concrete, and two coats of the cementitious based epoxy liner was spray-applied. The patching materials, wall sealing, and liner mix were applied according to manufacturer's specifications.

4.5.3 NORTH POND ACTIVITIES

Two bedrock outcrops were uncovered in the North Pond (stormwater detention pond no. 1 of the North Pond) during excavation and grading activities. One outcrop was located in the area of the discharge riprap apron on the east side of the pond. The second bedrock outcrop was located in the area of the discharge riprap apron at the southern end of the pond where the swale enters the pond. Pond capacity calculations were performed to determine if modifications to the design of the pond would be required to meet the capacity specifications.

Waste and/or impacted soil was encountered in the south bank of the North Pond during the pond expansion activities on ADESA's property. The limits of waste were determined by ADESA and based on characterization sampling. The waste pile was removed by ADESA in accordance with a Release Abatement Measures (RAM) Plan submitted to MADEP by ADESA. The removal of ADESA's waste pile resulted in some modifications to the pond contours to meet the remedial design objectives for stormwater capacity and erosion control. ADESA also completed the erosion control measures with CRA's guidance.

The as-constructed volume/capacity of the North Pond was determined to be within one percent of the design volume/capacity and, therefore, no expansion of the pond was required to accommodate the bedrock outcrops and the removal of the waste pile. Additionally, the bedrock outcrops were incorporated into the design and construction of the pond inlet and discharge features.

4.6 WASTE DISPOSAL

4.6.1 SITE DEBRIS

Approximately 520 tons of vegetation waste and railroad ties were generated and temporarily stored during the cleaning and preparing of the Site to construct the landfill engineered barrier and during the construction and implementation of stormwater management controls (i.e., North Pond swale and upgrades). The collected materials were sampled and sent for analysis at Accutest Laboratories of New England (Accutest). The debris was categorized as contaminated media, contaminated debris, and non-hazardous uncontainerized debris. The collected vegetation waste, railroad ties, and other debris (e.g., large rocks, rubble, wooden shipping pallets) were not soil, and could not be reused as part of the engineered barrier remedy.

The details of the waste characterization, analytical laboratory reports, and the Bill of Lading (BOL) documentation are provided in a technical memorandum dated March 1, 2006 (Appendix H).

4.6.2 STORMWATER SEWER CLEANING AND LINING WASTEWATER

As part of storm sewer cleaning activities, 29 tanks of wastewater (total 258,000 gallons) were generated and temporarily stored on Site. The wastewater batches were sampled by Severson/CRA and submitted for chemical analysis by Waste Stream Technology Inc. (WST) for VOCs, SVOCs, metals, PCBs, and general chemistry [pH and total suspended solids (TSS)]. Based on the characterization of the wastewater it was characterized as non-hazardous wastewater and transported and disposed of at a permitted off-site treatment/disposal facility from November 16 to 30, 2005. The details of the wastewater characterization, analytical laboratory reports, and the BOL documentation are provided in a Technical Memorandum dated March 13, 2006 (Appendix H).

During the liner installation/curing activities approximately 52,500 gallons of wastewater were generated and temporarily stored in 20,000-gallon storage tanks. The wastewater batches were sampled by Severson/CRA and submitted for chemical analysis by WST for VOCs, SVOCs, metals, PCBs, and general chemistry (pH and TSS). Based on the characterization of the wastewater it was characterized as non-hazardous wastewater and transported and disposed of at a permitted off-site treatment/disposal facility on April 24, 2006. The details of the wastewater characterization, analytical laboratory reports, and the BOL documentation are provided in a Technical Memorandum dated June 6, 2006 (Appendix H).

4.6.3 STORMWATER SEWER CLEANING DEBRIS AND SEDIMENT

Approximately 300 CY of debris and sediment were generated from the stormwater sewer cleaning activities. The collected materials were sorted (potentially reusable sediment and unusable rocks and debris), temporarily stockpiled on-Site and characterized by sampling and chemical analysis by Accutest for Target Compound List/Target Analyte List (TCL/TAL) parameters (VOCs, metals, and PCBs). The storm sewer sediment data was evaluated and was placed on-Site beneath the engineered barrier (soil cap). Storm sewer debris was categorized as non-hazardous waste and sent off-Site.

5.0 REMEDIAL CONSTRUCTION QUALITY CONTROL AND QUALITY ASSURANCE

GM/CRA and their RC contractor, Severson, implemented the QC/QA program throughout RC activities. The QC/QA program was conducted in accordance with the Construction Quality Assurance Plan (CQAP) (Appendix E of the Phase IV RIP) from September 2005 to September 2006. This section provides the details of the QC/QA program in the following subsections:

- 5.1 Remedial Construction Project Organization;
- 5.2 Construction QC;
- 5.3 Construction QA;
- 5.4 Construction QC and QA Results, Issues and Resolutions;
- 5.5 Pavement Structural Number and Loading;
- 5.6 OMM Considerations; and
- 5.7 Construction QC and QA Summary.

5.1 REMEDIAL CONSTRUCTION PROJECT ORGANIZATION

Severson employed several subcontractors and suppliers for RC activities. The major subcontractors and suppliers for QC were as follows:

- 1. Briggs Engineering & Testing (Briggs);
- 2. GZA Geoenvironmental, Inc. (GZA);
- 3. Aggregate Industries;
- 4. Funari Trucking (Funari);
- 5. Kimball Sand Company, Inc. (Kimball);
- 6. P.J. Keating;
- 7. Waste Stream Technology Inc. (WST);
- 8. Insituform Technologies Inc. (Insituform); and
- 9. Franny's Landscaping Co. Inc.

Severson's primary QC subcontractors were Briggs and GZA.

CRA provided design and engineering, construction supervision, QA and related contract administration activities on behalf of GM/REALM. CRA's major subcontractors and suppliers for QA were ATC Associates, Inc. (ATC) and Accutest.

ADESA and their subcontractors also conducted waste material removal and grading, repairs and erosion controls in the North Pond area as activities separate from but supporting the Phase IV RIP activities. As previously indicated, ADESA implemented a RAM Plan approved by MADEP to manage the waste material as part of disposal site RTN: 3-0317.

The project organization for the Phase IV RIP implementation activities is provided on Figure 5.1.

5.2 CONSTRUCTION QUALITY CONTROL

Sevenson implemented the QC program throughout RC activities. The QC program consisted of inspection and testing of construction materials, procedures and constructed components of the remedy, as well as the preparation and issuance of submittals regarding QC components (e.g., shop drawings, manufacturer's information, and installation specifications). The QC program was documented by: QC reports; inspection and testing logs; submittals and transmittals; technical memorandum; laboratory reports and surveys.

The Phase IV RIP Technical Specifications detailed the requirements for the submittal of shop drawings, work plans, survey information, data, technical and other information for equipment and materials supplied used to install or construct RC components. Sevenson prepared and issued approximately 125 submittals of information to CRA throughout RC activities. CRA reviewed and accepted or approved the submittals, provided conditional acceptance or approval, or rejected the submittals. The submittal tracking log was prepared in accordance with the CQAP and was updated throughout the RC activities. The final submittal tracking log is provided as Table 5.1 and includes a complete listing of the submittals required by the Phase IV RIP Technical Specifications. These submittals essentially provide the complete package of documentation of the supply and installation, QC certification, and QA verification of the RC component materials. Copies of the transmittal and submittal forms with CRA QA approval or approval conditions are maintained in the project/Site files. Some of the required documentation that was not submitted or contained deficiencies as identified and documented as part of QC/QA review are discussed in Section 5.4.

The materials were inspected by Sevenson and/or their subcontractor and verified to be acceptable for use prior to importing or installation. Sevenson and/or their subcontractors prior to QC testing also inspected the installed or placed materials. There

were specified frequencies of QC/QA testing required (based on the Table E2 of the Phase IV RIP) prior to importing materials and during the placement of materials. The required QC frequencies were generally based on the quantity of material or the size of field placement areas. Table 5.2 presents the imported material quantities for all of the construction activities. The required and actual frequencies of QC/QA testing are summarized for both imported materials and material placement, organized by area or layers constructed, and are presented in Tables 5.3 (imported materials) and 5.4 (installed materials), respectively.

The majority of the QC inspections and testing were fully conducted and indicated compliance with the QC program. Certain deficiencies, issues and resolutions occurred in the QC program and these are discussed in Section 5.4.

5.3 CONSTRUCTION QUALITY ASSURANCE

CRA engineers and qualified technical staff performed QA inspections and testing throughout the RC activities, in accordance with the CQAP, to supplement the QC inspections and other activities. CRA's LSP conducted frequent inspections of the construction activities and QC/QA program to verify compliance with MCP requirements. The QA program consisted primarily of ongoing inspections, testing of materials and placement by CRA's subcontractors, as well as ongoing field supervision and oversight and project management. The QA activities also included liaison and coordination with MADEP, FCC, Severson, ADESA, subcontractors, and the local community. The following analytical data collection and assessment activities were performed as part of QC and QA activities:

- field and laboratory soil geotechnical, chemical analysis and other testing;
- engineered barrier materials physical testing;
- asphalt paving field and laboratory testing;
- sewer cleaning and lining wastewater laboratory analysis; and
- waste characterization laboratory analysis.

The scope of work, requirements, and the data collected/data assessments for each of these activities were discussed at regular Site progress meetings. The QA program was documented by the review and tracking of contractor submittals as documented in the submittal tracking log (Table 5.1), by CRA Site oversight personnel daily logs and through collection of confirmatory materials samples for geotechnical and chemical analysis by QA subcontractors. The CRA daily logs included observations and

information regarding construction activities, QC and QA inspections and testing, and copies of the logs from October 3, 2005 to December 23, 2005 and April 4, 2006 to June 1, 2006 are provided in Appendix I.

QA testing was required to be completed at a minimum frequency of 10 percent of the frequency of the required QC testing, as required by the CQAP, for all RC components that were QC tested. The frequency of the material and placement QA testing are presented in Tables 5.3 and 5.4, respectively.

The majority of the QA inspections and testing were fully conducted and indicated compliance with the QA program. The QC/QA program was verified by a review of all the QC/QA results. Certain deficiencies, issues and resolutions occurred in the QA program and these are discussed in Section 5.4 and summarized in Section 5.5.

5.4 CONSTRUCTION QUALITY CONTROL AND QUALITY ASSURANCE RESULTS, ISSUES AND RESOLUTIONS

During the execution of RC activities, certain of QC/QA issues were identified. Issues included missing contractor submittals, inadequate testing frequencies, and deficiencies in both imported materials and material placement test results. Certain imported materials were rejected for use, were reconstructed and or retested and certain areas required repair, or design modifications or retesting before acceptance.

The following subsections discuss the QC/QA program results, the specific deficiencies which occurred and the corrective actions and rationale and technical justification for final acceptance of the remedial components in the QC/QA program, and the issues and resolution approaches for the following areas:

- 5.4.1 Submittals
- 5.4.2 Spoils Layer
- 5.4.3 Common Fill and Asphalt Subbase Layers
- 5.4.4 Asphalt Base Layer
- 5.4.5 Asphalt Binder Course
- 5.4.6 Stormwater Sewer Lining
- 5.4.7 Asphalt Leveling Course
- 5.4.8 Asphalt Top Course

5.4.1 SUBMITTALS

As shown on the submittal tracking log (Table 5.1), the majority of the required submittals by Severson were submitted on time and approved by CRA, either through email correspondence or through verbal confirmation. The following is a discussion of the items that were not submitted by Severson.

5.4.1.1 CONSTRUCTION MEETING MINUTES

Weekly progress meetings were held between CRA, Severson and active subcontractors to review the activities for the week, resolve issues and discuss health and safety. These meeting minutes should have been documented in more detail, however, only the occurrence of the meeting and brief summary descriptions of the meeting topics were described in the CRA's Daily Logs or field log books as approved by the CRA Project Manager.

5.4.1.2 TRANSPORTATION ROUTES

As required by Section 02120 1.4.F of the Technical Specifications, Severson did not submit the off-Site transportation routes for off-Site disposal of materials as required by the approved Transportation and Disposal Plan. All of the materials that were transported and disposed of at off-Site facilities and were loaded, labeled and transported by licensed transportation companies that were contracted to perform the work in accordance with the appropriate local, State and Federal transportation, regulations and requirements. Additionally, there was not a significant amount of materials transported for off-Site disposal, and the transportation activities were scheduled at reasonable frequencies and times so that the transportation activities would not significantly affect the surrounding community.

5.4.1.3 AGGREGATE AND RIPRAP MATERIAL PROPERTIES

Geotechnical (gradation) testing and chemical analysis of the imported aggregates A1, A2 and A3 were not submitted as required by Sections 02316 2.5.C and 2.5.D of the Technical Specifications. Also, gradation testing of both riprap Types I and II materials was not completed as required by Section 02370 2.1.G. of the Technical Specifications. Rather material supplier gradation specification sheets were provided and represented as providing accurate properties of the supplied materials and were reviewed/approved

as part of the submittal process. As shown on the imported quantities table (Table 5.2) the following quantities of aggregates and riprap materials were brought to the Site:

<i>Material Type</i>	<i>Aggregate Material</i>	<i>Supplier</i>	<i>Imported Quantity (tons)</i>
Riprap Type 1 & II	12 -24" Stone	P.J. Keating	330
Riprap Type II	6-10" Stone	P.J. Keating	96
Aggregate A1	¾" Stone	Aggregate Industries	35
Aggregate A1/A2	6" Minus Stone	Aggregate Industries	71

Upon submission of the material source for the aggregate types, Severson submitted samples of the materials for QA evaluation. QA sample inspections and QA field measurements of imported materials provided verification that the materials complied with the Technical Specifications.

It is not general industry practice, nor practically feasible to perform chemical analysis on aggregates and, therefore, the QC/QA requirement to analyses aggregate was waived based on review of the proposed sources, material specifications and inspections at the time of receiving at the Site indicating no foreign materials or potentially deleterious substances were present.

5.4.1.4 PROGRESS SUBMITTALS FOR FLEXIBLE PAVEMENT

As required by Section 02740 1.3.C, a viscosity-temperature chart was not submitted prior to asphalt production and was not required to be submitted since it was not a significant technical property of the imported asphalt.

5.4.2 SPOILS LAYER

Approximately 5,714 CY of sediment/bank materials from the north pond and small wetland areas at the Site were stabilized and placed in a 9-inch thick layer under the area of the asphalt barrier below the definition layer. The stabilization process used cement kiln ash as described in the approved Solidification/Stabilization Plan.

5.4.2.1 MATERIAL PROPERTIES

As shown in Table 5.3, the maximum numbers of maximum dry density/optimum moisture content QC/QA tests required were exceeded. Additionally, grain size analysis, soil classification, and atterberg limits were performed. Copies of the QC (GZA, samples NP.01, silt pond and organic fill) and QA (CRA, sample: S-12618-110905-JC-100) geotechnical laboratory reports are provided in Appendix J.

In September and October 2005, eight samples of north pond sediment/bank and off-Site North Pond materials were collected and submitted for laboratory chemical analysis by Accutest. Chemical included Toxicity Characteristic Leaching Procedure (TCLP) SVOCs, VOCs, pesticides, herbicides and metals, total PCBs and Resource Conservation and Recovery Act (RCRA) characteristics (corrosivity, ignitability, and reactivity). Copies of the analytical laboratory reports and the CRA data compliance assessments are provided in Appendix L, except for Accutest Report Number M52588 which is provided in Appendix H as part of waste disposal documentation. The sample key is as follows:

<i>Accutest Report Number</i>	<i>Sample Identification</i>	<i>Sample Location</i>
M51212	S-12618-092905-CA-001	North Pond #2 North
	S-12618-092905-CA-002	North Pond #2 South
	S-12618-092905-CA-003	North Pond #1 Northeast
M51311	S-12618-100305-CA-004	North Pond #1 Northwest
	S-12618-100305-CA-005	North Pond #1 Southwest
	S-12618-100305-CA-006	North Pond #1 Southeast
M51505	S-12618-100705-CA-007	Southeast of North Pond #1
M51683	S-12618-101305-CA-008	Southeast of North Pond #1

310 CMR 40.0032(3) states that:

soils that contain one or more hazardous materials at less than a release notification threshold, and are not a hazardous waste may be transported from a disposal site ... provided that such soils:

- a) are not disposed or reused at locations where the concentrations of oil or hazardous materials in the soil would be in excess of a release notification threshold applicable at the receiving site, as delineated in 310 CMR 40.0300 and 40.1600; and*

- b) *are not disposed or reused at locations where existing concentrations of oil and/or hazardous material at the receiving site are significantly lower than the levels of those oil and/or hazardous materials present in the soil being disposed or reused.*

The analytical data were reviewed and confirmed that the sediment/bank materials contained certain OHM. Consistent with the MCP requirements, the types and concentrations of OHM were not significantly different than those associated with the Site and would not change the release notification threshold. Therefore, these data provided confirmation that materials could be used to achieve the necessary subgrades for the engineered barrier construction but had to be placed below the definition layer.

5.4.2.2 MATERIAL PLACEMENT

Maximum dry density and optimum moisture content tests were performed for each type of material to be placed. Materials were excavated from four different areas (North Pond Sediment, North Pond banks, wetlands and ADESA supplied fill material) and therefore four QC proctors were required and completed by GZA as documented in GZA field reports one and two [samples: North Pond-1, North Pond-2 (two samples), and organic fill]. The frequency requirement for the QA testing of one maximum dry density and optimum moisture content test was met, as documented in ATC Report from November 13, 2005 (sample: Pond Silt).

The QC/QA testing requirements for the placement of the north pond stabilized sediment/bank materials included in-place density. The total number of QC tests required for in-place compaction and moisture content was 105 based on the approximate area of material placed beneath the asphalt barrier. The number of QC tests performed was 103, which is slightly below the requirement. Additionally, the estimated area is approximate and less than two percent difference is not considered significant. Therefore, the actual frequency of QC for compaction and moisture contents is considered acceptable. The number of required QA compaction and moisture content was 11 and only 10 tests were performed by ATC. Since this is approximately 10% of the QC tests performed, the QA program frequency also is considered acceptable.

The QC results were documented in GZA Field Reports One and Two and the results are summarized in Table K-1 and Figures 1 through Figure 21 of Appendix K. The QA results are documented in the ATC Report dated November 13, 2005, included in Appendix K.

There were 103 QC compaction tests performed on the stabilized sediment/bank material on November 2, 4, 7, 8, 9, 14, 18 and 21, 2005. The compaction results indicate that 77 of the samples had an initial compaction of 95% or greater. Five areas (FD-7, FD-8, FD-20, FD-84, and FD-85) had an initial compaction of less than 95%, but the areas were allowed to dry, recompacted and retested (FD-16, FD-15, FD-51, FD-86 and FD-89) achieving a compaction greater than 95%. One area (FD-19) need two rounds of drying, recompacting and testing (FD-23 and FD-50) before it achieved the desired compaction of 95%.

Four areas (FD-21, FD-28, FD-32 and FD-35) were allowed to dry, recompacted and retested (FD-49, FD-48, FD-47 and FD-46) but still did not meet the compaction requirements with compaction results ranging from 92% to 93%. There were additionally five areas that had compaction results ranging from 88.3% to 92.1% and therefore did not meet the compaction specifications criteria but were not retested (FD-72, FD-73, FD-74, FD-75 and FD-87). Therefore, from the 88 different sampling locations, eight of the locations did not achieve a final compaction greater than the required 95%. Materials that could not be compacted to 95% was relocated to the soil barrier area.

All ten of the QA compaction tests that ATC performed met the specification of 95% with compaction results ranging from 97.5% to 100%.

Collectively, the majority of the QC and QA compaction tests for the stabilized material met the specification and the locations that slightly failed were deemed acceptable.

5.4.3 COMMON FILL AND ASPHALT SUBBASE LAYER

The common fill layer consisted of excavated fill (stockpile fill), imported common fill from Funari and imported 3 inch common fill gravel from Kimball.

As part of the Phase II CSA, CRA conducted sampling and analysis of the existing approximately one ft of cover soil overlying the OHM impacted waste/soil. The geotechnical and chemical characterization of the cover soil was established from samples collected from eleven test pits excavated in representative locations across the Site. Twelve samples were analyzed for VOCs, SVOCs, Extractable Petroleum Hydrocarbons (EPH) and metals. The analytical data results were presented in Table 5.5 in the Phase II CSA (July 2005, CRA). The one ft of Site cover soil had five exceedances of the MCP S-2/GW-3 numerical standard (beryllium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and Indeno(1,2,3-cd)pyrene), at two of the 11 test pit locations but were below Reportable Concentrations. The Method 3 Risk

Characterization conducted as part of the Phase II CSA confirmed that these OHM did not result in a condition of significant risk. Approximately 178,837 SF (4.1 acres) of soil, at an average depth of 1.2 ft bgs (7,950 CY) was excavated from above the impacted waste/soil in the area of the asphalt barrier and stockpiled on Site, for use as common fill under the engineered barrier.

In 2005, approximately 480 CY of Funari common fill was also used in the area of the asphalt barrier, even though it was approved only for use in the berm and soil cover areas. Since the quantity of stockpiled fill was not sufficient to bring the common fill layer up to the design grades, the 3 inch common fill gravel was used to augment the common fill. The as-recorded volume of the common fill layer in the area of the asphalt barrier was surveyed to be 3,913 CY; the remaining approximately 4,040 CY were used in the soil barrier and berm construction.

After the initial placement of the common fill layer, a significant number of compaction tests were not meeting the specified criteria of 95%. These deficiencies were primarily due to the wet and cold weather conditions during placement. In order to stabilize the Site and provide appropriate structural support and technically equivalent stability, it was determined that certain construction methods a structural reinforcing geotextile would be placed between the 12 inch common fill layer and the 8 inch subbase layer (see Section 5.4.3.3). The specifications for the structural geotextile were provided from the manufacturer on the physical properties of the structural geotextile and these specifications were reviewed and approved by CRA for use.

An 8 inch asphalt subbase layer was placed over the structural geotextile, which consisted of 3 inch common fill gravel from Kimball. The as-recorded volume of the subbase layer in the area of the asphalt barrier was 4,328 CY.

For the purposes of the QC and QA data tabulation (Tables 5.3 and 5.4) program, the testing of the common fill and subbase layers below the asphalt barrier were combined (8,241 CY). This was for convenience since the frequency of material property and field testing were the same.

5.4.3.1 MATERIAL PROPERTIES

As shown in Table 5.3, the required geotechnical analyses for the common fill and subbase materials included maximum dry density, optimum moisture content , grain size, atterberg limits, and soil classification. Since there were three sources (stockpile fill, Funari common fill and 3 inch common fill gravel) three QC tests were required by the

contractor and one QA test was required to verify the contractor results. The QC geotechnical laboratory results are documented in GZA reports (samples: ON-CF-01, FUN-CF-01 and 3-in Processed) but no atterberg limits were completed. The QA geotechnical laboratory results are documented in CRA lab reports (samples: S-12618-120105-JC-101 and S-12618-120205-JC-102). There were three additional QA samples collected and tested in April 2006 as part of asphalt repair evaluation. The QC and QA geotechnical laboratory reports are provided in Appendix J.

Two QC samples of Funari common fill (FUN CF.1 and FUN.TS.1) and one sample of 3 inch common fill gravel (KIM GR.1) were submitted for laboratory chemical analysis by WTS. QC analytical parameters included VOCs, SVOCs, metals, pesticides, PCBs, EPH and general chemistry (cyanide and percent solids). One sample each of the Funari common fill (S-12618-120105-CA-020) and three inch common fill gravel (S-12618-120205-CA-021) were collected and submitted to Accutest for laboratory chemical analysis as documented in Accutest reports M-52997 and M-53041. QA analytical parameters included TCLP VOCs, SVOCs and metals, total petroleum hydrocarbons (TPH), herbicides, pesticides, PCBs, metals and general chemistry (cyanide and percent solids). Copies of the QC and QA analytical data reports are provided in Appendix L.

There were no deficiencies in the frequency or results of QA/QC testing with the exception that no atterberg limits QC testing was completed. This was considered a minor deficiency since the geotechnical properties of the majority of the common fill were extensively tested as part of the Phase II CSA and QA testing.

5.4.3.2 MATERIAL PLACEMENT

The required QC/QA tests for the common fill and subbase layers placement included maximum dry density, optimum moisture content, in-place density, in-place moisture content, confirmatory moisture content and layer thickness. The required frequency of QC/QA testing of materials was complete with the exception that neither Severson nor CRA completed any confirmatory moisture content analysis. This deficiency was determined to not be significant due to the large number of QC/QA tests conducted, the consistency of the results, and the use of the structural geotextile. The layer thickness for both the common fill and subbase was continually being measured and monitored in the field by both Severson and CRA staff.

GZA performed 82 QC compaction and in-place moisture content tests as documented in GZA Field Reports 1, 2, and 3 (Appendix K). There were 14 out of 22 tests of stockpile

fill material that had a compaction greater than 95%, and the remaining compaction results ranged from 89.2% to 94.9%. All three of the compaction test for the Funari common fill had compaction results greater than 95%. All 57 compaction tests completed on the 3 inch common fill gravel failed to meet the compaction requirement of 95% with compaction results ranging from 79.9% to 91.2% with the majority being in the higher compaction range. The failed compaction results due to weather and Site conditions were addressed by certain construction methods and a structural geotextile to provide adequate common fill layer/subbase construction (see Section 5.4.3.3).

ATC performed ten QA compaction tests as documented in the December 13, 2005 reports. The results of the compaction testing were consistent with the QC results in that all ten tests had failed compaction with results ranging from 87.3% to 91.5%. A copy of the ATC report is provided in Appendix K. The failed compaction results due to weather and Site conditions were addressed by certain construction methods and a structural geotextile to provide adequate common fill layer/subbase construction (see Section 5.4.3.3).

The QC deficiencies indicated above and associated with the compaction of the common fill/spoils subgrade layer and base and subbase layers in December 2005 over approximately 1/3 of the asphalt barrier area due to wet and freezing conditions were evaluated in detail to determine the appropriate corrective actions. The technical deficiency evaluations are detailed in the Technical Memorandum dated April 25, 2006 provided in Appendix G and the corrective actions are detailed in Section 5.4.3.3.

5.4.3.3 STRUCTURAL REINFORCEMENT GEOTEXTILE

To address the areas where compaction was not being achieved, CRA approved the use of the COMTRAC P 80/80 High Strength Geotextile. In general, the steps and additional actions implemented to adequately complete the grading and prepare the asphalt barrier area for the asphalt binder course placement were as follows:

1. Remove mud/water, to the extent practicable, from the areas where the geotextile will be applied.
2. Apply cement kiln dust, as necessary, in areas that are wet and muddy.
3. Conduct compaction tests consistent with QA/QC requirements although 95% compaction likely would not be achieved (the placement of the geotextile will achieve the same result).

4. Place geotextile down across the Site except isolated areas that are up to grade and have met compaction requirements as determined in the field.
5. Add Type C Gravel (specified for the 8-inch base course) or substitute with Type M2.01.7 crushed stone (preferred) to bring the grade up to the bottom of the 4-inch subbase course in one lift regardless of thickness.
6. Compact Type C gravel/M2.01.7 crushed stone to 95%.
7. Apply 4-inch subbase course consisting of Type M2.01.7 crushed stone as specified and compact to 95%.
8. Apply 2.5-inch asphalt binder course instead of 2-inch binder course.
9. Implement additional erosion control measures as part of Site stabilization for the winter months.
10. Conduct technical evaluations and repairs, as necessary, in spring 2006.

5.4.4 ASPHALT BASE LAYER

The asphalt engineered barrier included a 4 inch thick crushed stone base layer above the asphalt subbase layer. The crushed stone was imported 1 ½-inch State DS mix from Aggregate Industries. The as-recorded volume of the base layer under the asphalt barrier was 2,568 CY.

5.4.4.1 MATERIAL PROPERTIES

GZA performed one grain size analysis test for QC and CRA collected one sample (CRA-12618-1109-05-JC-103) for QA which was analyzed for maximum dry density, optimum moisture content, grain size, soil classification and atterberg limits. The QC/QA analysis confirmed that the 1 ½ inch State DS Mix was appropriate for base material. Copies of the QC and QA geotechnical laboratory reports are provided in Appendix K.

One sample of 1 ½ inch State DS Mix base material (sample: DG-01) was submitted for laboratory chemical analysis at WST for quality control and the results were presented in WST's November 4, 2005 report. A QA sample was submitted for laboratory chemical analysis at Accutest and the results were presented in Accutest report number M53283 (CRA-12618-121505-CA-022). Copies of the QC and QA analytical laboratory reports are presented in Appendix L.

There were no deficiencies in the frequency of QC and QA testing. There were three additional QA tests completed beyond the specified project requirements.

5.4.4.2 MATERIAL PLACEMENT

GZA performed the QC compaction and moisture content field tests as documented in GZA Field Report Number Three and summarized in Table K-1 provided in Appendix K. All 57 of the compaction tests completed were less than the required 95%, with compaction results ranging from 73.2% to 87.4%. The compaction deficiencies were fully addressed (Section 5.4.3.3).

ATC performed ten QA compaction tests as documented in the December 13, 2005 reports. The results of the compaction testing confirmed the QC results from GZA in that all ten of the test failed compaction with results ranging from 87.5% to 92.6%. A copy of the ATC report is provided in Appendix K. The compaction deficiencies were fully addressed (Section 5.4.3.3).

There were no deficiencies in the frequency of QC and QA testing of the base material. There were 31 additional QC compaction tests and seven QA tests completed beyond the specified project requirements.

5.4.5 ASPHALT BINDER COURSE

5.4.5.1 JOB MIX FORMULA

Sevenson retained Aggregate Industries as the paving contractor. Aggregate Industries supplied the asphalt concrete from their Stoughton and Saugus batch plants as shown on the imported material quantities table (Table 5.2). Prior to the placement of the binder course in 2005, the Job Mix Formulas (JMF) for asphalt concrete from the two plants were submitted and approved and copies are included in Appendix M. The two JMFs met the aggregate gradation and asphalt content requirements of the Phase IV RIP Technical Specifications. Aggregate Industries proposed using the Performance Grade (PG) 52-34 rather than the specified viscosity grade asphalt cement AC-20. The PG 52-34 asphalt cement is designed to be used for a 7-day average maximum pavement temperature of 52°C (126°F) during summer and a minimum pavement temperature of -34°C (-29°F) during winter. The change in specified material was approved since it is more acceptable and typical practice in northern more cold weather climates.

5.4.5.2 BINDER COURSE PLACEMENT

The supply and installation of the asphalt binder course was conducted in accordance with the Phase IV RIP Technical Specifications, which included the Massachusetts Highway Department (MHD) 1995 Standard Specifications for Highway and Bridges (Standard Specifications). The bases of the MHD Standard Specifications are the gradation of mineral aggregate and asphalt cement content. Marshall volumetric properties are not specified in the MHD Standard Specifications but were included in the Phase IV RIP Technical Specifications. For the purposes of the QA/QC program, tests of the supplied asphalt materials and the installed asphalt layers were generally considered to meet the project requirements if the test results met the MHD Standard Specifications.

In December 2005, frost and cold weather conditions during the base and subbase aggregate layers placement caused concern about whether the asphalt concrete binder course should be installed (Section 5.4.3.3). It was determined that the paving of the binder course would be completed in December 2005 in order to stabilize the Site for winter months, and that the binder course and subbase and base layers would be inspected, tested and evaluated in the spring of 2006 to determine the appropriate repairs prior to construction completion.

On December 22 and December 23, 2005 a 2.5 inch thick asphalt binder course was placed instead of the proposed thickness of 2 inches since the thicker layer would provide improved protection from the cold weather conditions over the winter months and a more durable layer over the long term. The quantity of imported asphalt binder course material was 3,096 tons (Table 5.2). The measured compacted thickness ranged from 2.5 inches to 2.75 inches.

The ambient temperature at the time of placement on the two days of paving (December 22 and 23, 2005) ranged from 18°F to 36°F. Due to the cold weather conditions, the temperature of the asphalt for the first five truck loads placed was approximately 150°F which was below 167°F, the minimum specified temperature for proper placement and compaction. QC field measurements indicated that the asphalt temperature at the time of compaction ranged from 140°F to 260°F. The lower than specified temperatures were accepted in order to stabilize the Site for the winter months due to being only slightly lower than the specifications and only for a low proportion of the total loads of materials.

5.4.5.3 IN-PLACE QA/QC

Two bulk (uncompacted) samples of the binder asphalt concrete were collected during the paving operation on December 22, 2005. The samples were tested for Marshall Bulk Specific Gravity.

QC thickness measurements were performed at sixteen locations. The compacted measured thickness ranged from 2.5 to 2.75 inches, which exceeded the specified 2.0 inches.

5.4.5.4 SPRING 2006 OBSERVATIONS AND REPAIRS

In April 2006, detailed technical evaluations including field and laboratory testing were conducted based on spring 2006 inspections (as described in the Technical Memorandum provided in Appendix E). The technical evaluations documented the subbase, base and asphalt binder course conditions and were used to determine appropriate repairs. The major field observations are summarized as follows:

1. Frequent localized (sinkhole shaped) settlements up to and exceeding six inches;
2. Some trench like settlements;
3. Segregated asphalt concrete resulting in an extensive pock-marked surface in a few paving lanes; and
4. Pavement settlements along the unsupported southern and western edges.

The total area observed to have severe settlement issues (greater than six inches) was approximately 7,500 SF and the remaining 203,000 SF was characterized by extensive localized shallow depressions of relatively small area and shallow depth (less than six inches). The repairs and completion of earthwork construction along the western and southern edges of the asphalt layer to provide support to the structure were completed in April 2006. Upon completion of these repairs, Severson completed proof rolling of the entire asphalt layer was conducted using a tri-axial truck with a total estimated weight (including fill material) of 73,000 pounds to verify the structural adequacy of the majority of the subbase, base and binder course and ensure that all areas requiring repair were identified.

5.4.5.5 ASPHALT BASE COURSE REPAIRS QA/QC

The asphalt repairs were completed on May 8, 2006, in accordance with the proposed methodology. JMFs were provided by Severson/Aggregate Industries for the binder course repair material to be imported from the Ashland and Wrentham Plants (Appendix M). A quantity of 411 tons of Class 1, Type 1 Binder Course asphalt concrete was imported from Aggregate Industries Ashland and Wrentham plants for binder course repairs.

On May 1, 2006 seven binder course samples were collected and analyzed for compaction. Three samples had compaction results ranging from 92.8% to 94.4% which are less than the specified of 95% and the remaining four samples had compaction results ranging from 95.2% to 99.5%.

On May 1, 2006, Briggs collected six 6-inch diameter cores from the binder asphalt. The QC results are summarized in Table N-1-1, and the laboratory reports are provided in Appendix N. Based on the laboratory test results, the degree of the in-situ compaction of the six core samples with respect to the laboratory Marshall bulk density ranged from 92.2% to 99.5%, with three values exceeding the specification of 95%. Core samples four and five were collected from segregated surface areas and had compaction results of 93.1% and 92.2%, respectively. Core samples six was collected from a non-segregated area and the compaction was 94.3%. A composite of the six samples was also analyzed for gradation and asphalt content and the results are summarized on Table N-1-2 and lab reports provided in Appendix N. The asphalt cement content and mineral aggregate gradation were in conformance with the project specifications.

On May 22, 2006 after the placement of the leveling and top course, Briggs collected six core samples from the binder course and the results are summarized on Table N-1-1 and copies of the laboratory reports are provided in Appendix N. The core samples were tested for Marshall bulk specific gravity and compaction and the degree of compaction ranged from 95.1% 98.7%, meeting the specified requirement of 95%.

After the further evaluation of asphalt conditions after proof rolling and the Spring QC/QA test results, the asphalt repair methodology was finalized and consisted of the following:

1. Removal of the asphalt in areas where the observed settlement exceeded six inches (7,500 SF), replace the granular base layer, compact, and repave these areas with 2.5 inch thick binder asphalt instead of the specified 2 inch thick layer; and

2. Install a tack layer and a 1 inch thick asphalt concrete leveling course, using a machine paver across the entire 4.5 acre asphalt binder course layer.

5.4.5.6 DEFICIENCIES IN QC AND QA FREQUENCY TESTING

As shown in Table 5.4, there were certain deficiencies in the QC and QA testing requirements. There were 12 bulk specific gravity tests completed on both uncompacted and compacted samples in comparison to the 24 tests required. Based on the binder course area, there were 105 required compaction tests and only 19 tests were performed. Material properties such as asphalt content and gradation were only tested on one sample when two were required. There was no QA testing completed for the binder course.

The QC and QA deficiencies were deemed acceptable based on the construction methods implemented to allow adequate subbase and base layer construction as described in Section 5.4.3.3. Additionally, the subbase, base and binder course layers were completed in cold weather conditions in order to stabilize the Site for the winter months and since technical evaluations and repairs would be conducted in spring 2006 to address the less than optimum construction conditions. The design of the pavement structure also was altered to make it longer lasting and more durable by increasing the thickness (Section 5.4.3.3). Additionally, the final OMM Plan would be prepared and implemented to identify and effect necessary repairs over the life of the asphalt barrier.

5.4.6 STORMWATER SEWER LINING

The storm sewer from the Wetland A headwall to manhole STM-02 (approximately 365 LF) was lined by Insituform from January 25 to 30, 2006. The Vinylflow liner (Series No. VF-300) is a CIPP that consists of a needled polyester felt tube that is impregnated with a vinyl ester resin. As described in the Phase IV RIP (CRA, October 2005), the installed liner is technically equivalent, with ongoing OMM, to the provision of a 4 ft separation barrier around a utility as recommended in the Guidance on the Use, Design, Construction, and Monitoring of Engineered Barriers (MADEP, November 2002).

Insituform conducted liner leak testing on February 1, 2006 in accordance with the protocols and procedures provided by the American Society for Testing and Materials (ASTM) Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Inversion and Curing of a Resin Impregnated Tube. The liner failed to meet the leak test ASTM criteria. The installed liner was video inspected by Insituform on February 2,

2006, and the detailed inspection results and failure analysis are provided in the Investigation Summary Regarding Failure/Seam Separation in the CIPP Tube report (Insituform, March 7, 2006) (Appendix M).

The storm sewer from the Wetland A headwall to manhole STM-02 (approximately 365 LF) was relined by Insituform on April 4 and 5, 2006. The liner was installed inside the liner that was installed in February 2006, which failed to meet the ASTM leak test criteria. Insituform conducted the liner leak test and video inspection on April 5 and 6, 2006. The leak test results met the ASTM criteria.

5.4.7 ASPHALT LEVELING COURSE

5.4.7.1 JOB MIX FORMULAS

Sevenson/Aggregate Industries, supplied asphalt concrete from their Ashland and Wrentham batch plants for the leveling and top course layers. The JMF for asphalt concrete from the two plants was submitted to CRA in May 2006. The two JMF met or exceeded the aggregate gradation and asphalt content requirements of the Phase IV RIP Technical Specifications. Aggregate Industries proposed using the PG 64-28 instead of the specified viscosity grade asphalt cement AC-20. The PG 64-28 asphalt cement is designed to be used for a 7-day average maximum pavement temperature of 64°C (147°F) during summer and a minimum pavement temperature of -28°C (-18°F) during winter. The proposed asphalt cement PG 64-28 is one grade higher than the asphalt cement typically used in northern regions for fast transient loads. When the loads change from fast transient to slow transient, the grade of the asphalt cement is moved up by one grade to enhance the ability of the asphalt concrete to resist rutting. Since the engineered barrier will be used as a parking lot subjected to slow moving transient loads, the use of PG 64-28 was accepted as a design change.

5.4.7.2 LEVELING COURSE PLACEMENT

A tack coat was applied on the binder course surface and then an asphalt leveling course was placed on May 8, 9, and 10, 2006. A total of 2,040 tons of Class I Type 1 asphalt concrete was imported (Table 5.2), was placed over an area of 209,600 SF with an average thickness of 1.5 inches.

5.4.7.3 IN-PLACE QC/QA

On May 8, 2006, Severson did not schedule Briggs to be on Site and therefore in-place compaction testing was not completed as documented in the Daily Logs (Appendix I). Severson was directed to stop the paving work, however the remaining truck load of 411 tons was allowed to be placed and was compacted (Table 5.2).

On May 9, 2006, Briggs performed QC compaction tests from 16 locations and the data are summarized in Table N-1-3 and copies of the Briggs reports (including test location sketches) are provided in Appendix N. All 16 compaction results were greater than the 95% MHD Standard Specification requirement, with results ranging from 95.8% to 98.5%. Briggs and ATC both collected one core sample each on May 9, 2006 and the samples were submitted for analysis of Marshall properties (Table N-1-3) and grain size analysis and asphalt content (Table N-1-4). The percent air voids of both the QC and QA samples were slightly higher than the MHD Standard Specifications.

On May 10, 2006, Briggs collected one core sample for analysis of Marshall properties (Table N-1-3) and grain size analysis and asphalt content (Table N-1-4). The results of the QC samples indicate that the percent air voids were slightly lower than the MHD Standard Specifications and two intervals of the gradation results did not the MHD Standard Specifications but were within the allowable tolerance range.

On May 11, 2006, Briggs did not arrive on time to the Site and the field technician did not have a nuclear gage; CRA notified Severson of this deficiency and it was documented in the Daily Logs (Appendix I). ATC collected three QA core samples on May 11, 2006, and the compaction results ranged from 90.6 to 94.3 and, therefore, did not meet the 95% requirement.

Briggs collected eighteen core samples from the completed leveling course on May 22, 2006 after the placement of the top course. The samples were tested for Marshall bulk specific gravity and compaction and the results are summarized in Table N-1-3. All of the 18 samples had compaction results greater than the required 95%, ranging from 95.0% to 100.0%.

5.4.7.4 DEFICIENCIES IN QC AND QA FREQUENCY TESTING

As shown in Table 5.4, there were certain deficiencies in the frequency of bulk specific gravity and compaction tests. Although the paving was completed on three separate days, the frequency requirements were based on the actual two full days (8-hours) as

documented in the Daily Logs. The significantly lower number of QC tests for compaction (105 required and 34 completed) is mostly due to the absence of Briggs during one day of placement as Severson was notified of. There were no deficiencies in QC testing for material properties of the leveling course materials.

The only deficiency in QA frequency was that only three samples of compaction were taken and 11 samples were required which was based on the actual number of QC tests.

5.4.8 ASPHALT TOP COURSE

The top course was placed on May 11, 12, and 17, 2006. A total of 2,335 tons of asphalt concrete was placed over 209,600 SF (Table 5.2), with an average thickness of 1.75 inches which exceeded the specification of 1.5 inches.

5.4.8.1 MATERIAL PLACEMENT

The QC and QA results are summarized in Tables N-1-5 and N-1-6 and the reports are provided in Appendix N.

During placement on May 11, 12 and 17, 2006, 79 QC compaction tests and two QA compaction tests were completed. All of the compaction tests were above the 95% specification with the exception of seven tests, collected from the lanes paved with top mix materials imported from Aggregate Industries Wrentham batch plant, that ranged in compaction from 88.8% to 92.6%. The compaction results above 95% ranged from 95.0% to 100.0%. Additionally, 28 compaction tests were completed on May 20 and 22, 2006 and six of the samples, collected from the Wrentham lanes, had compaction results ranging from 92.6% to 94.5%. The remaining 22 compaction results were greater than the specification of 95%, ranging from 95.0% to 99.8%. Based on all of the QC/QA test results the compaction of the top course was deemed to be acceptable, except the areas where asphalt from the Wrentham plant was placed.

Air content in the four QC samples and two QA tested for Marshall volumetric properties was ranged from 4.1% to 5.3% with one low value of 0.2%, in comparison to the specified minimum 5.5%. Two of the six bulk samples tested for Marshall flow met the specified range of 10 to 16, and four samples ranged from 8.2 to 9.8, slightly lower than the minimum specification. Voids in mineral aggregate (VMA) met the specification for five out of the six samples; VMA in one sample was 14.3% which is slightly below the specified minimum 14.5%. The Marshall stability of all the six

samples ranged from 2,450 pounds to 3,530 pounds which exceeds specification of 1,190 pounds. The tensile strength ratio (TSR) of the one sample tested for resistance to moisture induced damage was 80.3% which exceeds the minimum specification of 75%.

Five QC core samples were collected on May 20, 2006 by Aggregate Industries from Wrentham locations and Briggs collected four QC samples on May 11, 12, 15 and 22 from the Ashland top course asphalt and the cores were submitted for gradation and asphalt content analysis and results summarized in Table N-1-6. Only one of the nine QC core samples (Core 5 from Aggregate Industries) met the Technical Specifications for gradation and asphalt content parameters. The remaining eight samples did not meet the Technical Specifications for either mineral aggregate gradation or asphalt cement content or both. The mineral aggregate gradation for the 'fine aggregate' fraction passing the # 8 sieve ranged from 32% to 35% which is slightly less than the specified 37% to 54%. The asphalt content of the four Ashland samples ranged from 5.3% to 5.4% which is slightly less than the specified range of 5.5% to 7.0%.

ATC collected two samples of top course from Ashland for gradation and asphalt content and both of them did not meet the Technical Specifications and one did not meet the asphalt content requirements. The mineral aggregate gradation for the 'fine aggregate' fraction passing the # 8 sieve was 35% in one sample which is slightly less than the specified 37% to 54%. The asphalt content of number samples was 5.3%, which is slightly less than the specified range of 5.5% to 7.0%.

Based on all of the QC/QA tests, the results were generally met the Technical Specifications or were slightly outside the specified ranges, and were acceptable, except for samples of top course asphalt collected from the areas where Wrentham asphalt were used.

5.4.8.2 ASPHALT WARRANTY

Due to the deficiencies identified and discussed above and the low compaction in the two areas paved with 597.14 tons of Wrentham asphalt the warranty for this asphalt area (approximately 53,000 SF, was increased from the specified one-year period to a five-year period. The extended warranty is provided in Appendix O, including a survey showing the area covered.

5.5 PAVEMENT STRUCTURAL NUMBER AND LOADING

The structural number for the pavement structure installed was calculated as part of the Phase IV RIP and the calculation was updated based on the design/construction changes which were implemented. The typical structural coefficients used in the industry are 0.44, 0.14, and 0.1 for asphalt concrete, granular base and subbase layers, respectively. For the design pavement structure consisting of 4 inch thick asphalt concrete over a 4 inch thick crushed stone base and an 8 inch thick granular subbase, the structural number is 3.12.

The as-constructed pavement structure consists of 5.75 inches of asphalt, 4 inches of crushed stone base and 8 inches of granular subbase. The subbase were wetter than optimum and also could not be compacted to the specified compaction due cold weather conditions. To address the areas where compaction was not being achieved, certain construction methods and a structural reinforcement geotextile were used. In general, the steps to complete the grading and prepare the cap for the application of the 2.5 inch asphalt binder course were as discussed in Section 5.4.3.3.

The base and subbase layers as well as the asphalt layers in failure areas which comprised approximately of 15% of the total asphalt area, were evaluated and repaired in April and May 2006. An additional asphalt leveling course was also installed over the entire asphalt binder course layer to address the deficiencies identified based on technical evaluations of field inspections and testing. The asphalt layers also contained certain deficiencies in material and placement specifications for a portion of the pavement structure. Based on a literature review and professional experience, reduced structural coefficients of 0.40, 0.10, and 0.06 were used to account for the deficiencies for the purposes of calculating the structural number for the installed asphalt. The calculated structural number is 3.18, which exceeds the structural number for the design pavement structure (3.1.2).

The prepared subgrade is expected to have a minimum Resilient Modulus M_r of 4500 pounds per square inch (psi), which corresponds to a California Bearing Ratio (CBR) of 3%. Based on the Guide for Design of Pavement Structures (AASHTO, 1993), the allowable 18,000 pounds. Equivalent Single Axle Load (ESAL) repetitions on a given section of the pavement over its design life are calculated to be approximately 294,000 repetitions in comparison to the 260,000 repetitions for the Phase IV remedial design pavement structure. The ESAL calculations with the estimated/assumed input data are provided in Table N-1-7.

5.6 OMM CONSIDERATIONS

Although the binder course was installed in less than optimum wet and cold weather conditions in 2005 and there were certain QC/QA deficiencies in the asphalt layer installation activities, the asphalt engineered barrier is technically equivalent to the Phase IV RIP design based on the following:

1. Changes to the pavement structure design (binder course 2.5 inches versus 2.0 inches, additional 1.5 inch leveling course, top course 1.75 inches versus 1.5 inches);
2. Changes to the pavement structure installation/construction wetlands (Section 5.4.3.3);
3. The spring 2006 inspection testing, technical evaluation and repair program completed to replace/address approximately 15% of the asphalt placed in 2005 that was determined to be deficient;
4. The QC/QA inspection and testing information and technical evaluation;
5. The calculated actual versus design structural number and loading repetitions; and
6. The extended (five years versus one year) warranty provided for the approximately 53,000 SF Wrentham asphalt area.

This conclusion is also contingent on the asphalt barrier pavement structure being regularly monitored and maintained in accordance with the guidelines provided below which are incorporated in the final OMM Plan. The OMM Plan provides the specific inspection and routine and unscheduled maintenance activities required to maintain the asphalt barrier and was developed in part, based on these guidelines.

Asphalt pavement structures deteriorates over time due to the environmental effects such as freeze-thaw cycle, exposure to moisture during wet weather conditions, drying out of the natural oils in the asphalt cement during dry weather etc., in addition to the traffic effects. In order to achieve as long a life as practical and feasible, it is essential that the inspection and maintenance activities provided by the OMM are conducted. The pavement structure should be regularly monitored for cracks, settlements, pothole formations, and other defects. Early detection and repair of minor defects will reduce propagation of the defects over larger areas. Defects, which are identified, should be addressed relatively quickly to prevent further deterioration. Water should not be allowed to pond over the asphalt surface or adjacent to the pavement structure.

Drying out of asphalt, combined with traffic movement results in raveling, which is progressive separation of mineral aggregate particles in a pavement from the surface downwards. If allowed to progress, raveling will lead to structural weakness in the pavement structure resulting in structural failures such as alligator cracks, potholes, etc. Seal coat applications at regular time intervals, typically about 6 to 8 years will prevent raveling and will prolong the pavement life significantly.

5.7 CONSTRUCTION QUALITY CONTROL AND QUALITY ASSURANCE SUMMARY

Based on the review of the transmittals/submittals and the Submittal Tracking Log issued during RC activities, the provision of CRA and LSP review and verification throughout RC activities, and the final Submittal Tracking Log provided herein, the RIP submittal requirements were completed.

Based on the satisfactory completion of the QA program for the Phase IV activities, the QC inspection program was verified as being completed in accordance with the intent and scope of the Phase IV RIP, including the CQAP.

Based on the review of the QC and QA inspections and testing, the provision of CRA and LSP review and verification throughout RC activities, and the final QC and QA information provided herein, the RIP CQAP requirements were met.

The data quality objectives (DQOs) established in the Phase IV RIP (including the Technical Specifications and the CQAP) are verified as being met. For QA chemical analyses data, a CRA chemist independently verified the achievement of DQOs in accordance with MADEP regulations and guidance.

6.0 FCC ORDERS OF CONDITIONS/SITE INSPECTIONS

The FCC issued two orders of conditions regarding the comprehensive response actions for the Site. Monthly inspections were completed after substantial completion of the remedial construction activities in May 2006 until the final 2006 inspection completed in October 2006.

6.1 OCTOBER 2004 ORDER OF CONDITIONS

In September 2004, a Phase II CSA Work Plan and a Notice of Intent was submitted to MADEP and the FCC regarding proposed Phase II CSA investigation activities for the Site as well as two other sites [Beaverdam Brook (RTN: 3-4356) and the Former Settling Lagoon (RTN: 3-3940)] at 63 Western Avenue. The FCC issued Order of Conditions (MADEP File Number 158-1033) for the Site on October 1, 2004. The Phase II CSA activities were completed by submission of the Final Phase II CSA Reports for the:

- Site (RTN: 3-3939) (CRA, August 2005);
- Former Settling Lagoon (RTN: 3-3940) (CRA, September 2006); and
- Beaverdam Brook (RTN: 3-4356) (CRA, December 2006).

All of the October 2004 order conditions were met for the Phase II CSA Activities. In January 2007, a request for a Certificate of Compliance was submitted to the FCC upon completion of the Brook Phase II CSA activities for all three sites to closeout the October 2004 Order of Conditions. Based on discussions with the FCC a Certificate of Compliance will be issued in February 2007.

6.2 AUGUST 2005 ORDER OF CONDITIONS

In August 2005, a Notice of Intent was submitted to the MADEP and FCC to govern the implementation of the Phase IV RIP activities. On August 3, 2005, the FCC issued an Order of Conditions for the RC activities. Based on the October 11, 2006 Final Inspection by the FCC and LSP, a final inspection is required in the Spring of 2007 to confirm adequate establishment of vegetation and to address any substantive further erosion that occurred over the winter months as documented in the FCC's memorandum (Appendix E) as detailed below.

6.3 PRE-FINAL SITE INSPECTION

During the week of May 22-28, 2006 prior to Severson's demobilization from the Site, a Pre-Final Site Inspection was performed to identify work items required to complete RC activities. Attendees at the Pre-Final Site Inspection were as follows:

<i>Name</i>	<i>Representing</i>
Jason Rice	GM/CRA
Mike Wass	Severson
Mike Tristany	Severson

A Pre-Final Site Inspection Punch List was prepared and distributed to all attendees in May 2006 and the Punch List items were to be completed prior to the Final Site Inspection. These items were completed from May 22 to June 3, 2006 as verified by CRA's QA/Oversight Engineer.

Additional pre-final Site inspections were conducted by the LSP of Record on July 19, August 30, September 12, and October 11, 2006. The additional pre-final Site inspections were conducted to verify the establishment of vegetative growth, review the status of work items identified during the inspections to complete the response action activities, and verify items were completed to support a Request for Certificate of Compliance for the August 2005 FCC Order of Conditions DEP No. 158-1061. The detailed deficiencies identified and observations during the pre-final inspections are documented in a Technical Memorandum provided in Appendix E.

6.4 FINAL 2007 SITE INSPECTION

All of the outstanding items identified in the pre-final Site inspections were verified as being completed during the final 2006 Site inspection conducted by the FCC and the LSP of Record on October 11, 2006, except one item. Since one of the outstanding pre-final inspection items required some final erosion repairs and landscaping in the area of the North Pond and hydroseeding was conducted late in the growing season the vegetation had not become fully established at the time of the October 11, 2006 inspection. Based on this condition, the FCC indicated that they believed that the vegetation would become fully established, however, a final inspection would be required in the Spring of 2007 to confirm adequate establishment and address any substantive further erosion that occurred over the winter months. The FCC documented this determination in a

December 6, 2006 memorandum (Appendix E). No further items were identified that are required to be addressed to provide construction completion.

7.0 HEALTH AND SAFETY

The remedial activities were implemented in accordance with the Health and Safety Technical Specifications. Severson prepared a Site-specific HASP (Severson, September 2005) to govern all Site remedial construction activities. The implementation of the HASP ensured that the remedial activities were performed safely, in accordance with applicable regulatory requirements, and all persons on the Site, the general public, and the environment were protected from potential hazards during the remedial activities. The Site construction and oversight personnel were 40-hour trained in accordance with 40 CFR 1910. The Framingham Board of Health was notified of activities that required workers to use respirators and the results of air monitoring in accordance with the MCP requirements.

Daily Health and Safety meetings were conducted by the Severson's Health and Safety Officer (HSO) and documented in the Daily Construction Reports. Daily Health and safety activities were documented in the Daily Safety Checklist and Daily Safety Log Reports.

An air monitoring program was implemented by Severson, including both real time air monitoring and air sampling and analysis at an off-Site laboratory to determine worker exposure to particulates, VOCs and lead during certain construction activities. The construction activities were designed and sequenced to minimize potential exposures of construction workers to OHM at the Site. Monitoring activities were documented on the Daily Field Monitoring Result Forms.

The real time monitoring program consisted of monitoring for respirable particulate and VOCs on a daily basis to evaluate workers exposure and verify the adequacy of personal protective equipment (PPE). The respirable particulate and VOC monitoring were conducted daily at a frequency of every two hours (starting on October 18, 2005 and ending on January 31, 2006) in the exclusion zone during RC activities. The area and workers who had the greatest potential for exposure were monitored. Work practices such as closed cabs, only necessary workers in the work areas, limiting excavation quantities and accelerating removal and replacement of clean soil cover to minimize exposure to OHM. A water truck was used when appropriate to control dusts. No respirable particulate or VOC exceedances occurred above the action levels provided in the Site -specific HASP.

Air monitoring of lead levels was conducted once a week for the first month of work in which OHM impacted soil and waste were handled. A total of six samples (October 18, 27, and 31, 2005) were collected and submitted to an off-Site laboratory for lead analysis.

Each of the six samples were non-detect at a detection limit below the HASP prescribed action level. Based on the monitoring and the replacement and covering of all Site waste with the subgrade of the engineered barrier, Severson downgraded the requirements for respirator use but conducted additional monthly monitoring to provide ongoing verification of no potential unacceptable lead exposures during Site activities. The sampling and analysis procedures provided by the National Institute for Occupational Safety and Health (NIOSH) Method 7082 were followed for the air monitoring.

In cases where Severson employed subcontractors for certain RC activities (e.g., storm sewer rehabilitation activities), Severson's HASP was followed in addition to a subcontractor HASP.

8.0 NOTICE OF ACTIVITY AND USE LIMITATION AND OMM PLAN

8.1 NOTICE OF ACTIVITY AND USE LIMITATION

Consistent with a Class A-4 RAO and to ensure that a level of NSR is maintained at the Site, an AUL is necessary to restrict future Site activities and uses consistent with the conclusions of the Phase II Risk Characterization and maintain the response actions implemented in accordance with the Phase IV RIP, and MCP requirements.

The AUL has been developed in accordance with the MCP and the Guidance on Implementing AULs, Interim Final Policy BWSC 99-300 (MADEP, May 1999). Two separate but identical AUL's were prepared and registered for the Site. One AUL is for a portion of the Site owned by GM (5.46 acres) and one for the portion of the on ADESA property (0.19 acres). Both AUL's were registered at the Middlesex South County Registry of Deeds by Schofiled on January 16, 2006 and the BWSC Forms 113 and 113a were submitted to the MADEP electronically on January 25, 2006. Copies of the registered AUL packages and the BWSC edep transaction copies are provided in Appendix C. Both of the GM and ADESA AULs include the following components:

- BWSC Form 113: AUL Transmittal Form;
- Form 1075 (Notice of AUL);
- Exhibit A - Legal Description of the Property;
- Exhibit A-1 - Legal Description of the Portion of the Property Subject to the AUL;
- Exhibit B - Sketch Plan;
- Exhibit C - AUL Opinion; and
- Exhibit D - BWSC 113a: AUL Opinion Form.

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

8.1.1 PERMITTED USES AND ACTIVITIES

The following is a summary of the permitted uses and activities at the Site as stated in the both the GM and ADESA Form 1075 and the AUL Opinions (Exhibit C):

- *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 NSR; and*
- such other activities and uses which, in the Opinion of an 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.*

8.1.2 RESTRICTED USES AND ACTIVITIES

The following is a summary of the restricted uses and activities at the Site as provided in both the GM and ADESA Form 1075 and the AUL Opinions (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 NSR.*

8.1.3 OBLIGATIONS AND CONDITIONS

The following is a summary of the obligations and conditions of future Site activities as stated in both the GM and ADESA the Form 1075 and the AUL Opinions (Exhibit C):

- *Continued Operation, Maintenance and Monitoring of the Site remedy must be conducted in accordance with the Final OMM Plan as provided in an Appendix of this report;*
- *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,*
 - *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 PPE, 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 NSR.*

8.2 FINAL OMM PLAN

A preliminary OMM Plan was provided in the Phase IV RIP. The OMM Plan has been revised following the completion of remedial construction activities and is necessary to maintain the engineered barrier/AUL's and continue the achievement of NSR for the Class A-4 RAO. The final OMM Plan is provided in Appendix D.

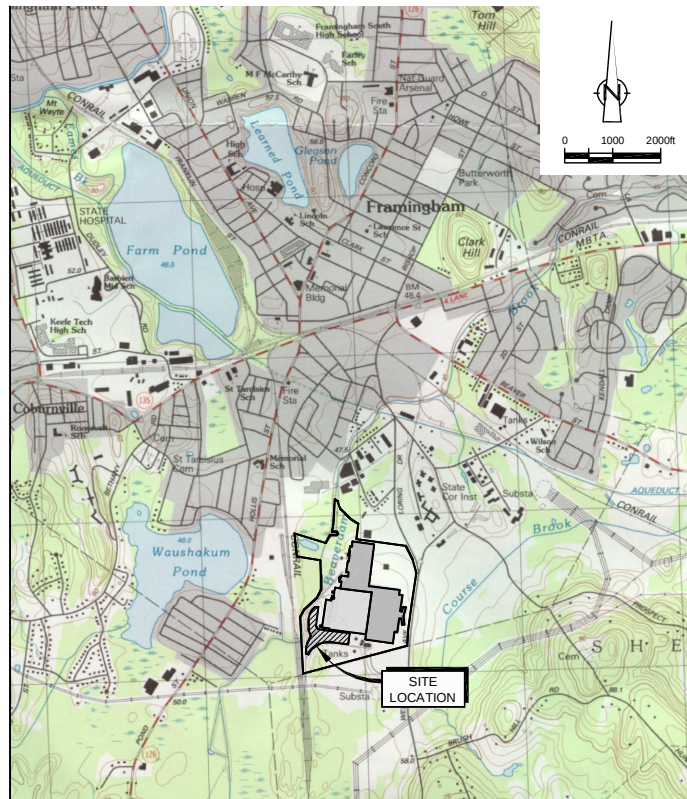
8.2.1 AUL FINANCIAL ASSURANCE

The requirements for financial assurance mechanisms (FAM) are generally indicated in the MCP (40.40996) and the Guidance on the Use, Design, Construction and Monitoring

of Engineered Barriers – Public Comment Draft (MADEP, November 2002). In order to determine the specific requirements, GM/CRA has had a number of discussions with MADEP to finalize a mutually agreed upon FAM. The FAM value is based on the estimated present worth cost of 30 years of operation and monitoring activities, to be conducted in accordance with the OMM plan. In December 2006, GM obtained a surety bond and discussions are ongoing with MADEP regarding the potential changes to the FAM to satisfy MADEP requirements. A copy of the surety bond obtained by GM is enclosed after the OMM in Appendix D.

9.0 RESPONSE ACTION OUTCOME STATEMENT

CRA has prepared an RAO Statement for the comprehensive response actions completed for the Former Landfill. The RAO Statement includes a Data Usability and Representativeness Evaluation. The Site has been investigated and remediated in accordance with the MCP under the supervision of Mr. Fred K. Taylor of CRA, a MADEP LSP. The RAO Statement indicates that a Class A-4 RAO has been achieved for the Site, and is included in Appendix B.



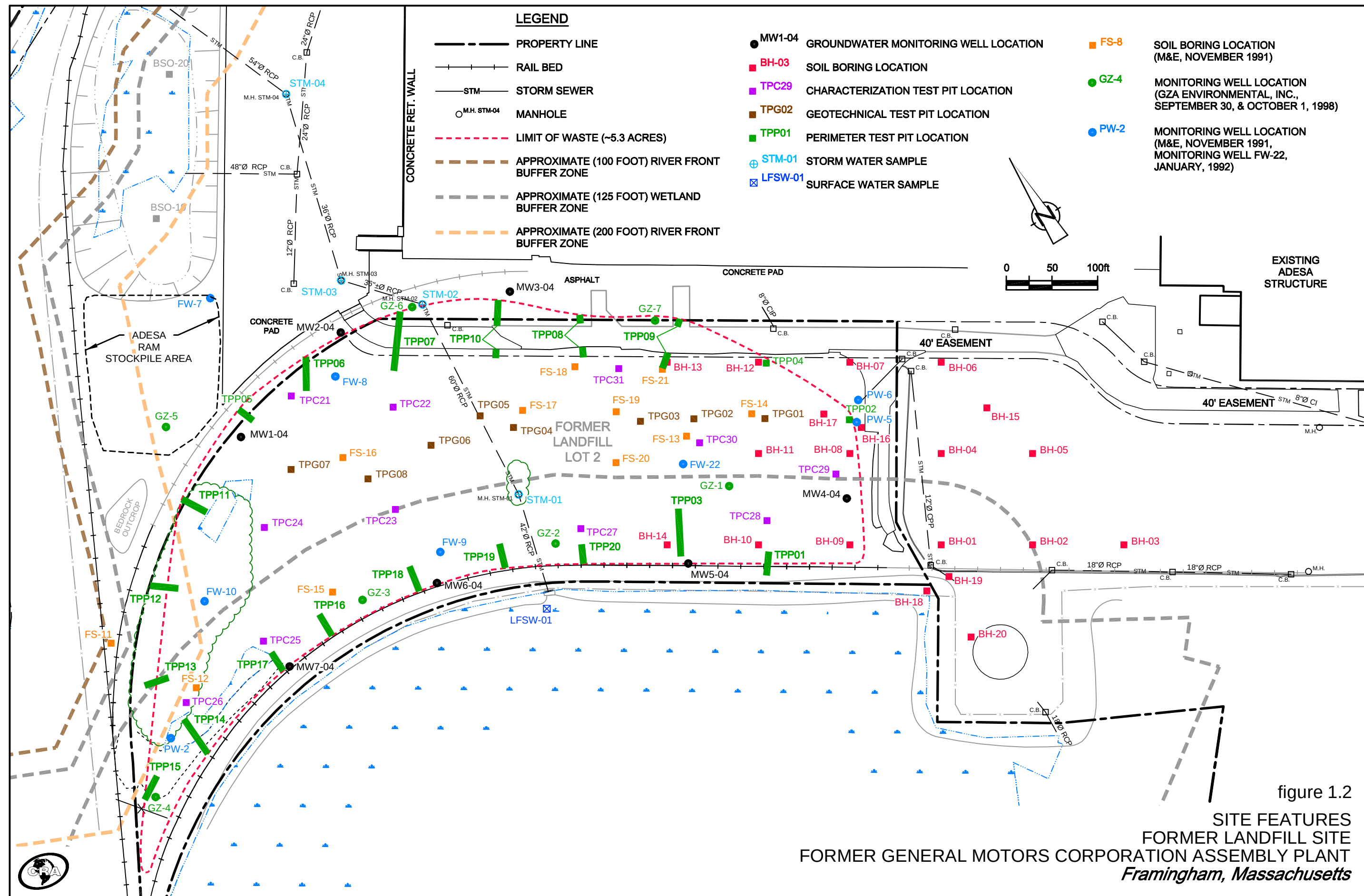
KEY MAP

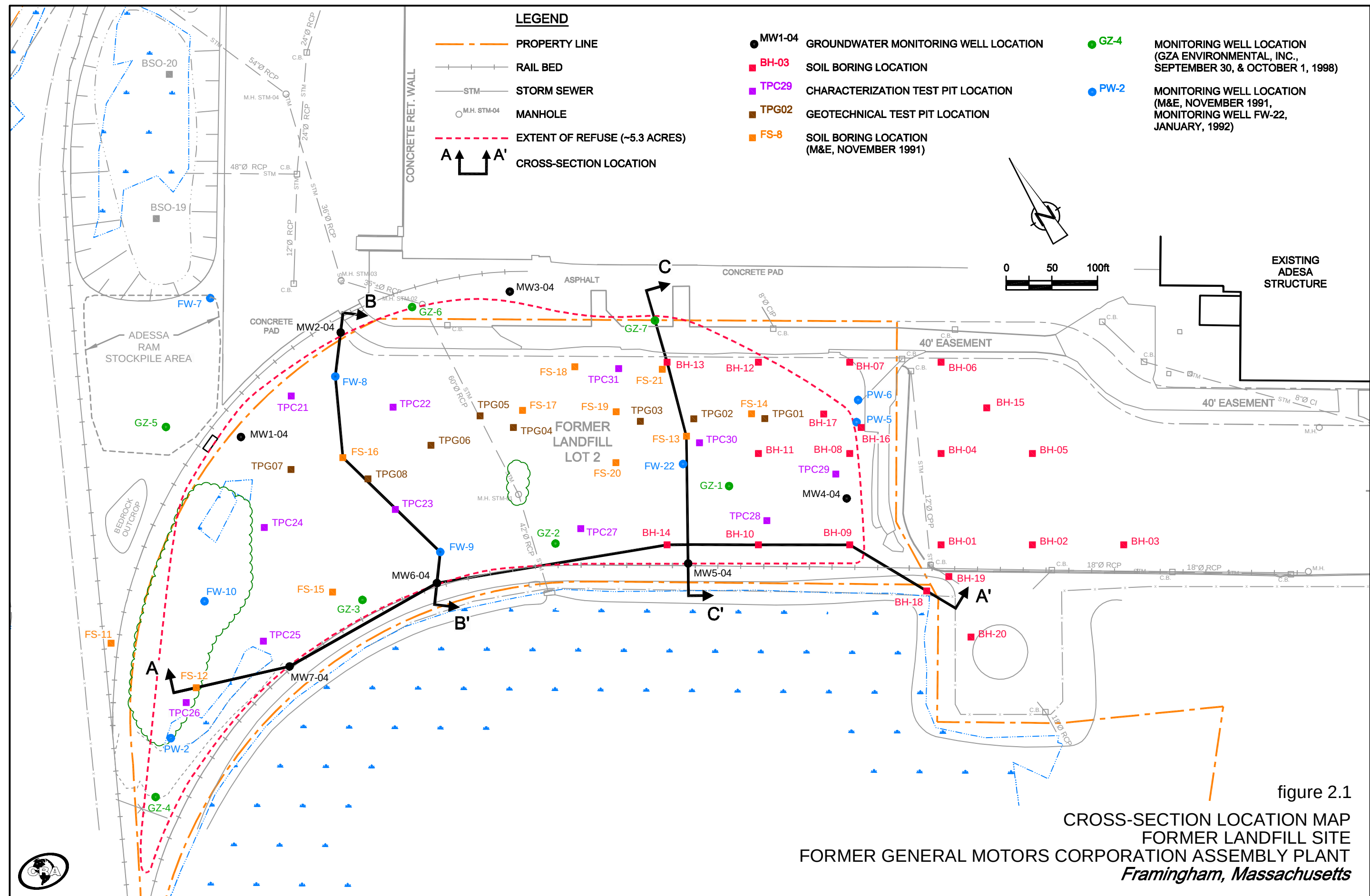
DRAWING INDEX

DWG. No.	REV. No.	DATE	TITLE
1	0	NOVEMBER 2006	PRE-CONSTRUCTION CONDITIONS
2	0	NOVEMBER 2006	SITE WORKS
3	0	NOVEMBER 2006	SPOILS PLACEMENT
4	0	NOVEMBER 2006	GRADING PLAN
5	0	NOVEMBER 2006	CAP SECTIONS
6	0	NOVEMBER 2006	CAP DETAILS
7	0	NOVEMBER 2006	STORMWATER AND FENCE DETAILS
8	0	NOVEMBER 2006	NORTH POND GRADING PLAN
9	0	NOVEMBER 2006	NORTH AND SOUTH POND DETAILS
10	0	NOVEMBER 2006	STORM SEWER ALIGNMENT

AS-RECORDED DRAWINGS
ENGINEERED BARRIER AND
STORMWATER MANAGEMENT
FORMER LANDFILL SITE
(RTN 3-3939)

GENERAL MOTORS CORPORATION
FORMER FRAMINGHAM ASSEMBLY
PLANT





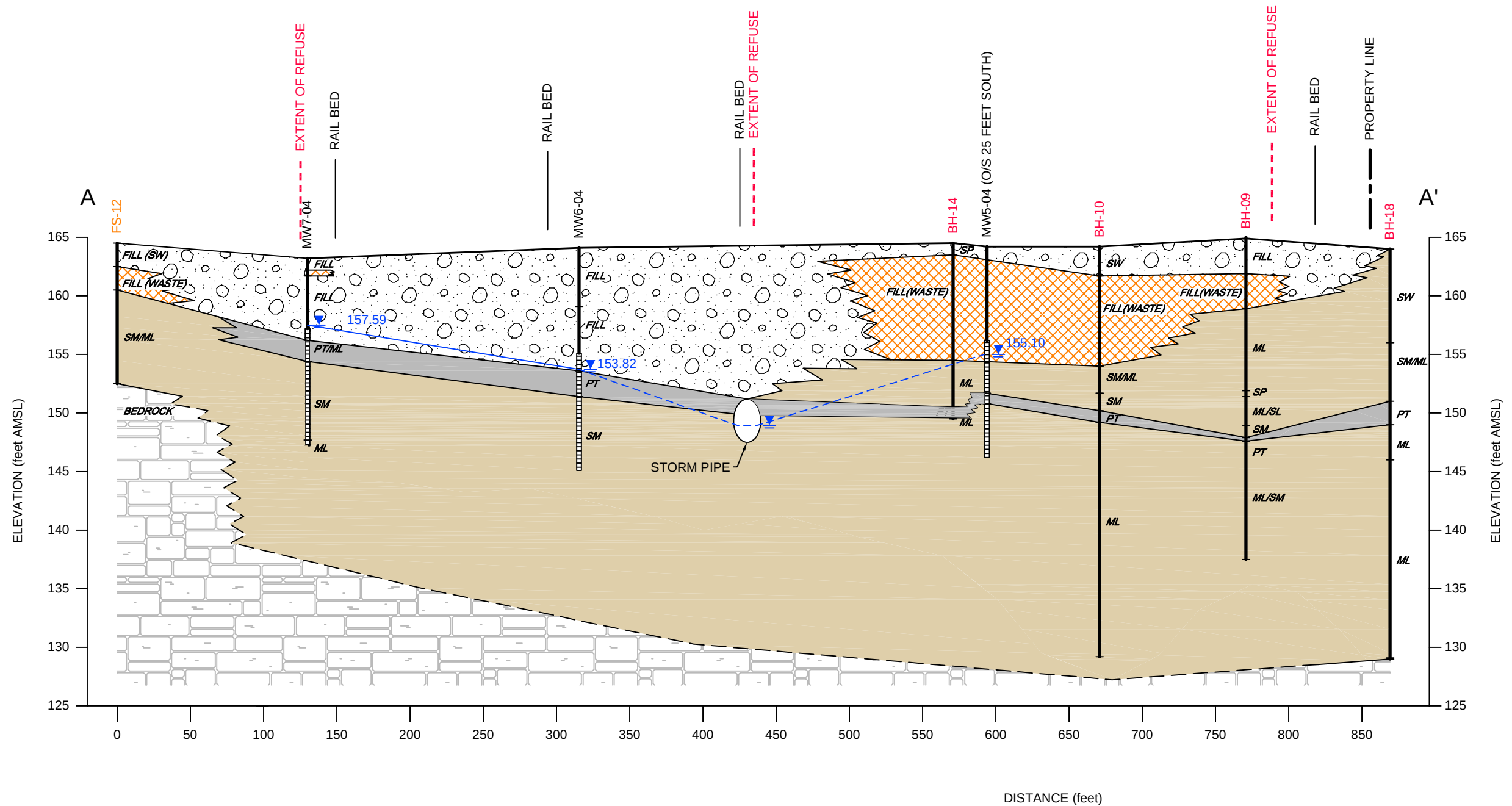


figure 2.2
CROSS-SECTION A-A'
FORMER LANDFILL SITE
FORMER GENERAL MOTORS CORPORATION ASSEMBLY PLANT
Framingham, Massachusetts



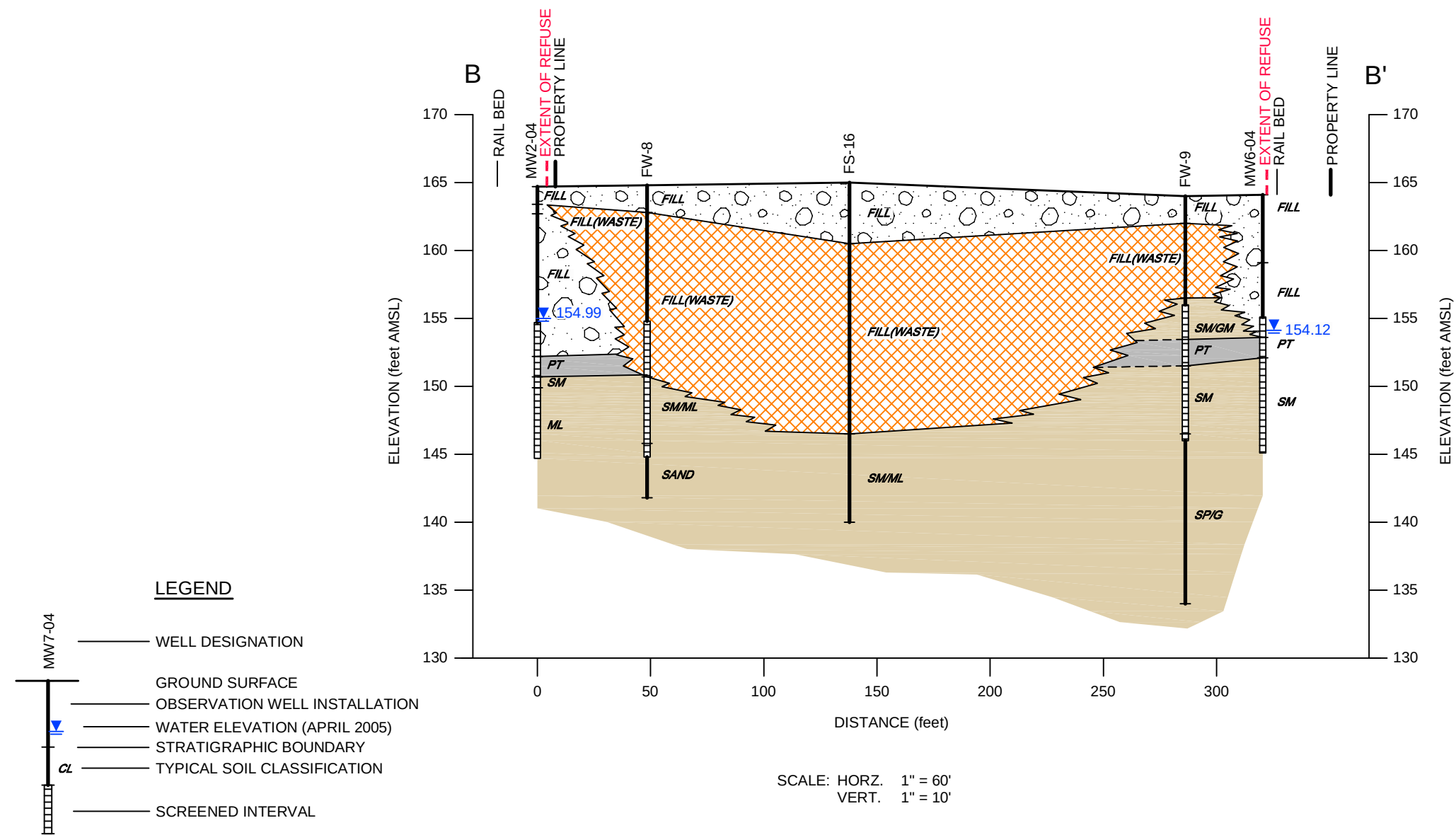


figure 2.3
CROSS-SECTION B-B'
FORMER LANDFILL SITE
FORMER GENERAL MOTORS CORPORATION ASSEMBLY PLANT
Framingham, Massachusetts



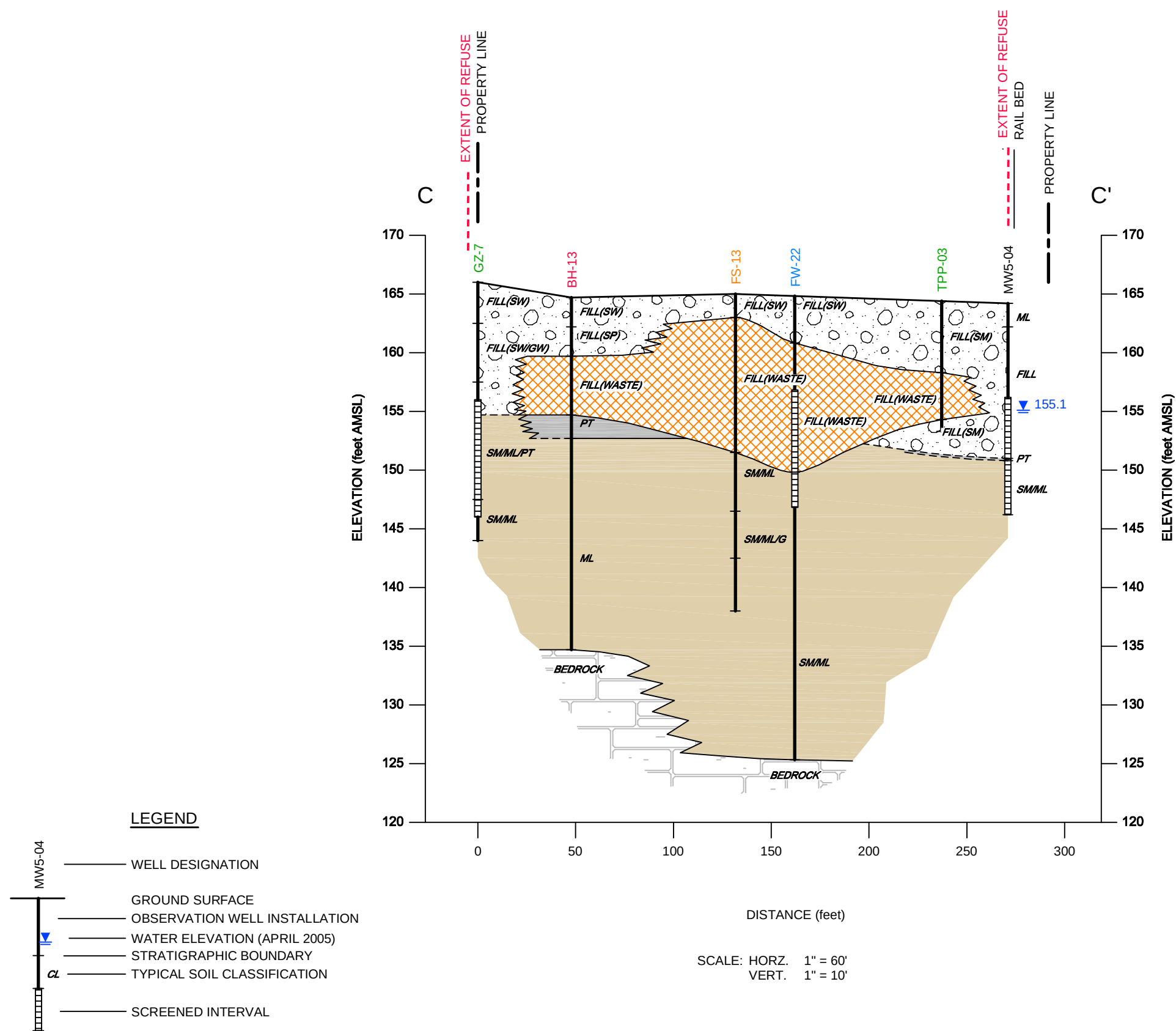
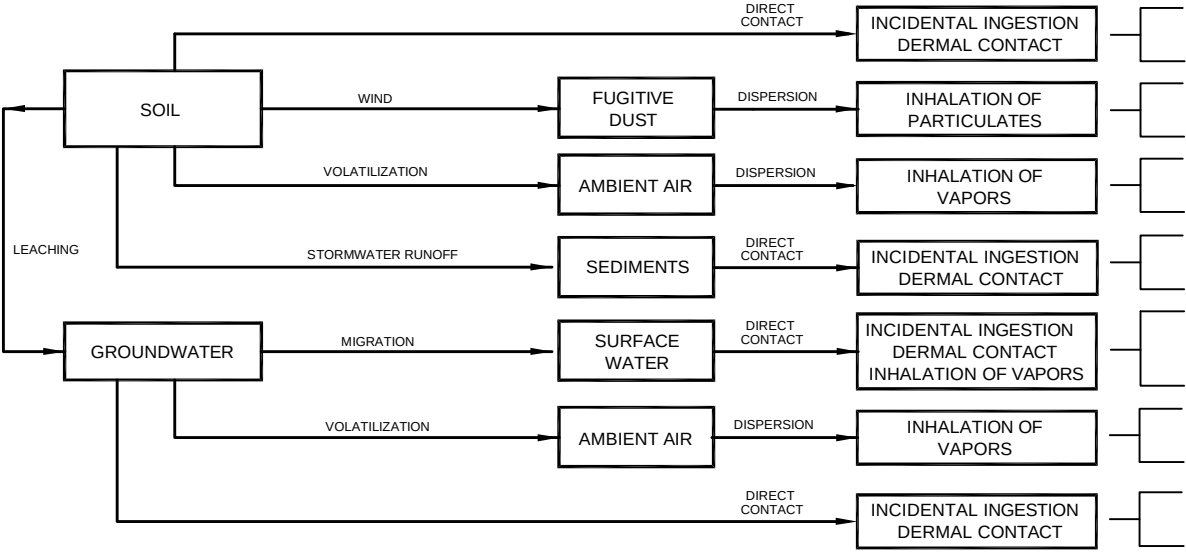


figure 2.4
CROSS-SECTION C-C'
FORMER LANDFILL SITE
FORMER GENERAL MOTORS CORPORATION ASSEMBLY PLANT
Framingham, Massachusetts





POTENTIALLY EXPOSED RECEPTORS			
ON - SITE			
TRESPASSERS	WORKERS		
	INDUSTRIAL/COMMERCIAL	UTILITY	CONSTRUCTION
●	●	●	●
●	●	●	●
●	●	●	●
●	N/E	N/E	N/E
●	N/E	N/E	N/E
—	—	●	●
—	—	●	●

LEGEND

- POTENTIALLY COMPLETE EXPOSURE PATHWAY
- INCOMPLETE EXPOSURE PATHWAY
- N/E NOT EVALUATED

figure 2.5

HUMAN HEALTH EXPOSURE SITE MODEL SCHEMATIC
FORMER LANDFILL SITE
FORMER GENERAL MOTORS CORPORATION ASSEMBLY PLANT
Framingham, Massachusetts



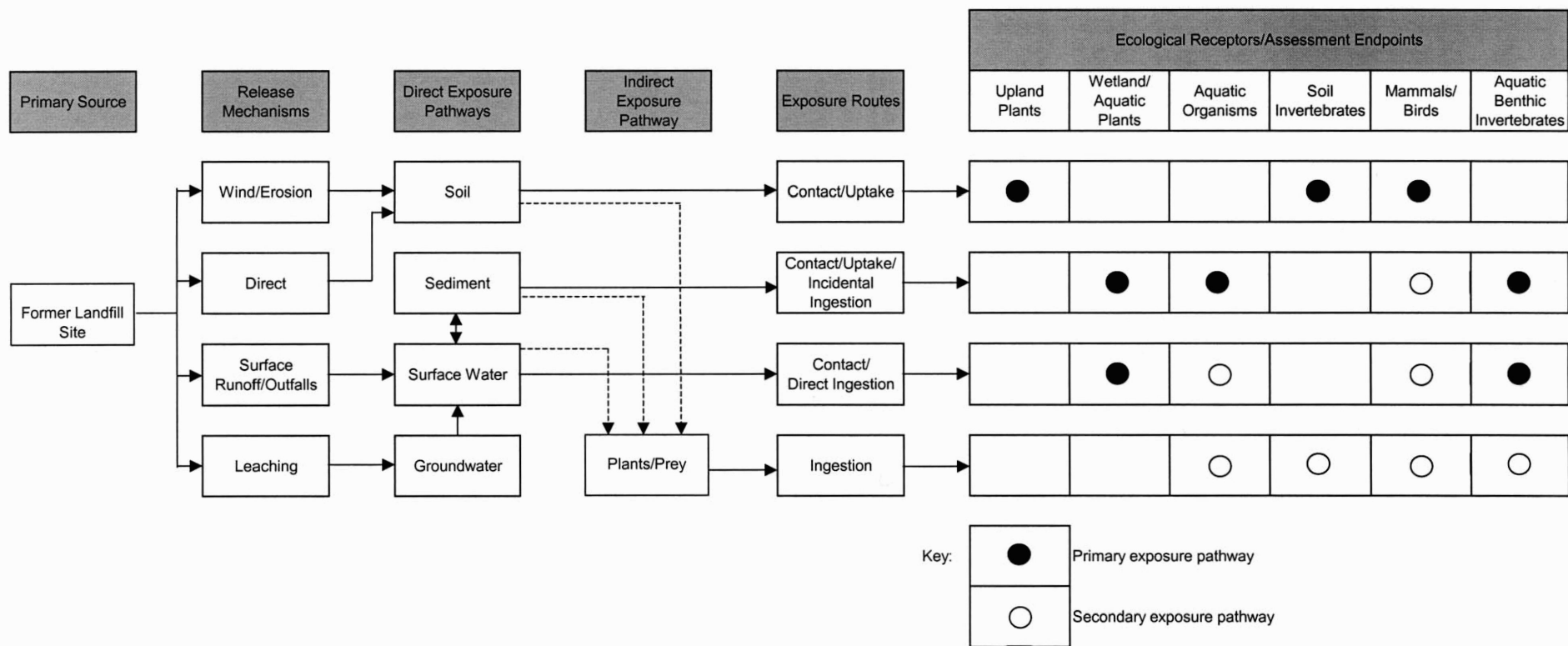


figure 2.6

ECOLOGICAL EXPOSURE SITE MODEL SCHEMATIC
FORMER LANDFILL SITE
FORMER GENERAL MOTORS CORPORATION ASSEMBLY PLANT
Framingham, Massachusetts



SOURCE: EXPONENT ECORISK ASSESSMENT

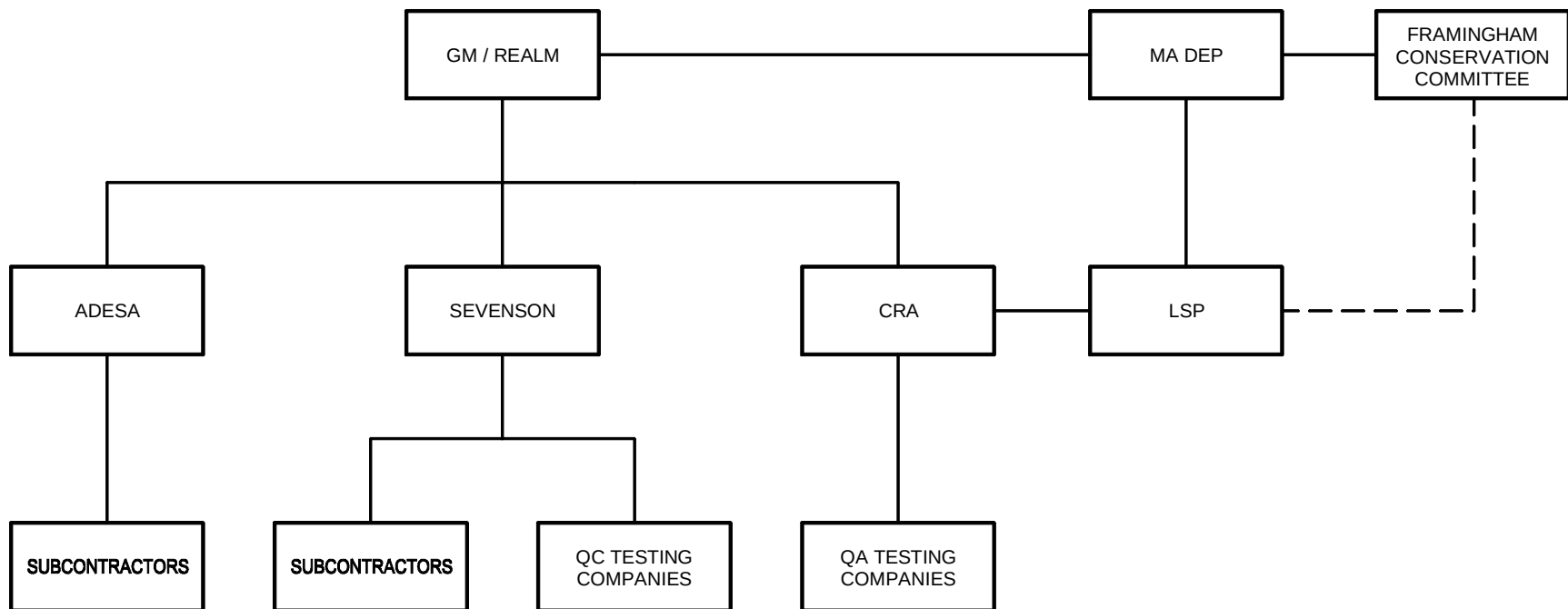


figure 5.1

PROJECT ORGANIZATION
FORMER LANDFILL SITE
FORMER GENERAL MOTORS CORPORATION ASSEMBLY PLANT
Framingham, Massachusetts



TABLE 1.1
CHRONOLOGY OF EVENTS
FORMER LANDFILL SITE
FRAMINGHAM, MASSACHUSETTS

Year **Month** **Event**

2004

August Notice of Intent Wetlands and Waterways (Phase II CSA)
 Notice of Intent (Phase II CSA) Supplement

September Phase II CSA Scope of Work

October FCC/MADEP Phase II Order of Conditions (DEP 158-1033)
 Phase II CSA Activities

November Phase II CSA Activities

2005

March Phase II CSA Scope of Work Addendum No. 1

April Phase II CSA Interim Report No.1 (Wetland Delineation Report) and Phase II CSA Work Plan Addendum No. 2

July Phase II CSA Interim Report No. 2 (Characterization and Tier 1C Permit Application)
 Notice of Intent (Phase IV CRA) Wetlands and Waterways
 Notice of Intent (Phase IV CRA) Supplement
 Storm Sewer Video Inspections

August Final Phase II CSA Report (Risk Characterization)
 FCC/MADEP Phase IV Order of Conditions (DEP 158-1061)

September Phase III Remedial Action Plan (RAP)

October Phase IV Remedy Implementation Plan (RIP)
 Mobilization and Site Preparation
 Clearing and Grubbing
 Installation of Silt Fencing/Erosion Controls
 Soil Cover Excavation
 Rough Grading
 North Pond Bank and Sediment Excavation/Stabilization
 Vegetation and Debris Consolidation, Transportation and Disposal

November Storm Sewer Cleaning/Post-Cleaning Video Inspection
 Storm Sewer Sediment Stabilization
 Storm Sewer Debris Consolidation
 Storm Sewer Cleaning Wastewater Transportation and Off-Site Disposal
 Spoils and Defining Layer Placement

December Common Fill Placement
 Subgrade Layers Placement
 Structural Geotextile Installation
 Asphalt Binder Course Paving
 Request for Certificate of Compliance August 2005 Phase II Order of Conditions
 Winterization Plan Implementation

TABLE 1.1
CHRONOLOGY OF EVENTS
FORMER LANDFILL SITE
FRAMINGHAM, MASSACHUSETTS

Year **Month** **Event**

2006

January	Storm Sewer Manhole Abandonment Activities Storm Sewer Rehabilitation Wastewater Transportation and Off-Site Disposal
March	Debris Transportation and Off-Site Disposal Site Erosion Repairs
April	Second Sewer Lining Stormwater Management Features Final Grading/Construction Asphalt Binder Course Inspections and Repairs
May	Asphalt Leveling Course Paving Asphalt Top Course Paving Soil Barrier Construction Soil Berm Construction Topsoil Placement and Hydroseeding (Barrier, Berm and Stormwater Management Features)
June	Site Cleaning and Demolition
July	First Site Pre-Final Inspection
August	Second Site Pre-Final Inspection North Pond Bank Repairs
September	Site Pre-Final Inspection with FCC
October	Site Final Inspection with FCC
December	OMM/AUL Financial Assurance Obtained

2007

January	Notices of AULs Registered As-Built Construction and RAO
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TABLE 2.1
SUMMARY OF RISK ASSESSMENT COPC'S
FORMER LANDFILL
FRAMINGHAM, MASSACHUSETTS

	<u>HHRA</u>						<u>ERA</u>			
	<u>Soil</u> (0-3 ftbgs)	<u>Soil</u> (0-6 ftbgs)	<u>Soil</u> (0-15 ftbgs)	<u>Groundwater</u>	<u>Surface Water</u>	<u>Sediment</u>	<u>Surficial Soil</u>	<u>North Pond Surficial Soil</u>	<u>Surface Water</u>	<u>Wetlands Sediment</u>
<u>Metals</u>										
Aluminum	X	X	X	X	X	X	-	-	X	-
Antimony	X	X	X	X	-	X	-	X	-	-
Arsenic	X	X	X	X	-	X	-	-	-	X
Barium	X	X	X	X	X	X	-	-	-	-
Beryllium	X	X	X	X	-	X	-	-	-	-
Cadmium	X	X	X	-	-	-	-	X	-	-
Chromium Total	X	X	X	X	-	X	-	X	-	-
Cobalt	X	X	X	X	-	X	-	-	-	-
Copper	X	X	X	X	X	X	X	X	X	-
Iron	X	X	X	X	X	X	X	X	X	-
Lead	X	X	X	X	X	X	-	X	-	X
Manganese	X	X	X	X	X	X	X	-	-	-
Mercury	-	-	X	-	-	X	-	-	-	-
Nickel	X	X	X	X	X	X	-	X	-	-
Selenium	X	X	X	X	-	-	-	-	-	-
Silver	-	-	-	X	-	-	-	-	-	-
Vanadium	X	X	X	X	-	X	X	X	-	-
Zinc	X	X	X	X	-	X	X	X	X	X
<u>SVOCs</u>										
2,4-Dimethylphenol	-	-	-	X	-	-	-	-	-	-
2-Methylnaphthalene	-	X	X	-	-	-	-	-	-	-
3&4-Methylphenol	X	X	X	-	-	-	-	-	-	-
Acenaphthene	X	X	X	-	-	-	-	-	-	X
Anthracene	X	X	X	-	-	-	-	-	-	-
Benzo(a)anthracene	X	X	X	-	-	-	-	-	-	X
Benzo(a)pyrene	X	X	X	-	-	X	-	-	-	X
Benzo(b)fluoranthene	X	X	X	-	-	-	-	-	-	X
Benzo(g,h,i)perylene	X	X	X	-	-	-	-	-	-	X
Benzo(k)fluoranthene	X	X	X	-	-	-	-	-	-	X
Benzoic acid	X	X	X	-	X	X	-	-	-	-
bis(2-Ethylhexyl)phthalate	X	X	X	-	-	-	-	-	-	-
Butyl benzylphthalate	X	X	X	-	-	X	-	-	-	-
Carbazole	X	X	X	X	-	-	-	-	-	-
Chrysene	X	X	X	-	-	-	-	-	-	X
Dibenz(a,h)anthracene	X	X	X	-	-	-	-	-	-	X
Dibenzofuran	X	X	X	-	-	-	-	-	-	-
Diethyl phthalate	X	X	X	-	-	-	-	-	-	-
Di-n-butylphthalate	X	X	X	X	-	-	-	-	-	-
Di-n-octyl phthalate	X	X	X	-	-	-	-	-	-	-
Fluoranthene	X	X	X	-	-	-	-	-	-	X
Fluorene	X	X	X	-	-	-	-	-	-	X
Hexachlorobenzene	X	X	X	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	X	X	X	-	-	-	-	-	-	X
Naphthalene	X	X	X	-	-	-	-	-	-	-

TABLE 2.1
SUMMARY OF RISK ASSESSMENT COPC'S
FORMER LANDFILL
FRAMINGHAM, MASSACHUSETTS

	<u>HHRA</u>						<u>ERA</u>			
		<u>Soil</u>		<u>Groundwater</u>	<u>Surface Water</u>	<u>Sediment</u>	<u>Surficial Soil</u>	<u>North Pond Surficial Soil</u>	<u>Surface Water</u>	<u>Wetlands Sediment</u>
	<u>(0-3 ftbgs)</u>	<u>(0-6 ftbgs)</u>	<u>(0-15 ftbgs)</u>							
Pentachlorophenol	-	X	X	-	-	-	-	-	-	-
Phenanthrene	X	X	X	-	-	-	-	-	-	X
Phenol	X	X	X	-	-	-	-	-	-	-
Pyrene	X	X	X	-	-	-	-	-	-	X
<u>VOCs</u>										
1,1,2,2-Tetrachloroethane	-	-	X	-	-	-	-	-	-	-
1,1-Dichloroethene	-	-	-	X	-	-	-	-	-	-
1,2,4-Trichlorobenzene	-	-	X	-	-	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	X	X	X	-	-	X	-	-	-	-
2-Hexanone	-	X	X	-	-	-	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	X	-	-	-	-	-	-	-
Acetone	X	X	X	-	-	X	-	-	-	X
Benzene	X	X	X	X	-	-	-	-	-	-
Carbon disulfide	X	X	X	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	-	-	X	X	-	-	-	-	-	-
Ethylbenzene	X	X	X	X	-	-	-	-	-	-
Isopropylbenzene (Cumene)	-	-	X	X	-	-	-	-	-	-
Methyl Tert Butyl Ether	-	-	-	X	-	-	-	-	-	-
Methylene chloride	X	X	X	-	-	-	-	-	-	-
Tetrachloroethene	X	X	X	-	-	-	-	-	-	-
Toluene	X	X	X	X	-	X	-	-	-	-
Trichloroethene	-	-	X	-	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	X	X	X	-	-	-	-	-	-	-
Xylene (total)	X	X	X	X	-	-	-	-	-	-
<u>Pesticides</u>										
4,4'-DDD	X	X	X	-	-	-	-	-	-	-
4,4'-DDE	X	X	X	-	-	-	-	-	-	-
4,4'-DDT	X	X	X	-	-	-	-	-	-	-
Aldrin	-	-	X	-	-	-	-	-	-	-
alpha-BHC	-	X	X	X	-	-	-	-	-	-
alpha-Chlordane	X	X	X	-	-	-	-	-	-	-
beta-BHC	-	-	X	-	-	-	-	-	-	-
delta-BHC	X	X	X	-	-	-	-	-	-	-
Dieldrin	-	X	X	-	-	-	-	-	-	-
Endosulfan I	-	-	X	-	-	-	-	-	-	-
Endosulfan II	X	X	X	-	-	-	-	-	-	-
Endosulfan sulfate	X	X	X	-	-	-	-	-	-	-
Endrin	X	X	X	-	-	-	-	-	-	-
Endrin aldehyde	X	X	X	-	-	-	-	-	-	-
Endrin ketone	X	X	X	-	-	-	-	-	-	-
gamma-Chlordane	X	X	X	-	-	-	-	-	-	-
Heptachlor	-	X	X	-	-	-	-	-	-	-
Heptachlor epoxide	X	X	X	-	-	-	-	-	-	-
Methoxychlor	X	X	X	-	-	-	-	-	-	-
Toxaphene	-	-	-	-	-	-	-	-	-	-

TABLE 2.1
SUMMARY OF RISK ASSESSMENT COPC'S
FORMER LANDFILL
FRAMINGHAM, MASSACHUSETTS

	<i>HHRA</i>						<i>ERA</i>			
	<i>(0-3 ftbgs)</i>	<i>Soil (0-6 ftbgs)</i>	<i>(0-15 ftbgs)</i>	<i>Groundwater</i>	<i>Surface Water</i>	<i>Sediment</i>	<i>Surficial Soil</i>	<i>North Pond Surficial Soil</i>	<i>Surface Water</i>	<i>Wetlands Sediment</i>
<i>PCBs</i>										
Aroclor-1254 (PCB-1254)	X	X	X	-	-	-	-	-	-	-
Aroclor-1260 (PCB-1260)	X	X	X	-	-	-	-	-	-	-
<i>Petroleum Products</i>										
Total Petroleum Hydrocarbons (C11-C22) Aromatic	X	X	X	-	-	X	-	-	-	-
Total Petroleum Hydrocarbons (C19-C36) Aliphatic	X	X	X	-	-	X	-	-	-	-
Total Petroleum Hydrocarbons (C9-C18) Aliphatic	X	X	X	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons (C5-C8) Aliphatic	X	X	X	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons (C9-C12) Aliphatic	-	-	X	-	-	-	-	-	-	-

TABLE 3.1

**CHRONOLOGY OF CSA/REMEDIAL CONSTRUCTION ACTIVITIES
FORMER GENERAL MOTORS LANDFILL SITE
FRAMINGHAM, MASSACHUSETTS**

<u><i>Date</i></u>	<u><i>Event</i></u>
2004	
September	Submittal of Phase II CSA Scope of Work
October/November	Phase II CSA Activities
2005	
March	Submittal of Interim Phase II Report (Wetlands Delineation)
April	Storm Sewer Survey (visual and video)
July	Submittal of Phase II CSA Interim Report No. 2 (Characterization and Tier Reclassification)
August	Submittal of Final Phase II CSA Report (Risk Characterization)
September	Submittal of Phase III Remedial Action Plan (RAP)
October	Submittal of Phase IV Remedy Implementation Plan (RIP) Mobilization and Site Preparation -- Clearing and Grubbing -- Installation of Silt Fencing -- Equipment Decontamination Area Setup -- Removal of Soil Cover Spoil Consolidation and Site Grading North Pond Sediment Removal
November	Sewer Cleaning/Inspection
December	Debris Removal and Off-Site Disposal -- Common Fill Placement -- Subgrade Layers Installation -- Structural Geotextile Installation -- Base Course Asphalt Paving

TABLE 3.1

**CHRONOLOGY OF CSA/REMEDIAL CONSTRUCTION ACTIVITIES
FORMER GENERAL MOTORS LANDFILL SITE
FRAMINGHAM, MASSACHUSETTS**

<u><i>Date</i></u>	<u><i>Event</i></u>
2006	
January	Sewer Rehabilitation Asphalt Repairs and Leveling Course Soil Cap Repairs
April	Second Sewer Lining Stormwater Management Feature Repairs Completion of drainage swales
May	Asphalt Topcoat Paving Soil Cap Completion Cap, Berm, Guiderail and curb completion Topsoil Placement and Hydroseeding Punchlist Completion
July	First Site Pre-Final Inspection
August	Second Site Pre-Final Inspection
September	Third Site Pre-Final Inspection with the FCC representative
October	Fourth Site Pre-Final Inspection with the FCC representative Site Final Inspection

TABLE 5.1
SUBMITTAL TRACKING LOG
FORMER LANDFILL
FRAMINGHAM, MASSACHUSETTS

SPEC SECTION	SCOPE OF ACTIVITY	SPEC PARAGRAPH	SUBMITTAL DESCRIPTION	SEVENSON'S SUBMITTAL DATE	CRA'S RESPONSE DATE	SUBMITTAL RESPONSE ACTION	Comments
01300	Administrative Requirements	1.6	Progress Meetings	Weekly	-	-	Daily meetings; tasks completed / progress and action items documented in daily reports
		1.9	Submittal Schedule and Progress schedules	Weekly	-	-	Verbally approved as project progressed and documented in daily reports
		1.10	Construction Quality Control Reports	-	-	-	QC tests and reports submitted in the field/after received from laboratory
		1.11	Proposed Products list	-	-	-	Product information provided as required by specification section
		1.12	Shop Drawings	-	-	-	Shop drawings provided and approved as required by specification section
		1.14	Samples	-	-	-	Product submitted in field by requirements of specification section
		1.15	Manufacturers Installation Instructions	-	-	-	Manufacturers installation instructions provided as required by specification section
		1.16	Manufacturers Certificates	-	-	-	Manufacturers certificates instructions provided as required by specification section
		1.17	Project organization	9/19/05	-	-	Project organization as proposed at kick-off meeting
		1.18	Submittals for Progress Meetings	Weekly	-	-	As project progressed and documented in daily reports
		1.19	Site Layout	-	-	-	Verbally approved as project progressed and documented in daily reports
		1.20	Submittals Schedule	9/19/05	-	-	Submittals schedule as proposed at kick-off meeting and as project progressed
01351	Health and Safety	1.6.B	Health and Safety Plan	10/4/05	10/11/05	Approved	-
		1.6.C	Proof of OSHA Training	10/4/05	10/11/05	Approved	-
		1.6.D	Medical Surveillance	10/4/05	10/11/05	Approved	-
		1.6.E	Respirator Fit Test	10/4/05	10/11/05	Approved	-
		1.6.F	Air Monitoring Reporting (Daily)	Daily	-	-	Verbally approved as project progressed and documented in daily reports
01400	Quality Requirements	1.5.D.1.a.	Identification of Analytical Laboratory	10/19/05	11/1/05	Approved	-
		1.5.D.1.b.	Identification of Geotechnical Laboratory	10/19/05	11/1/05	Approved	-
		1.5.D.2.a.	Analytical Laboratory Certification	10/19/05	11/1/05	Approved	-
		1.5.D.2.b.	Geotechnical Laboratory Certification	10/19/05	11/1/05	Approved	-
01500	Temporary Facilities and Controls	1.3.G.4	Analytical results of containerized wastewater	-	-	-	See Section 02120
01571	Temporary Soil Erosion and Sediment Control	1.3.B.a	Product Data: Filter Soxx	10/19/05	10/21/05	Approved	-
		1.3.B.b	Product Data: Heavy Duty Silt Fence	11/3/05	11/3/05	Approved as Noted	Replaced with double silt fence
		1.3.B.c	Product Data: Standard Silt Fence	10/20/05	11/3/05	Approved as Noted	Foot spacing greater than specified - Contractor to ensure that fence is maintained in good repair.
		1.3.C	Soil Erosion and Sediment Control Plan	10/14/05	-	-	Verbally approved as project progressed and documented in daily reports
01700	Execution Requirements	1.2	Examination/Verification of Existing Conditions	9/19/05	-	-	Verbally approved
		1.3	Registered Site Drawing and Surveyor Certificate	-	-	-	Provided by GM/CRA and based on As-Built drawings
		1.10	Record Documents (including as-built drawings)	-	-	-	Interim surveys performed and submitted throughout project. As-built drawings were submitted upon project completion.
		1.11	Warranties	-	-	-	CRA provided verification and comments and surveys were revised accordingly. Final approval November 17, 2006. Product warrantees provided as required by specification section
02117	Material Handling and On-Site Transportation	1.4.B	Material Handling and On-Site Transportation Plan	10/24/2005	-	-	Initial submittal
				10/28/05	11/3/05	Approved as Noted	Material cut from wetland area within the landfill may require stabilization before placement in the landfill. Engineer to approve decontaminated water prior to use for dust control.
02120	Loading, off-Site Transportation and Disposal	1.4.B	Transportation and Disposal Plan	10/28/05	11/9/05	Revise & resubmit	Requires conformance with 40.0030
				11/11/05	11/13/06	Revise & resubmit	Requires conformance with 40.0030
				11/14/05	11/14/06	Approved	Verbally approved
		1.4.C	TSDf Requirements (including agency approvals)	-	-	-	As presented in Transportation and Disposal Plan
		1.4.E	TSDf Compliance Letter, Licenses and Permits	-	-	-	As presented in Transportation and Disposal Plan
		1.4.F	Transportation Routes	Not Submitted	-	-	-
		1.4.G.1	Signed Affidavit stating that all vehicle operators are HAZMAT trained	-	-	-	Photocopies of driver's license and Hazmat training certificates submitted
		1.4.G.2	Statement that motor vehicle operators meet requirements	-	-	-	Photocopies of driver's license and Hazmat training certificates submitted
		1.4.H	Storage Time Limits	-	-	-	As presented in Transportation and Disposal Plan
		1.4.I	Shipping and Disposal Documents	11/2/05	-	-	Included as part of Generator Waste Profile Forms and completed Bill's of Lading
				11/11/05	-	-	Included as part of Generator Waste Profile Forms and completed Bill's of Lading
				11/15/05	-	-	Included as part of Generator Waste Profile Forms and completed Bill's of Lading
				11/20/05	-	-	Included as part of Generator Waste Profile Forms and completed Bill's of Lading
				2/7/06	-	-	Included as part of Generator Waste Profile Forms and completed Bill's of Lading
		1.4.K	Weigh Scale Documentation	-	-	-	Included as part of Generator Waste Profile Forms and completed Bill's of Lading
		1.4.L	Analytical Test Results	11/2/05	-	-	Included as part of Generator Waste Profile Forms and completed Bill's of Lading
				11/11/05	-	-	Included as part of Generator Waste Profile Forms and completed Bill's of Lading
				11/15/05	-	-	Included as part of Generator Waste Profile Forms and completed Bill's of Lading
				11/20/05	-	-	Included as part of Generator Waste Profile Forms and completed Bill's of Lading
				2/7/06	-	-	Included as part of Generator Waste Profile Forms and completed Bill's of Lading
02161	Solidification and Stabilization	1.4.B	Stabilization/Solidification Plan	10/24/05	11/3/05	Approved as Noted	Procedures for mechanical/chemical stabilization vary from the specs but are acceptable.
		1.4.C	Daily Field Installation Report	-	-	-	Verbally approved as documented in daily reports
		3.6.B	Field Quality Control - In-Place Density and Moisture Content	11/1/05	-	Field approvals	GZA Field Reports #1 and #2
		3.6.C	Field Quality Control - Maximum Dry Density and Optimum Moisture Content	1/11/06	-	Field approvals	GZA Field Reports #1 and #2
				10/31/05	-	Field approvals	GZA Report 10/25/05 - NP.01
02200	Site Preparation	2.1	Low Strength Concrete Product Data	NA	NA	NA	Not used
		2.2	Cement-bentonite Grout Product Data	1/31/06	-	-	Verbally Approved
		3.9	City Approval/Permit to Extend Existing Hydrant	NA	NA	NA	Removed from Scope of Work
02316	Fill	1.4.B	Material Source: Common Fill (Northgate)	9/30/05	10/26/05	Approved	Not Used
		1.4.B	Material Source: Common Fill (Funari)	10/31/05	11/8/05	Rejected, Resubmit	-
		1.4.B	Material Source: Common Fill (Funari)	10/31/05	11/11/05	Approved as Noted	Rejected for landfill - can only be used in berm and soil cover area.
		1.4.B	Material Source: Common Fill (Kimball 3" Gravel)	11/28/05	12/3/05	Approved	-
		1.4.B	Material Source: A1 (Filter Stone)	9/30/05	10/6/05	Rejected, Resubmit	-

TABLE 5.1
SUBMITTAL TRACKING LOG
FORMER LANDFILL
FRAMINGHAM, MASSACHUSETTS

SPEC SECTION	SCOPE OF ACTIVITY	SPEC PARAGRAPH	SUBMITTAL DESCRIPTION	SEVENSON'S SUBMITTAL DATE	CRA'S RESPONSE DATE	SUBMITTAL RESPONSE ACTION	Comments
		1.4.B	Material Source: A1 (Filter Stone) (3/4" Clean Stone)	10/10/05	10/14/05	Approved	-
		1.4.B	Material Source: A2 (Clear Stone) (Surge Stone)	10/10/05	10/14/05	Rejected, resubmit	-
		1.4.B	Material Source: A2 (Clean Stone) (24" Shot Rock)	10/26/06	10/26/05	Approved as Noted	Remove 24" rock
		1.4.B	Material Source: A3 (Bedding Stone) (1 1/2" Clean Stone)	10/10/05	10/14/05	Rejected, resubmit	-
		1.4.B	Material Source: A3 (Bedding Stone) (Surge Stone)	10/10/05	10/26/2005	Approved	Not Used
		1.4.C	Geotechnical and Chemical Data	-	-	-	See 2.5
		1.4.D	Material Samples	-	-	-	Submitted in field prior to use and evaluated as part of submittal reviews.
		1.4.E	Identification of Geotechnical and Analytical Testing Firm	-	-	-	See Section 01400
		1.4.F	Supplier Certificates	-	-	-	Not submitted since materials proposed were provided with geotechnical information
		1.4.G	Delivery Weigh Tickets	-	-	-	Submitted in field as documented in daily reports
		1.4.H	Weigh Scale Calibration	-	-	-	No scale used on Site
		2.5.B	Source Quality Control: Geotechnical: Common Fill (Funari)	10/31/05	As required	-	GZA Report 10/25/05 - Funari FUN-CF-01
		2.5.B	Source Quality Control: Geotechnical: Common Fill (Stockpile Fill)	10/31/05	As required	-	GZA Report 10/25/05 - On-Site ON-CF-01
		2.5.B	Source Quality Control: Geotechnical: Common Fill (Kimball 3" Gravel)	01/11/06	As required	-	GZA Report 12/6/05 - On-Site Kimball 1
		2.5.C	Source Quality Control: Geotechnical Aggregate Types A1, A2, and A3	Not Submitted	-	-	-
		2.5.D	Source Quality Control: Chemical Analysis: Common Fill (Funari)	11/01/05	As required	-	Waste Stream Technologies Report 11/1/05 - Fun CF.1
		2.5.D	Source Quality Control: Chemical Analysis: Common Fill (Funari)	11/07/05	As required	-	Waste Stream Technologies Report 11/4/05 - FUN.TS.1
		2.5.D	Source Quality Control: Chemical Analysis: Common Fill (Stockpile Fill)	N/A	As required	-	Completed as part of Phase II Comprehensive Site Assessment/Phase IV Remedial Implementation Plan
		2.5.D	Source Quality Control: Chemical Analysis: Common Fill (Kimball 3" Gravel)	11/01/05	As required	-	Waste Stream Technologies Report 11/1/05 - Kim GR.1
		2.5.D	Source Quality Control: Chemical Analysis: Aggregate Types A1, A2, and A3	Not Submitted	As required	-	-
		3.6.D	Field Quality Control	1/11/06	As required	-	GZA Field Report #1: Maximum Dry Density, Optimum Moisture Content, In-Place Density, In-Place Moisture Content
				1/12/06	As required	-	GZA Field Report #3: Maximum Dry Density, Optimum Moisture Content, In-Place Density, In-Place Moisture Content
				5/18/06	As required	-	GZA Field Report #4: Maximum Dry Density, Optimum Moisture Content, In-Place Density, In-Place Moisture Content
02317	Excavation	1.4	Excavation Plan	10/24/05	11/3/05	Approved	-
02370	Permanent Erosion and Sedimentation Control	1.4.B	Material Source: Riprap Type 1 (Aggregate Surge Stone)	10/10/05	10/14/05	Rejected, resubmit	Not Used
		1.4.B	Material Source: Riprap Type 1 (Aggregate 24" Shot Rock)	10/24/05	10/26/05	Resubmit with gradation	Not Used
		1.4.B	Material Source: Riprap Type 1 (P.J. Keating 12-24")	10/31/05	11/3/05	Approved	-
		1.4.B	Material Source: Riprap Type 2 (Aggregate 24" shot rock)	10/10/05	10/14/06	Resubmit with gradation	-
		1.4.B	Material Source: Riprap Type 2 (Aggregate 24" shot rock)	10/24/05	10/26/05	Approved as noted	24" rocks removed - Not used
		1.4.B	Material Source: Riprap Type 2 (P.J. Keating 6-10")	10/31/05	11/3/05	Rejected	-
		1.4.B	Material Source: Riprap Type 2 (P.J. Keating 12-24")	10/31/05	11/3/05	Approved as noted	Use if remove >18" stone
		1.4.C	Product Data: Geotextile	12/1/05	12/1/05	Approved	-
		1.4.C	Manufacturer's Installation Instructions: Geotextile	-	-	-	-
		1.4.C	Manufacturer's Certifications: Geotextile	-	-	-	-
		1.4.C	Manhole Shop Drawing	-	-	-	Removed from Scope of Work
		1.4.C	Manhole Certificates	-	-	-	Removed from Scope of Work
		1.4.C	Manufacturer's Data: Manhole	-	-	-	Removed from Scope of Work
		2.1	Geotechnical: Riprap Type 1 and Type 2 (P.J. Keating 12-24")	Not submitted	-	-	-
		2.2	Geotextile	12/1/05	-	-	Verbally approved as documented in daily reports
		2.4	Manhole	-	-	-	Removed from Scope of Work
		2.6.B	Source Quality Control: Riprap	-	-	-	Source quality assurance completed in field as documented in daily reports.
		2.6.C	Source Quality Control: Geotextile	-	-	-	See 1.4
		3.6.D	Field Quality Control: Manhole Leakage Test	-	-	-	Removed from Scope of Work

TABLE 5.1
SUBMITTAL TRACKING LOG
FORMER LANDFILL
FRAMINGHAM, MASSACHUSETTS

SPEC SECTION	SCOPE OF ACTIVITY	SPEC PARAGRAPH	SUBMITTAL DESCRIPTION	SEVENSON'S SUBMITTAL DATE	CRA'S RESPONSE DATE	SUBMITTAL RESPONSE ACTION	Comments
02/40	Flexible Pavement	1.3.B	Material Source: Base Course (1 1/2" T-Base; Aggregate)	10/10/05	10/28/05	Approved as noted	Must meet Massachusetts highway specifications
		1.3.B	Material Source: Subbase (Kimball 3" Gravel)	10/26/05	11/11/05	Approved as noted	Must meet Massachusetts highway specifications
		1.3.B	Material Source: Subbase (Kimball 3" Gravel)	10/10/05	10/28/05	Approved	-
		1.3.B	Material Source: Subbase (Kimball 3" Gravel)	10/26/05	11/11/05	Approved	-
		1.3.C	Viscosity-Temperature Chart	Not submitted	-	-	-
		1.3.D	Certification and Test Data	N/A	-	-	Asphalt cement not used (See 2.1.A)
		1.3.E.1	Job Mix Formula (Wrentham/Bourne & Peabody/Swampscott)	12/19/05	12/20/05	Approved	Verbally approved
		1.3.E.2	Job Mix Formula (Ashland/Plymouth & Wrentham/Bourne)	5/9/06	5/10/05	Approved	Verbally approved
		2.1.A	Product Data: Asphalt Cement	N/A	-	-	Not Used
		2.1.B	Product Data: Subbase (Kimball 3" Gravel)	10/10/05	11/11/05	Approved	
		2.1.B	Product Data: Subbase (Kimball 3" Gravel)	10/26/05			
		2.1.B	Product Data: Base (1 1/2" T-Base; Aggregate)	10/10/05	11/11/05	Approved as noted	Must meet Massachusetts highway specifications
		2.1.B	Product Data: Base (1 1/2" T-Base; Aggregate)	10/26/05			
		2.1.D	Product Data: Asphalt Binder Course	-	-	-	See Job Mix Formula
		2.1.E	Product Data: Asphalt Top Course	-	-	-	See Job Mix Formula
		-	Asphalt Top Course Warranty	7/12/06	-	-	In addition to Scope of Work
		2.1.F	Product Data: Mineral Filler	-	-	-	See Job Mix Formula
		2.1.G	Product Data: Combined Aggregate	10/27/05	11/9/05	Rejected	Removed from Scope of Work
		2.1.H	Product Data: Emulsified Asphalt	-	-	-	See Job Mix Formula
		2.1.I	Product Data: Primer	10/27/05	11/9/05	Rejected	Removed from Scope of Work
		2.1.J	Product Data: Tack Coat	10/27/05	11/9/05	Approved as noted	Tack Coat is not required if Top Coat is placed immediately on top of the Base Coat
		2.1.K	Product Data: Seal Coat	10/27/05	11/9/05	Approved as noted	Seal Coat to be applied 7 to 9 months after completion of Top Coat. - Not completed
		2.3.C	Source Quality Control: Subbase (Kimball 3" Gravel)	01/11/06	-	-	Geotechnical: GZA Report 12/6/05 - Kimball 1
		2.3.C	Source Quality Control: Subbase (Kimball 3" Gravel)	11/01/05	-	-	Chemical Analysis: Waste Stream Technologies Report 11/1/05 - Kim GR.1
		2.3.C	Source Quality Control: Base (1 1/2" T-Base; Aggregate)	1/11/06	-	-	Geotechnical: GZA Report 12/6/05 - A10
		2.3.C	Source Quality Control: Base (1 1/2" T-Base; Aggregate)	11/7/05	-	-	Chemical Analysis: Waste Stream Technologies Report 11/4/05 - DG-01
02841	Guide Rail	3.3 C.a	Field Quality Control Tests: Briggs Uncompacted Asphalt	12/30/05	As required	-	Briggs Report: 12/30/05
		3.3 C.b	Field Quality Control Tests: Briggs Compacted Asphalt	5/4/06	As required	-	Briggs Report: 5/3/06
		3.3 C.b	Field Quality Control Tests: Briggs Compacted Asphalt	5/16/06	As required	-	Briggs Report: 5/9/06 and 5/12/06
		3.3 C.b	Field Quality Control Tests: Briggs Compacted Asphalt	5/30/06	As required	-	Briggs Report: 5/17/06
		3.3 C.b	Field Quality Control Tests: Briggs Compacted Asphalt	5/31/06	As required	-	Briggs Reports: 5/10/06, 5/12/06, 5/15/06, 5/17/06 and 5/18/06
		3.3 C.b	Field Quality Control Tests: Briggs Compacted Asphalt				
		3.3 C.b	Field Quality Control Tests: Briggs Compacted Asphalt				
		3.3 C.b	Field Quality Control Tests: Briggs Compacted Asphalt				
		3.3 C.b	Field Quality Control Tests: Briggs Compacted Asphalt				
		3.3 C.b	Field Quality Control Tests: Briggs Compacted Asphalt				
02841	Guide Rail	1.3.B	Shop Drawings	5/9/06	5/9/06	Approved	-
		1.3.C	Product Data	5/9/06	5/9/06	Approved	-
		1.3.D	Manufacturer's Installation Instructions	-	-	-	Verified in field and documented in daily reports.
02921	Hydroseeding	1.4.B	Seeding and Erosion Control Plan	10/20/05	10/31/05	Approved	-
		1.4.C	Seed Certifications	5/9/06	5/9/06	Approved	-
		1.4.D	Fertilizer Certificates	5/9/06	5/9/06	Approved	-
		1.4.E	Erosion Control Blanket: Berm and Soil Cover Cap (Greenstreak PEC-Mat)	9/30/05	10/4/05	Rejected, resubmit	Does not meet P550
		1.4.E	Erosion Control Blanket: Ditches and Stormwater Ponds (Eastcoast ECC-2)	9/30/05	10/4/05	Approved	-
		1.4.E	Erosion Control Blanket: P550 (CPG3000)	10/10/05	10/14/05	Rejected, resubmit	-
		1.4.E	Erosion Control Blanket: P550 (CPG3000)	10/18/05	10/21/05	Rejected, resubmit	-
		1.4.E	Erosion Control Blanket: P550 (North American Green)	10/24/05	11/3/05	Approved	Verbally approved as documented in daily reports
		1.4.E	Erosion Control Agent: (ConTack)	5/4/06	5/5/06	Approved	-
		1.4.F	Topsoil Sample (Funari)	-	-	-	Submitted in field prior to use and evaluated as part of submittal reviews.
		1.4.G	Topsoil Characteristic Properties Test Results (Funari)	11/1/05	11/11/05	Approved	-
		1.4.G	Topsoil Chemical Test Results (Funari)	11/1/05	11/7/05	Approved	-
		1.4.G	Topsoil Chemical Test Results (Funari)	4/12/06	-	-	Geotechnical: GZA Report 4/12/2006 - FUN 06-1 and FUN 06-2
		1.4.G	Topsoil Chemical Test Results (Funari)	4/13/06	-	-	Chemical Analysis: Waste Stream Technologies Report 4/13/06 - Furnace Fill
		1.5.B	Maintenance Instructions	-	-	-	Addressed as part of OMM Plan
		1.6	Seed Producer, Fertilizer Vendor, and Installer Qualifications	5/9/06	5/9/06	Approved	-
02957	Sewer Rehabilitation	1.3.B	Material Coupon Test Information	10/18/05	-	-	Verbally approved as documented in daily reports
		1.4.C	Manufacturer's Certificates	10/18/05	-	-	Verbally approved as documented in daily reports
		1.3.D.a.1	Renovation Plan - Sewer	10/18/05	-	-	Verbally approved as documented in daily reports
		1.3.D.a.1	Renovation Plan - Sewer	2/23/05	-	-	Verbally approved as documented in daily reports
		1.3.D.a.2	Cleaning Plan - Sewer	11/5/05	11/11/05	Approved	-
		1.3.D.b	Renovation Plan - Manhole	10/18/05	11/3/05	Approved	-
		3.6.D	Report and Video Cassette from Video Inspection of Rehabilitated Sewers	12/2/05	-	-	Verbally approved as documented in daily reports
		3.8.C	Field Quality Control Tests Report of Leakage Testing	2/1/06	2/1/06	Rejected	Failed specifications; to be relined and retested
02957	Sewer Rehabilitation	3.8.C	Field Quality Control Tests Report of Leakage Testing	4/5/06	4/5/06	Approved	Passed specifications
		3.8.C	Field Quality Control Tests Report of Leakage Testing				
-	Soil Stabilization Geotextile	-	Comtrac P80/80	12/1/05	12/2/05	Approved	Required in addition to specifications

TABLE 5.2

IMPORTED MATERIAL QUANTITIES
FORMER LANDFILL
FRAMINGHAM, MASSACHUSETTS

<u>Material</u>	<u>Truck Company</u>	<u>Date</u>	<u>Quantity</u>
Cement Kiln Dust	Lafarge	1-Nov-05	25.10
		4-Nov-05	25.00
		11-Nov-05	25.00
		14-Nov-05	25.11
		16-Nov-05	25.00
		17-Nov-05	23.22
		18-Nov-05	25.20
		7-Dec-05	25.10
		Total (2005)	198.73
3" Common Fill Gravel	Kimball Sand Co.	2-Dec-05	753.00
		3-Dec-05	1,271.84
		5-Dec-05	714.19
		6-Dec-05	806.70
		7-Dec-05	1,453.39
		8-Dec-05	1,307.92
		12-Dec-05	1,307.86
		13-Dec-05	1,194.27
		14-Dec-05	1,237.11
		15-Dec-05	2,174.55
		16-Dec-05	422.64
		17-Dec-05	1,583.81
		19-Dec-05	659.89
		Total (2005)	14,887.17
1 1/2" State DS Mix	Aggregate Industries	7-Dec-05	1004.11
		9-Dec-05	34.22
		12-Dec-05	1282.96
		13-Dec-05	1321.86
		14-Dec-05	973.56
		15-Dec-05	1750.96
		16-Dec-05	674.05
		19-Dec-05	1559.56
		20-Dec-05	770.68
		21-Dec-05	758.17
		Total (2005)	10130.13
Binder Mix - Stoughton	Aggregate Industries	22-Dec-05	1,351.07
		23-Dec-05	740.46
		Total (2005)	2,091.53
Binder Mix - Saugus	Aggregate Industries	23-Dec-05	1,004.35
		Total (2005)	1,004.35

TABLE 5.2

**IMPORTED MATERIAL QUANTITIES
FORMER LANDFILL
FRAMINGHAM, MASSACHUSETTS**

<u>Material</u>	<u>Truck Company</u>	<u>Date</u>	<u>Quantity</u>
3" Common Fill Gravel	Kimball Sand Co.	26-Apr-06	1,256.87
		27-Apr-06	1,131.45
		28-Apr-06	1,282.06
		4-May-06	445.89
		5-May-06	831.45
		10-May-06	562.54
		17-May-06	699.84
		18-May-06	606.75
		Total (2006)	6,816.85
1 1/2" State DS Mix	Aggregate Industries	4-May-06	100.39
		Total (2006)	100.39
12-24" Stone	P.J. Keating	19-Apr-06	65.38
		26-Apr-06	132.46
		28-Apr-06	131.28
		Total (2006)	329.12
3/4" Stone	Aggregate Industries	3-May-06	34.86
		Total (2006)	34.86
6" Minus Stone	Aggregate Industries	20-Apr-06	71.01
		Total (2006)	71.01
6-10" Stone	P.J. Keating	19-Apr-06	63.60
		12-May-06	32.50
		Total (2006)	96.10
Binder Mix - Ashland	Aggregate Industries	8-May-06	192.29
		Total (2006)	192.29
Binder Mix - Wrentham	Aggregate Industries	8-May-06	218.79
		Total (2006)	218.79
Concrete (3000 3/4 AE)	Aggregate Industries	29-Apr-06	4.50
		Total (2006)	4.50
Fill	Funari Trucking	29-Nov-05	480
		7-Dec-05	656
		Total (2005)	1,136
Flow Fill (Pumpable) Heated Ready Mix Concrete	Tresca Bros.	31-Jan-06	82
		Total (2006)	82

TABLE 5.2

IMPORTED MATERIAL QUANTITIES
FORMER LANDFILL
FRAMINGHAM, MASSACHUSETTS

<u>Material</u>	<u>Truck Company</u>	<u>Date</u>	<u>Quantity</u>
Top Mix - Ashland	Aggregate Industries	8-May-06	312.01
		9-May-06	574.79
		10-May-06	168.89
		11-May-06	723.50
		12-May-06	577.90
		17-May-06	570.55
		Total (2006)	2,927.64
Top Mix - Wrentham	Aggregate Industries	8-May-06	387.29
		9-May-06	597.14
		12-May-06	463.26
		Total (2006)	1,447.69
Top Soil	Funari Trucking	14-Apr-06	600
		18-Apr-06	300
		20-Apr-06	240
		24-May-06	460
		Total (2006)	1,600

TABLE 5.2

IMPORTED MATERIAL QUANTITIES
FORMER LANDFILL
FRAMINGHAM, MASSACHUSETTS

Units

Tons

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TABLE 5.2

IMPORTED MATERIAL QUANTITIES
FORMER LANDFILL
FRAMINGHAM, MASSACHUSETTS

Units

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Tons

Cubic Yards

Cubic Yards

Cubic Yards

Cubic Yards

Cubic Yards

Cubic Yards

Cubic Yards

TABLE 5.2

IMPORTED MATERIAL QUANTITIES
FORMER LANDFILL
FRAMINGHAM, MASSACHUSETTS

Units

Tons

Tons

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Cubic Yards

Cubic Yards

Cubic Yards

Cubic Yards

Cubic Yards

TABLE 5.3
SUMMARY OF QUALITY CONTROL AND QUALITY ASSURANCE TESTING FOR IMPORTED MATERIAL PROPERTIES
FORMER LANDFILL SITE
FRAMINGHAM, MASSACHUSETTS

Area/Layer	Specification Section	Material (s)	Test	Standard	Frequency of Quality Control Tests Required	Quantity	Unit	QC Tests Required	QC Tests Performed	QA Tests Required (1)	QA Tests Performed	Key Acceptance Criteria
Spoils Under Asphalt Cover	2161	North Pond Stabilized Bank/Sediment	Maximum Dry Density/Optimum Moisture Content	ASTM D698	1 test per 4,800 cu. yd. (source)	5714	cu. yd.	1	3	1	1	-
			Grain Size	ASTM D422	Completed in addition to specifications	5714	cu. yd.	-	3	-	1	Completed in addition to specifications
			Soil Classification	AASHTO M145	Completed in addition to specifications	5714	cu. yd.	-	3	-	1	Completed in addition to specifications
			Atterberg Limits	ASTM D4318	Completed in addition to specifications	5714	cu. yd.	-	-	-	1	Completed in addition to specifications
			Chemical Analysis	-	Completed in addition to specifications	5714	cu. yd.	-	-	-	8	Completed in addition to specifications
Common Fill and Subbase Under Asphalt Cover	2316 & 2740	Stockpile Fill, Common Fill (Funari) and Subbase (Kimball 3" Common Fill Grav	Maximum Dry Density/Optimum Moisture Content	ASTM D698	1 test per 4,000 cu. yd. (source)	8,241	cu. yd.	3	3	1	5	-
			Grain Size	ASTM D422	1 test per 4,500 cu. yd. (source)	8,241	cu. yd.	3	3	1	5	Maximum particle size 150 mm nominal
			Atterberg Limits	ASTM D4318	1 test per 4,500 cu. yd. (source)	8,241	cu. yd.	3	0	1	2	AASHTO M145
			Soil Classification	AASHTO M145	1 test per 4,500 cu. yd. (source)	8,241	cu. yd.	3	3	1	5	AASHTO M145
			Chemical Analysis	Section 02316-2.5.D	1 test per source	8,241	cu. yd.	3	3	1	2	MCP 310CMR40.0000
Aggregates	2316	A1 (Aggregate Industries 3/4" Stone), A2 (P.J. Keating 6-10" Stone) and A3 (Aggregate Industries 6" Minus Stone)	Maximum Dry Density/Optimum Moisture Content	ASTM D698	1 test per 500 cu. yd. (source)	154	tons	3	0	1	0	See Specification Section 02316
			Grain Size	ASTM C136	1 test per 500 cu. yd. (source)	154	tons	3	0	1	0	See Specification Section 02316
			Chemical Analysis	Section 02316-2.5.D	1 test per source	154	tons	3	0	1	0	MCP 310CMR40.0000
Riprap	2370	Type 1 (PJ Keating 6-10") and Type 2 (PJ Keating 12-24")	Gradation	Section 02370-2.1.G	3 tests per each type of riprap per source	378	tons	6	0	1	0	Section 02370 2.1.G and 02370 2.1.H
Structural Geotextile	2370	Comtrac P 80/80	Unit Weight	ASTM D5261	1 test per 100,000 sq. ft.	-	-	1	1	-	-	8 ounces per sq. yd.
			Ultra Violet Degradation	ASTM D4355	Per manufacturer's standard QC testing frequency	-	-	1	1	-	-	10/500 percent retained per number of hours
			Tensile Strength	ASTM D4632	1 test per 100,000 sq. ft.	-	-	1	1	-	-	200 pounds
			Elongation at Break	ASTM D4632	1 test per 100,000 sq. ft.	-	-	1	1	-	-	greater than 50 percent
			Mullen Burst Strength	ASTM D3786	Per manufacturer's standard QC testing frequency	-	-	1	1	-	-	450 pounds per square inch (psi)
			Puncture Strength	ASTM D4833	Per manufacturer's standard QC testing frequency	-	-	1	1	-	-	130 pounds
			Permittivity	ASTM D4491	Per manufacturer's standard QC testing frequency	-	-	1	1	-	-	1.5 seconds ⁻¹
			Coefficient of Permeability	See 02370 2.2.D	Per manufacturer's standard QC testing frequency	-	-	1	1	-	-	0.2 cm/s
			Apparent Opening Size	ASTM D4751	Per manufacturer's standard QC testing frequency	-	-	1	1	-	-	100 sieve size
Base	2740	Aggregate Industries 1/2" State DS Mix	Grain size	ASTM D422	1 test per source	2,568	cu. yd.	1	1	1	4	MHD Standard Specifications
			Maximum Dry Density/Optimum Moisture Content	ASTM D698	Completed in addition to specifications	2,568	cu. yd.	-	1	-	4	Completed in addition to specifications
			Soil Classification	AASHTO M145	Completed in addition to specifications	2,568	cu. yd.	-	1	-	4	Completed in addition to specifications
			Atterberg Limits	ASTM D4318	Completed in addition to specifications	2,568	cu. yd.	-	-	-	1	Completed in addition to specifications
			Chemical Analysis	-	Completed in addition to specifications	2,568	cu. yd.	1	1	1	1	Completed in addition to specifications
Berm, Barrier, Stormwater Ponds and Swales	2921	Topsoil (Funari)	pH	ASTM D4972	1 test per 2 acres (source)	2.86	acres	1	1	1	0	6 to 8
			Organic Content	ASTM D2974	1 test per 2 acres (source)	2.86	acres	1	1	1	0	2% to 10%
			Phosphorus, potassium, calcium, and magnesium	State accredited method	1 test per 2 acres (source)	2.86	acres	1	1	1	0	In accordance with State accredited criteria
			Maximum Dry Density/Optimum Moisture Content	ASTM D698	Completed in addition to specifications	1,600	cu. yd.	-	2	-	-	Completed in addition to specifications
			Grain Size	ASTM D422	Completed in addition to specifications	1,602	cu. yd.	-	2	-	-	Completed in addition to specifications
			Soil Classification	AASHTO M145	Completed in addition to specifications	1,603	cu. yd.	-	2	-	-	Completed in addition to specifications
			Chemical Analysis	-	Completed in addition to specifications	1,600	cu. yd.	1	1	1	0	Completed in addition to specifications

Notes:
(1) 10% of Required QC Tests
- AASHTO (American Association of State Highway and Transportation Officials)
- AI (Asphalt Institute)
- ASTM (American Society for Testing and Materials.)
- cu.yd. (cubic yard)
- QA (Quality Assurance)
- QC (Quality Control)
- MCP (Massachusetts Contingency Plan)
- MHD (Massachusetts Highway Department)
- sq.ft. (square feet)
- SMDD (Standard Maximum Dry Density)

TABLE 5.4

SUMMARY OF QUALITY CONTROL AND QUALITY ASSURANCE TESTING FOR MATERIAL PLACEMENT
FORMER LANDFILL SITE
FRAMINGHAM, MASSACHUSETTS

Area/Layer	Specification Section	Material (s)	Test	Standard	Frequency of Quality Control Tests Required	Quantity	Unit	QC Tests Required	QC Tests Performed	QA Tests Required ⁽¹⁾	QA Tests Performed	Key Acceptance Criteria
Spoils Under Asphalt Cover	2161	North Pond Stabilized Bank/Sediment	Maximum Dry Density/Optimum Moisture Content	ASTM D698	Completed in addition to specifications	5,714	cu. yd.	4	4	1	1	N/A
			In-Place Density	ASTM D2922	1 test per lift per 2,000 sq. ft.	210,000	sq. ft.	105	103	11	10	Minimum 95% SMDD
			In-Place Moisture content	ASTM D3017	Completed in addition to specifications	210,000	sq. ft.	105	103	11	10	Optimum moisture content plus or minus 2%
Common Fill and Sub-base Under Asphalt Cover	2316 & 2740	Stockpile Fill, Common Fill (Funari) and Sub-base (Kimball 3" Common Fill)	Maximum Dry Density/Optimum Moisture Content	ASTM D698	1 test per 4,000 cu. yd. (per source)	8,241	cu. yd.	3	3	1	2	N/A
			In-Place Density	ASTM D2922	1 test per 100 cu. yd. or per 2,500 sq. ft.	8,241	cu. yd.	82	82	8	10	Minimum 95% SMDD
			In-Place Moisture content	ASTM D3017	1 test per 100 cu. yd. or per 2,500 sq. ft.	8,241	cu. yd.	82	82	8	10	Optimum moisture content plus or minus 2%
			Confirmatory moisture content	ASTM D2216	10% of ASTM D3017 tests	8,241	cu. yd.	11	0	1	0	Optimum moisture content plus or minus 2%
			Layer thickness	Section 02316 3.3	1 test per each node point of 100x100-foot grid over the landfill	-	-	-	Periodic	-	Daily	Maximum 8 inches (common fill) and 8 inches (sub-base)
Aggregates	2316	A1 (Aggregate Industries 3/4" Stone), A2 (P.J. Keating 6-10" Stone) and A3 (Aggregate Industries 6" Minus Stone)	Relative Density	ASTM O4253 and O4255	1 test per each aggregate type per source	154	tons	3	0	1	1	See Section 02316
			Layer thickness	Section 02316 3.3.D	1 test per each node point of 100x100-foot grid over the landfill	-	-	-	Periodic	-	Daily	Maximum 6 inches
RipRap	2370	Type 1 (P.J. Keating 6-10") Type 2 (P.J. Keating 12-24")	QA Measurements	See 02370 2.6.B	See 02370 2.6.B	48	tons	1	0	1	1	See 02370 2.6.B
			QA Measurements	See 02370 2.6.B	See 02370 2.6.B	330	tons	1	0	1	0	See 02370 2.6.B
Base Under Asphalt Cover	2740	Aggregate Industries 1/2" State DS Mix	Maximum Dry Density/Optimum Moisture Content	ASTM D698	1 test per 4,000 cu. yd. (per source)	2,568	cu. yd.	1	1	1	1	N/A
			In-Place Density	ASTM D2922	1 test per 100 cu. yd. or per 2,500 sq. ft.	2,568	cu. yd.	26	57	3	10	Minimum 95% SMDD
			In-Place Moisture content	ASTM D3017	1 test per 100 cu. yd. or per 2,500 sq. ft.	2,568	cu. yd.	26	57	3	10	Optimum moisture content plus or minus 2%
			Layer thickness	Section 02740	1 test per source	-	-	-	Periodic	1	Daily	Maximum 4 inches
Asphalt Mix	2740	Binder Course (2005 and 2006)	Bulk Specific Gravity (Marshall Density)	ASTM D1188	Daily during placement (6 each compacted and uncompacted)	2	day	24	12	1	0	N/A
			In-Place Density	ASTM D2922	1 test per 2000 sq.ft.	210,000	sq.ft.	105	19	11	0	95% Density of Mix Design
			Asphalt Content	AASHTO T-164	1 test per day	2	day	2	1	1	0	Must meet mix design (MHD Master Range)
			Mineral Aggregate Gradation (Sieve Analysis)	AASHTO T-30	1 test per day	2	day	2	1	1	0	Must meet mix design (MHD Master Range)
			Stability, Flow, Air Voids, VMA	-	1 test per day	2	day	2	0	1	0	-
			Tensile Stress Ratio	AASHTO T-283	As required	-	-	-	0	-	0	-
			Bulk Specific Gravity (Marshall Density)	ASTM D1188	Daily during placement (6 each compacted and uncompacted)	2	day	24	18	2	3	N/A
			In-Place Density	ASTM D2922	1 test per 2000 sq.ft.	210,000	sq.ft.	105	34	11	3	95% Density of Mix Design
			Asphalt Content	AASHTO T-164	1 test per day	2	day	2	2	1	1	Must meet mix design (MHD Master Range)
			Mineral Aggregate Gradation (Sieve Analysis)	AASHTO T-30	1 test per day	2	day	2	2	1	1	Must meet mix design (MHD Master Range)
			Stability, Flow, Air Voids, VMA	-	1 test per day	2	day	2	2	1	1	-
			Tensile Stress Ratio	AASHTO T-283	As required	-	-	-	2	-	0	-
		Leveling Course (2006)	Bulk Specific Gravity (Marshall Density)	ASTM D1188	Daily during placement (6 each compacted and uncompacted)	2	day	24	18	2	3	N/A
			In-Place Density	ASTM D2922	1 test per 2000 sq.ft.	210,000	sq.ft.	105	34	11	3	95% Density of Mix Design
			Asphalt Content	AASHTO T-164	1 test per day	2	day	2	2	1	1	Must meet mix design (MHD Master Range)
			Mineral Aggregate Gradation (Sieve Analysis)	AASHTO T-30	1 test per day	2	day	2	2	1	1	Must meet mix design (MHD Master Range)
			Stability, Flow, Air Voids, VMA	-	1 test per day	2	day	2	2	1	1	-
			Tensile Stress Ratio	AASHTO T-283	As required	-	-	-	2	-	0	-
			Bulk Specific Gravity (Marshall Density)	ASTM D1188	Daily during placement (6 each, compacted and uncompacted)	3	day	36	28	4	1	N/A
			In-Place Density	ASTM D2922	1 test per 2000 sq.ft.	210,000	sq.ft.	105	107	11	2	95% Density of Mix Design
			Asphalt Content	AASHTO T-164	1 test per day	3	day	3	9	1	2	Must meet mix design (MHD Master Range)
			Mineral Aggregate Gradation (Sieve Analysis)	AASHTO T-30	1 test per day	3	day	3	9	1	2	Must meet mix design (MHD Master Range)
			Stability, Flow, Air Voids, VMA	-	1 test per day	3	day	3	4	1	2	-
			Tensile Stress Ratio	AASHTO T-283	As required	-	-	-	1	-	0	-
Berm, Tear Drop Soil Cover, South Pond, North Pond (including swale)	2921	Topsoil (Funari)	Layer thickness	Section 02921	1 test per each hydroseeded area	4	areas	4	Periodic	1	Daily	Minimum 4 inches
Berm and Soil Cover Area	-	Kimball 3" Common Fill Gravel	Maximum Dry Density/Optimum Moisture Content	ASTM D698	1 test per 4,000 cu. yd.	2,567	cu. yd.	1	1	1	0	N/A
			In-Place Density	ASTM D2922	1 test per 100 cu. yd. or per 2,500 sq. ft.	2,567	cu. yd.	26	50	3	0	Minimum 95% SMDD
			In-Place Moisture content	ASTM D3017	1 test per 100 cu. yd. or per 2,500 sq. ft.	2,567	cu. yd.	26	50	3	0	Optimum moisture content plus or minus 2%
2006 Repair Areas of Asphalt Cover	-	Base (Aggregate Industries 1/2" State DS Mix)	Maximum Dry Density/Optimum Moisture Content	ASTM D698	1 test per 4,000 cu. yd.	-	-	1	1	1	0	N/A
			In-Place Density	ASTM D2922	1 test per 100 cu. yd. or per 2,500 sq. ft.	19,422	sq.ft.	8	8	1	0	Minimum 95% SMDD
			In-Place Moisture content	ASTM D3017	1 test per 100 cu. yd. or per 2,500 sq. ft.	19,422	sq.ft.	8	8	1	0	Optimum moisture content plus or minus 2%
Sewer Lining	2957	-	Hydrostatic pressure and leakage test	See Section 02957, Article 3. Sewer to be tested at least once		-	-	2	3	Visual	Visual	See Section 02957, Article 3.8

Notes:

(1) 10% of Required QC Tests

- AASHTO (American Association of State Highway and Transportation Officials)

- AI (Asphalt Institute)

- ASTM (American Society for Testing and Materials.)

- cu.yd. (cubic yard)

- QA (Quality Assurance)

- QC (Quality Control)

- MCP (Massachusetts Contingency Plan)

- MHD (Massachusetts Highway Department)

- sq.ft. (square feet)

- SMDD (Standard Maximum Dry Density)

TABLE 6.1

REMEDIAL CONSTRUCTION IMPORTED QUANTITIES

<i>Truck Company</i>	<i>Description</i>	<i>Year</i>	<i>Unit</i>	<i>Quantity</i>	<i>Spec #</i>	<i>Description</i>
Funari	Top Soil	2005	Cubic Yards	1136	2316	Common Fill
		2006	Cubic Yards	1600	2921	Topsoil
Kimball Sand Co.	3" Common Fill Gravel	2005	Tons	14887	2316	Common Fill
		2006	Tons	6817	02740-2.1 C	Base Course
P.J. Keating	6-10" Stone	2006	Tons	93.08	02370-2.1 H	Type 2 Riprap
	12-24" Stone	2006	Tons	65	2316	Aggregate Type A2
		2006	Tons	264	02370-2.1 G	Type 1 Riprap
Lafarge	Cement Kiln Dust	2005	Tons	173.73	02161-2.2	Stabilization Additives
Aggregate Industries	1 1/2" State DS Mix	2005	Tons	6307.04	2316	Common Fill
		2005	Tons	8580.13	02740-2.1 B	Subbase Course
		2006	Tons	100.39	02740-2.1 B	Subbase Course
	3/4" Stone	2006	Tons	34.86	02316-2.3 A	Aggregate Type A1
	6" Minus Stone	2006	Tons	71.01	02316-2.3 A	Aggregate Type A2
	Binder Mix - MHD State Dense Binder	2005	Tons	2091.53	02740-2.1 D/E	Asphaltic Binder/Top Course
	Binder Mix - State Dense Binder	2005	Tons	1004.35	02740-2.1 D/E	Asphaltic Binder/Top Course
	Binder Mix - Ashland	2006	Tons	767.08	02740-2.1 D/E	Asphaltic Binder/Top Course
	Binder Mix - Wrentham	2006	Tons	815.93	02740-2.1 D/E	Asphaltic Binder/Top Course
	Concrete (3000 3/4 AE)	2006	Cu. Yrds	4.5		South Pond Structure Base and Manhole Repair
	Top Mix - Ashland Plant	2006	Tons	2040.84	2740	Asphaltic Binder/Top Course
	Top Mix - Wrentham Plant	2006	Tons	463.26	2740	Asphaltic Binder/Top Course

TABLE 6.2

LABORATORY COMPACTION AND MARSHALL TEST RESULTS
REMEDIAL IMPLEMENTATION PLAN - LANDFILL
63 WESTERN AVENUE FRAMINGHAM, MA
012618-20

Tested By	Sample/ Lab#	Batch Plant	Date Placed	Date Sample Collected	Core Thickness (inch)	Core Bulk Specific Gravity	Core Density ⁽¹⁾ lbs/ft ³	Compaction ⁽¹⁾		Compaction (%)	Marshall Volumetric Properties ⁽²⁾					Tensile Strength Ratio ⁽²⁾ (%)
								Marshall Bulk Specific Gravity	Marshall Density ⁽³⁾ lbs/ft ³		Stability kN (lbs)	Flow (25/100 mm)	% Air Voids	Voids in Mineral Aggregate (%)		
Binder Course																
Briggs	Sample 1		22-Dec-05	22-Dec-05	-		bulk sample	2.406	150.1	-	-	-	-	-	-	-
Briggs	Sample 2		22-Dec-05	22-Dec-05	-		bulk sample	2.401	149.8	-	-	-	-	-	-	-
Briggs	M13554-1		22-Dec-05	1-May-06	3.44	2.373	148.1	2.385	148.8	99.5	-	-	-	-	-	-
Briggs	M13554-2		22-Dec-05	1-May-06	2.25	2.268	141.5	2.385	148.8	95.1	-	-	-	-	-	-
Briggs	M13554-3		22-Dec-05	1-May-06	2.50	2.318	144.6	2.385	148.8	97.2	-	-	-	-	-	-
Briggs	M13554-4		22-Dec-05	1-May-06	2.88	2.220	138.5	2.385	148.8	93.1	-	-	-	-	-	-
Briggs	M13554-5		22-Dec-05	1-May-06	2.38	2.200	137.3	2.385	148.8	92.2	-	-	-	-	-	-
Briggs	M13554-6		22-Dec-05	1-May-06	2.38	2.249	140.3	2.385	148.8	94.3	-	-	-	-	-	-
Briggs	2B	Wrentham		22-May-06	-	2.322	144.9	2.385	148.8	97.4	-	-	-	-	-	-
Briggs	6B	Wrentham		22-May-06	-	2.354	146.9	2.385	148.8	98.7	-	-	-	-	-	-
Briggs	9B	Wrentham		22-May-06	-	2.273	141.8	2.385	148.8	95.3	-	-	-	-	-	-
Briggs	11B	Wrentham		22-May-06	-	2.298	143.4	2.385	148.8	96.4	-	-	-	-	-	-
Briggs	14B	Wrentham		22-May-06	-	2.277	142.1	2.385	148.8	95.5	-	-	-	-	-	-
Briggs	16B	Wrentham		22-May-06	-	2.268	141.5	2.385	148.8	95.1	-	-	-	-	-	-
Levelling Course																
Briggs	M-13566	Ashland	9-May-06	9-May-06	-		bulk sample	2.484	155.0	-	10.8 (2430)	11.2	4.8	18.3	83.33	-
Briggs	M-13575	Ashland	10-May-06	10-May-06	-		bulk sample	2.521	157.3	-	12.0 (2700)	11.3	5.0	18.2	85.58	-
Briggs	1M	Wrentham		22-May-06	-	2.414	150.6	2.501	156.1	96.5	-	-	-	-	-	-
Briggs	2M	Wrentham		22-May-06	-	2.429	151.6	2.501	156.1	97.1	-	-	-	-	-	-
Briggs	3M	Wrentham		22-May-06	-	2.435	151.9	2.501	156.1	97.4	-	-	-	-	-	-
Briggs	4M	Wrentham		22-May-06	-	2.409	150.3	2.501	156.1	96.3	-	-	-	-	-	-
Briggs	5M	Wrentham		22-May-06	-	2.422	151.1	2.501	156.1	96.8	-	-	-	-	-	-
Briggs	6M			22-May-06	-	2.397	149.6	2.501	156.1	95.8	-	-	-	-	-	-
Briggs	7M			22-May-06	-	2.469	154.1	2.501	156.1	98.7	-	-	-	-	-	-
Briggs	8M			22-May-06	-	2.416	150.8	2.501	156.1	96.6	-	-	-	-	-	-
Briggs	9M			22-May-06	-	2.455	153.2	2.501	156.1	98.2	-	-	-	-	-	-
Briggs	10M			22-May-06	-	2.377	148.3	2.501	156.1	95.0	-	-	-	-	-	-
Briggs	11M			22-May-06	-	2.430	151.6	2.501	156.1	97.2	-	-	-	-	-	-
Briggs	12M			22-May-06	-	2.461	153.6	2.501	156.1	98.4	-	-	-	-	-	-
Briggs	13M			22-May-06	-	2.471	154.2	2.501	156.1	98.8	-	-	-	-	-	-
Briggs	14M			22-May-06	-	2.462	153.6	2.501	156.1	98.4	-	-	-	-	-	-
Briggs	15M			22-May-06	-	2.462	153.6	2.501	156.1	98.4	-	-	-	-	-	-
Briggs	16M			22-May-06	-	2.449	152.8	2.501	156.1	97.9	-	-	-	-	-	-
Briggs	17M			22-May-06	-	2.385	148.8	2.501	156.1	95.4	-	-	-	-	-	-
Briggs	18M			22-May-06	-	2.500	156.0	2.501	156.1	100.0	-	-	-	-	-	-
ATC	C-158				-	-	-	-	-	-	15.2 (3410)	13	3.5	16.4	-	-
ATC	Core 1				-	-	133.7	-	147.5	90.6						
ATC	Core 2				-	-	135.2	-	147.5	91.7						
ATC	Core 3				-	-	139.1	-	147.5	94.3						
Top/Surface Course																
Briggs	M-13586	Ashland	11-May-06	11-May-06	-		bulk sample	2.498	155.9	-	15.0 (3375)	8.8	5.3	18.2	-	-
Briggs	M-13587A	Ashland	12-May-06	12-May-06	-		bulk sample	2.503	156.2	-	15.7 (3530)	9.8	4.1	17.3	-	-
Briggs	M-13605	Ashland	15-May-06	15-May-06	-		bulk sample	2.409	150.3	-	10.9 (2450)	10.0	4.8	17.9	-	-
Agg. Indus	Core 1	Wrentham		20-May-06	1.60	2.188	136.5	2.353	146.8	93.0	-	-	-	-	-	-
Agg. Indus	Core 2	Wrentham		20-May-06	1.50	2.208	137.8	2.353	146.8	93.8	-	-	-	-	-	-
Agg. Indus	Core 3	Wrentham		20-May-06	1.50	2.180	136.0	2.353	146.8	92.6	-	-	-	-	-	-
Agg. Indus	Core 4	Wrentham		20-May-06	1.75	2.260	141.0	2.353	146.8	96.0	-	-	-	-	-	-
Agg. Indus	Core 5	Ashland		20-May-06	2.50	2.538	158.4	2.560	159.7	99.1	-	-	-	-	-	-
Briggs	1T	Wrentham		22-May-06	-	2.446	152.6	2.501	156.1	97.8	-	-	-	-	-	-
Briggs	2T	Wrentham		22-May-06	-	2.478	154.6	2.501	156.1	99.1	-	-	-	-	-	-
Briggs	3T	Wrentham		22-May-06	-	2.446	152.6	2.501	156.1	97.8	-	-	-	-	-	-
Briggs	4T	Wrentham		22-May-06	-	2.438	152.1	2.501	156.1	97.5	-	-	-	-	-	-
Briggs	5T	Wrentham		22-May-06	-	2.391	149.2	2.501	156.1	95.6	-	-	-	-	-	-
Briggs	6T			22-May-06	-	2.489	155.3	2.501	156.1	99.5	-	-	-	-	-	-
Briggs	7T			22-May-06	-	2.478	154.6	2.501	156.1	99.1	-	-	-	-	-	-
Briggs	8T			22-May-06	-	2.431	151.7	2.501	156.1	97.2	-	-	-	-	-	-
Briggs	9T			22-May-06	-	2.378	148.4	2.501	156.1	95.1	-	-	-	-	-	-
Briggs	10T			22-May-06	-	2.448	152.8	2.501	156.1	97.9	-	-	-	-	-	-
Briggs	11T			22-May-06	-	2.426	151.4	2.501	156.1	97.0	-	-	-	-	-	-
Briggs	12T			22-May-06	-	2.426	151.4	2.500	156.0	97.0	-	-	-	-	-	-
Briggs	13T			22-May-06	-	2.381	148.6	2.501	156.1	95.2	-	-	-	-	-	-
Briggs	14T			22-May-06	-	2.454	153.1	2.501	156.1	98.1	-	-	-	-	-	-
Briggs	15T			22-May-06	-	2.423	151.2	2.501	156.1	96.9	-	-	-	-	-	-
Briggs	16T			22-May-06	-	2.496	155.8	2.501	156.1	99.8	-	-	-	-	-	-
Briggs	17T			22-May-06	-	2.444	152.5	2.501	156.1	97.7	-	-	-	-	-	-
Briggs	18T			22-May-06	-	2.412	150.5	2.501	156.1	96.4	-	-	-	-	-	-
Briggs	19T	Wrentham		22-May-06	-	2.181	136.1	2.353	146.8	92.7	-	-	-	-	-	-
Briggs	20T	Wrentham		22-May-06	-	2.190	136.7	2.353	146.8	93.1	-	-	-	-	-	-
Briggs	21T	Wrentham		22-May-06	-	2.224	138.8	2.353	146.8	94.5	-	-	-	-	-	-
Briggs	22T	Wrentham		22-May-06	-	2.236	139.5	2.353	146.8	95.0	-	-	-	-	-	-
Briggs	23T			22-May-06	-	2.521	157.3	2.560	159.7	98.5	-	-	-	-	-	-
Briggs	M-13639	Wrentham	Composite of cores 19 - 23		-		bulk sample	2.409	150.3	-	11.0 (2475)	8.2	4.1	16.8	80.26	-
ATC	C-162a	Ashland	11-May-06	11-May-06	-		bulk sample	-	-	-	12.4 (2790)	9.0	4.3	17.0	-	-
ATC	C-162b	Ashland	11-May-06	11-May-06	-		bulk sample	-	-	-	11.8 (2660)	12	0.2	14.3	-	-
ATC	Core 4				-	-	154.6	-	157.8	98.0	-	-	-	-	-	-
ATC	Core 5				-	-	152.1	-	157.8	96.4	-	-	-	-	-	-

Notes:

(1) Minimum Copaction Required 95% - Section 460.63 Massachusetts Highway Department 1995 Standard Specifications for Highway and Bridges

(2) Specifications not available in Massachusetts Highway Department 1995 Standard Specifications for Highway and Bridges

Project Specifications (Section 2740)

Minimum Marshall Stability at 140 ° F = 5.3 kN

Tensile Strength Ratio/Immersion Loss, maximum =75%

(3) Density obtained by multiplying the specific gravity by 62.4 lbs.ft³ (unit weight of water)

Bold indicates values not meeting Massachusetts Highway Department 1995 Standard Specifications for Highway and Bridges

TABLE 6.3

LABORATORY ASPHALT CONTENT AND GRADATION TEST RESULTS
REMEDIAL IMPLEMENTATION PLAN - LANDFILL
63 WESTERN AVENUE, FRAMINGHAM, MA

Sieve No.	Sieve Size (mm)	Sample No.	Binder Course ⁽¹⁾		Levelling Course ⁽¹⁾			Top Course																
			JMF	Allowable Tolerances (+/-%)	Master Range ⁽³⁾	Briggs M-13566/ Ashland	Briggs M-13575/ Ashland	ATC C-158	Briggs M-13586/ Ashland	Briggs M-13587A/ Ashland	Briggs M-13605/ Ashland	Sample No./Batch					ATC C-162a/ Ashland	ATC C-162b/ Ashland	JMF Wrentham (Ashland)	Allowable Tolerances (+/-%)	Master Range ⁽³⁾			
												Briggs M-13639 ⁽⁴⁾	Aggregate Industries Core 1/ Wrentham	Aggregate Industries Core 2/ Wrentham	Aggregate Industries Core 3/ Wrentham	Aggregate Industries Core 4/ Wrentham						Aggregate Industries Core 5/ Ashland		
		Briggs M-13544 ⁽²⁾																						
																		</						

Notes:

(1) Levelling and Top course, both of Top course specifications

(2) Composite sample made from Cores 1 to 6

(3) Section M3, Table A , Massachusetts Highway Department 1995 Standard Specifications for Highways and Bridges

(4) Composite sample made from Cores 19 to 23

Asphalt Content - Top course: 5.5% to 7% - Massachusetts Highway Department 1995 Standard Specifications for Highway and Bridges Section M3 Table A

Asphalt Content - Binder course - 4.5% to 5.5% - Massachusetts Highway Department 1995 Standard Specifications for Highway and Bridges Section M3 Table A

Bold indicates values not meeting Massachusetts Highway Department 1995 Standard Specifications for Highway and Bridges

6.6 value meeting MHD Master Range requirement but outside allowable tolerance range.

TABLE 6.4

**ASPHALT CONCRETE FIELD COMPACTION TEST RESULTS
REMEDIAL IMPLEMENTATION PLAN - LANDFILL
63 WESTERN AVENUE, FRAMINGHAM, MA**

Source Material Data				Marshall Laboratory Density (pcf)	Compaction Results						
Test Date	Source ID	Report No. or Date	Source ID		Test Laboratory	Test Method	Report No. or Date	Field Density (PCF)	Percent Compaction (%)	Pass/ Fail	FD Test Number
CONSTRUCTION QUALITY CONTROL TESTING (Briggs Data)											
1-May-06	Binder Course			152.5	Briggs	ASTM D2922	Report	151.7	99.5	Pass	1
1-May-06	Binder Course			152.5	Briggs	ASTM D2922		148.7	97.5	Pass	2
1-May-06	Binder Course			152.5	Briggs	ASTM D2922		145.2	95.2	Pass	3
1-May-06	Binder Course			148.8	Briggs	ASTM D2922		143.9	96.7	Pass	4
1-May-06	Binder Course			148.8	Briggs	ASTM D2922		141.5	95.1	Pass	5
1-May-06	Binder Course			148.8	Briggs	ASTM D2922		142.7	95.9	Pass	6
1-May-06	Binder Course			148.8	Briggs	ASTM D2922		147.0	98.8	Pass	7
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		155.5	97.5	Pass	1
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		156.6	98.2	Pass	2
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		156.5	98.1	Pass	3
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		155.5	97.5	Pass	4
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		156.0	97.8	Pass	5
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		153.9	96.5	Pass	6
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		154.4	96.8	Pass	7
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		155.5	97.5	Pass	8
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		156.0	97.8	Pass	9
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		154.9	97.1	Pass	10
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		156.2	97.9	Pass	11
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		154.4	96.8	Pass	12
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		152.8	95.8	Pass	13
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		157.1	98.5	Pass	14
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		156.5	98.1	Pass	15
9-May-06	Leveling Course			159.5	Briggs	ASTM D2922		155.4	97.4	Pass	16

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TABLE 6.4

**ASPHALT CONCRETE FIELD COMPACTION TEST RESULTS
REMEDIAL IMPLEMENTATION PLAN - LANDFILL
63 WESTERN AVENUE, FRAMINGHAM, MA**

Source Material Data				Marshall Laboratory Density (pcf)	Compaction Results						
Test Date	Source ID	Report No. or Date	Source ID		Test Laboratory	Test Method	Report No. or Date	Field Density (PCF)	Percent Compaction (%)	Pass/ Fail	FD Test Number
12-May-06	Top Course			146.5	Briggs	ASTM D2922		142.5	97.3	Pass	1
12-May-06	Top Course			146.5	Briggs	ASTM D2922		146.1	99.7	Pass	2
12-May-06	Top Course			146.5	Briggs	ASTM D2922		146.1	99.7	Pass	3
12-May-06	Top Course			146.5	Briggs	ASTM D2922		143.6	98.0	Pass	4
12-May-06	Top Course			146.5	Briggs	ASTM D2922		146.5	100.0	Pass	5
12-May-06	Top Course			146.5	Briggs	ASTM D2922		140.3	95.8	Pass	6
12-May-06	Top Course			146.5	Briggs	ASTM D2922		142.0	96.9	Pass	7
12-May-06	Top Course			146.5	Briggs	ASTM D2922		144.7	98.8	Pass	8
12-May-06	Top Course			146.5	Briggs	ASTM D2922		144.4	98.6	Pass	9
12-May-06	Top Course			146.5	Briggs	ASTM D2922		142.0	96.9	Pass	10
12-May-06	Top Course			146.5	Briggs	ASTM D2922		143.9	98.2	Pass	11
12-May-06	Top Course			146.5	Briggs	ASTM D2922		140.2	95.7	Pass	12
12-May-06	Top Course			146.5	Briggs	ASTM D2922		139.9	95.5	Pass	13
12-May-06	Top Course			146.5	Briggs	ASTM D2922		142.5	97.3	Pass	14
12-May-06	Top Course			146.5	Briggs	ASTM D2922		133.6	91.2	Fail	15
12-May-06	Top Course			146.5	Briggs	ASTM D2922		132.1	90.2	Fail	16
12-May-06	Top Course			146.5	Briggs	ASTM D2922		131.4	89.7	Fail	17
12-May-06	Top Course			146.5	Briggs	ASTM D2922		140.8	96.1	Pass	18
12-May-06	Top Course			146.5	Briggs	ASTM D2922		143.4	97.9	Pass	19
12-May-06	Top Course			146.5	Briggs	ASTM D2922		142.0	96.9	Pass	20
12-May-06	Top Course			146.5	Briggs	ASTM D2922		142.5	97.3	Pass	21
12-May-06	Top Course			146.5	Briggs	ASTM D2922		139.9	95.5	Pass	22
12-May-06	Top Course			146.5	Briggs	ASTM D2922		140.2	95.7	Pass	23
12-May-06	Top Course			146.5	Briggs	ASTM D2922		143.9	98.2	Pass	24
12-May-06	Top Course			146.5	Briggs	ASTM D2922		143.4	97.9	Pass	25
12-May-06	Top Course			146.5	Briggs	ASTM D2922		142.0	96.9	Pass	26
12-May-06	Top Course			146.5	Briggs	ASTM D2922		141.4	96.5	Pass	27

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TABLE 6.4

**ASPHALT CONCRETE FIELD COMPACTION TEST RESULTS
REMEDIAL IMPLEMENTATION PLAN - LANDFILL
63 WESTERN AVENUE, FRAMINGHAM, MA**

Source Material Data					Compaction Results						
Test Date	Source ID	Report No. or Date	Source ID	Marshall Laboratory Density (pcf)	Test Laboratory	Test Method	Report No. or Date	Field Density (PCF)	Percent Compaction (%)	Pass/Fail	FD Test Number
12-May-06	Top Course			146.5	Briggs	ASTM D2922		143.9	98.2	Pass	28
12-May-06	Top Course			146.5	Briggs	ASTM D2922		132.6	90.5	Fail	29
12-May-06	Top Course			146.5	Briggs	ASTM D2922		130.1	88.8	Fail	30
12-May-06	Top Course			146.5	Briggs	ASTM D2922		135.7	92.6	Fail	31
12-May-06	Top Course			146.5	Briggs	ASTM D2922		134.3	91.7	Fail	32
12-May-06	Top Course			146.5	Briggs	ASTM D2922		139.8	95.4	Pass	33
12-May-06	Top Course			146.5	Briggs	ASTM D2922		140.2	95.7	Pass	34
12-May-06	Top Course			146.5	Briggs	ASTM D2922		144.3	98.5	Pass	35
12-May-06	Top Course			146.5	Briggs	ASTM D2922		142.3	97.1	Pass	36
12-May-06	Top Course			146.5	Briggs	ASTM D2922		142.8	97.5	Pass	37
12-May-06	Top Course			146.5	Briggs	ASTM D2922		143.0	97.6	Pass	38
12-May-06	Top Course			146.5	Briggs	ASTM D2922		143.6	98.0	Pass	39
12-May-06	Top Course			146.5	Briggs	ASTM D2922		141.5	96.6	Pass	40
12-May-06	Top Course			146.5	Briggs	ASTM D2922		140.9	96.2	Pass	41
12-May-06	Top Course			146.5	Briggs	ASTM D2922		141.7	96.7	Pass	42
12-May-06	Top Course			146.5	Briggs	ASTM D2922		139.9	95.5	Pass	43
12-May-06	Top Course			146.5	Briggs	ASTM D2922		139.6	95.3	Pass	44
12-May-06	Top Course			146.5	Briggs	ASTM D2922		144.9	98.9	Pass	45
12-May-06	Top Course			146.5	Briggs	ASTM D2922		145.0	99.0	Pass	46
12-May-06	Top Course			146.5	Briggs	ASTM D2922		144.3	98.5	Pass	47
12-May-06	Top Course			146.5	Briggs	ASTM D2922		142.8	97.5	Pass	48
12-May-06	Top Course			146.5	Briggs	ASTM D2922		142.1	97.0	Pass	49
12-May-06	Top Course			146.5	Briggs	ASTM D2922		141.1	96.3	Pass	50
12-May-06	Top Course			146.5	Briggs	ASTM D2922		141.2	96.4	Pass	51
12-May-06	Top Course			146.5	Briggs	ASTM D2922		144.9	98.9	Pass	52
12-May-06	Top Course			146.5	Briggs	ASTM D2922		144.3	98.5	Pass	53
12-May-06	Top Course			146.5	Briggs	ASTM D2922		143.9	98.2	Pass	54
12-May-06	Top Course			146.5	Briggs	ASTM D2922		142.8	97.5	Pass	55

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TABLE 6.4

**ASPHALT CONCRETE FIELD COMPACTION TEST RESULTS
REMEDIAL IMPLEMENTATION PLAN - LANDFILL
63 WESTERN AVENUE, FRAMINGHAM, MA**

Source Material Data					Compaction Results						
Test Date	Source ID	Report No. or Date	Source ID	Marshall Laboratory Density (pcf)	Test Laboratory	Test Method	Report No. or Date	Field Density (PCF)	Percent Compaction (%)	Pass/Fail	FD Test Number
12-May-06	Top Course			146.5	Briggs	ASTM D2922		143.6	98.0	Pass	56
12-May-06	Top Course			146.5	Briggs	ASTM D2922		139.2	95.0	Pass	57
12-May-06	Top Course			146.5	Briggs	ASTM D2922		141.1	96.3	Pass	58
12-May-06	Top Course			146.5	Briggs	ASTM D2922		143.0	97.6	Pass	59
12-May-06	Top Course			146.5	Briggs	ASTM D2922		144.6	98.7	Pass	60
12-May-06	Top Course			146.5	Briggs	ASTM D2922		143.9	98.2	Pass	61
12-May-06	Top Course			146.5	Briggs	ASTM D2922		145.8	99.5	Pass	62
17-May-06	Top Course			146.5	Briggs	ASTM D2922		142.7	97.4	Pass	1
17-May-06	Top Course			146.5	Briggs	ASTM D2922		142.7	97.4	Pass	2
17-May-06	Top Course			146.5	Briggs	ASTM D2922		142.3	97.1	Pass	3
17-May-06	Top Course			146.5	Briggs	ASTM D2922		143.4	97.9	Pass	4
17-May-06	Top Course			146.5	Briggs	ASTM D2922		143.7	98.1	Pass	5
17-May-06	Top Course			146.5	Briggs	ASTM D2922		143.6	98.0	Pass	6
17-May-06	Top Course			146.5	Briggs	ASTM D2922		142.7	97.4	Pass	7
17-May-06	Top Course			146.5	Briggs	ASTM D2922		142.4	97.2	Pass	8
17-May-06	Top Course			146.5	Briggs	ASTM D2922		142.1	97.0	Pass	9
17-May-06	Top Course			146.5	Briggs	ASTM D2922		142.1	97.0	Pass	10
17-May-06	Top Course			146.5	Briggs	ASTM D2922		143.0	97.6	Pass	11
17-May-06	Top Course			146.5	Briggs	ASTM D2922		142.7	97.4	Pass	12
17-May-06	Top Course			146.5	Briggs	ASTM D2922		143.7	98.1	Pass	13
17-May-06	Top Course			146.5	Briggs	ASTM D2922		142.7	97.4	Pass	14
17-May-06	Top Course			146.5	Briggs	ASTM D2922		143.4	97.9	Pass	15
17-May-06	Top Course			146.5	Briggs	ASTM D2922		143.1	97.7	Pass	16
17-May-06	Top Course			146.5	Briggs	ASTM D2922		144.3	98.5	Pass	17

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TABLE 6.5

**ALLOWABLE EQUIVALENT SINGLE AXLE LOAD APPLICATIONS
REMEDIAL IMPLEMENTATION PLAN - LANDFILL
63 WESTERN AVENUE FRAMINGHAM, MA**

Design pavement Structure**As-Built Pavement Structure****Structural Number Calculation:**

Asphalt concrete a_1 =	0.44
Granular Base a_2 =	0.14
Granular Subbase a_3 =	0.10
Subbase Drainage Coefficient m_2 =	1.0
Subgrade Drainage Coefficient m_3 =	1.0
Asphalt thickness (inches) =	4.0
Granular base Thickness (inches) =	4.0
Granular Subbase Thickness (inches) =	8.0

Structural Number = 3.12

Asphalt concrete a_1 =	0.40
Granular Base a_2 =	0.10
Granular Subbase a_3 =	0.06
Subbase Drainage Coefficient m_2 =	1.0
Subgrade Drainage Coefficient m_3 =	1.0
Asphalt thickness (inches) =	5.75
Granular base Thickness (inches) =	4.0
Granular Subbase Thickness (inches) =	8.0

Structural Number = 3.18

Allowable 18000 lbs Equivalent Single Axle Load (ESAL) Applications

Subgrade Resilient Modulus M_r (psi) =	4.50E+03
Reliability =	0.9
Standard Normal Deviate Z_r =	-1.28
Standard Deviation, S_o =	0.35
Initial Pavement Serviceability Index, p_o =	4.6
Terminal Pavement Serviceability Index, p_t =	2.5
DPSI =	2.1
Structural Number S.N. =	3.12

ESAL (W_{18}) = 259446

Subgrade Resilient Modulus M_r (psi) =	4.50E+03
Reliability =	0.9
Standard Normal Deviate Z_r =	-1.28
Standard Deviation, S_o =	0.35
Initial Pavement Serviceability Index, p_o =	4.6
Terminal Pavement Serviceability Index, p_t =	2.5
DPSI =	2.1
Structural Number S.N. =	3.18

ESAL (W_{18}) = 293793

**DRAFT FOR REVIEW
PRIVILEGED AND CONFIDENTIAL
PREPARED AT THE REQUEST OF COUNSEL**

APPENDIX A

BWSC FORMS AND PUBLIC NOTIFICATION LETTERS

A-1: BWSC FORM 104

A-2: BWSC FORM 108

A-3: BWSC FORM 122

A-4: PUBLIC NOTIFICATION LETTERS



Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

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Username: **CRAWORLDPMH**

Transaction ID: **113813**

Document: **BWSC Response Action Outcome (RAO) Transmittal**

Size of File: **159.951 K**

Status of Transaction: **SUBMITTED**

Date and Time Created: **1/25/2007::5:19:48 PM**

Note: This file only includes forms that were part of your transaction as of the date and time indicated above. If you need a more current copy of your transaction, return to eDEP and select to "Download a Copy" from the Current Submittals page.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC104

RESPONSE ACTION OUTCOME (RAO) STATEMENT

Pursuant to 310 CMR 40.1000 (Subpart J)

Release Tracking Number

3 - 3939

For sites with multiple RTNs, enter the Primary RTN above.

A. SITE LOCATION:

1. Site Name/Location Aid: **GMC FMR LANDFILL**

2. Street Address: **63 WESTERN AVE**

3. City/Town: **FRAMINGHAM**

4. ZIP Code: **01701**

☒ 5. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.

☐ a. Tier IA ☐ b. Tier IB ☒ c. Tier IC ☐ d. Tier II

6. If a Tier I Permit has been issued, provide Permit Number: **W 066581**

B. THIS FORM IS BEING USED TO: (check all that apply)

1. List Submittal Date of RAO Statement (if previously submitted):

mm/dd/yyyy

☒ 2. Submit a **Response Action Outcome (RAO) Statement**

☐ a. Check here if this RAO Statement covers additional Release Tracking Numbers (RTNs). RTNs that have been previously linked to a Tier Classified Primary RTN do not need to be listed here.

b. Provide additional Release Tracking Number(s) covered by this RAO Statement.

☐ - ☐ ☐ - ☐

☐ 3. Submit a **Revised Response Action Outcome Statement**

☐ a. Check here if this Revised RAO Statement covers additional Release Tracking Numbers (RTNs), not listed on the RAO Statement or previously submitted Revised RAO Statements. RTNs that have been previously linked to a Tier Classified Primary RTN do not need to be listed here.

b. Provide additional Release Tracking Number(s) covered by this RAO Statement.

☐ - ☐ ☐ - ☐

☐ 4. Submit a **Response Action Outcome Partial (RAO-P) Statement**

Check above box, if any Response Actions remain to be taken to address conditions associated with this disposal site having the Primary RTN listed in the header section of this transmittal form. This RAO Statement will record only an RAO-Partial Statement for that RTN. A final RAO Statement will need to be submitted that references all RAO-Partial Statements and, if applicable, covers any remaining conditions not covered by the RAO-Partial Statements.

Also, specify if you are an Eligible Person or Tenant pursuant to M.G.L. c. 21E s.2, and have no further obligation to conduct response actions on the remaining portion(s) of the disposal site:

☐ a. Eligible Person ☐ b. Eligible Tenant

☐ 5. Submit an optional **Phase I Completion Statement** supporting an RAO Statement

☐ 6. Submit a **Periodic Review Opinion evaluating the status of a Temporary Solution** for a Class C-1 RAO Statement, as specified in 310 CMR 40.1051 (Section F is optional)

☐ 7. Submit a **Retraction** of a previously submitted **Response Action Outcome Statement** (Sections E & F are not required)

(All sections of this transmittal form must be filled out unless otherwise noted above)



RESPONSE ACTION OUTCOME (RAO) STATEMENT

Pursuant to 310 CMR 40.1000 (Subpart J)

Release Tracking Number

3 - 3939

C. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply; for volumes, list cumulative amounts)

- | | |
|--|---|
| ☐ 1. Assessment and/or Monitoring Only | ☐ 2. Temporary Covers or Caps |
| ☐ 3. Deployment of Absorbent or Containment Materials | ☐ 4. Treatment of Water Supplies |
| ☐ 5. Structure Venting System | ☒ 6. Engineered Barrier |
| ☐ 7. Product or NAPL Recovery | ☐ 8. Fencing and Sign Posting |
| ☐ 9. Groundwater Treatment Systems | ☐ 10. Soil Vapor Extraction |
| ☐ 11. Bioremediation | ☐ 12. Air Sparging |
| ☐ 13. Monitored Natural Attenuation | ☐ 14. In-situ Chemical Oxidation |

☐ 15. Removal of Contaminated Soils

- ☐ a. Re-use, Recycling or Treatment ☐ i. On Site Estimated volume in cubic yards _____
- ☐ ii. Off Site Estimated volume in cubic yards _____

ii.a. Facility Name: _____ Town: _____ State: _____

ii.b. Facility Name: _____ Town: _____ State: _____

iii. Describe: _____

☐ b. Landfill

- ☐ i. Cover Estimated volume in cubic yards _____

Facility Name: _____ Town: _____ State: _____

- ☐ ii. Disposal Estimated volume in cubic yards _____

Facility Name: _____ Town: _____ State: _____

☐ 16. Removal of Drums, Tanks or Containers:

a. Describe Quantity and Amount: _____

b. Facility Name: _____ Town: _____ State: _____

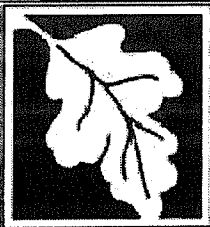
c. Facility Name: _____ Town: _____ State: _____

☐ 17. Removal of Other Contaminated Media:

a. Specify Type and Volume: _____

b. Facility Name: _____ Town: _____ State: _____

c. Facility Name: _____ Town: _____ State: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC104

RESPONSE ACTION OUTCOME (RAO) STATEMENT

Pursuant to 310 CMR 40.1000 (Subpart J)

Release Tracking Number

3

-

3939

C. DESCRIPTION OF RESPONSE ACTIONS (cont.): (check all that apply; for volumes, list cumulative amounts)

☒ 18. Other Response Actions:

Describe: **DISPOSAL OF NON-HAZARDOUS WASTEWATER (310,500 GALLONS), VEGETATION WASTE AND RAILROAD TIES (518.93 TONS) AND SMALL QUANTITIES OF INVESTIGATION DERIVED WASTE**

☒ 19. Use of Innovative Technologies:

Describe: **USE OF SPECIALIZED GEOTEXTILE TO ALLOW PAVING IN WINTER MONTHS**

D. SITE USE:

1. Are the response actions that are the subject of this submittal associated with the *redevelopment, reuse* or the *major expansion of the current use* of property(ies) impacted by the presence of oil and/or hazardous materials?

☐ a. Yes ☒ b. No ☐ c. Don't know

2. Is the property a *vacant or under-utilized commercial or industrial* property ("a brownfield property")?

☐ a. Yes ☒ b. No ☐ c. Don't know

3. Will funds from a state or federal brownfield incentive program be used on one or more of the property(ies) within the disposal site?

☐ a. Yes ☒ b. No ☐ c. Don't know If Yes, identify program(s): _____

4. Has a Covenant Not to Sue been obtained or sought?

☐ a. Yes ☒ b. No ☐ c. Don't know

5. Check all applicable categories that apply to the person making this submittal: ☐ a. Redevelopment Agency or Authority

☐ b. Community Development Corporation ☐ c. Economic Development and Industrial Corporation

☐ d. Private Developer ☐ e. Fiduciary ☐ f. Secured Lender ☐ g. Municipality

☐ h. Potential Buyer (non-owner) ☒ i. Other, describe: **OWNER/FORMER OPERATOR/RP**

This data will be used by MassDEP for information purposes only, and does not represent or create any legal commitment, obligation or liability on the part of the party or person providing this data to MassDEP.

E. RESPONSE ACTION OUTCOME CLASS:

Specify the Class of Response Action Outcome that applies to the disposal site, or site of the Threat of Release. Select **ONLY** one Class.

☐ 1. **Class A-1 RAO:** Specify one of the following:

☐ a. Contamination has been reduced to background levels. ☐ b. A Threat of Release has been eliminated.

☐ 2. **Class A-2 RAO:** You **MUST** provide justification that reducing contamination to or approaching background levels is infeasible.

☐ 3. **Class A-3 RAO:** You **MUST** provide an implemented Activity and Use Limitation (AUL) and justification that reducing contamination to or approaching background levels is infeasible.

☒ 4. **Class A-4 RAO:** You **MUST** provide an implemented AUL, justification that reducing contamination to or approaching background levels is infeasible, and justification that reducing contamination to less than Upper Concentration Limits (UCLs) 15 feet below ground surface or below an Engineered Barrier is infeasible. If the Permanent Solution relies upon an Engineered Barrier, you must provide or have previously provided a Phase III Remedial Action Plan that justifies the selection of the Engineered Barrier.



RESPONSE ACTION OUTCOME (RAO) STATEMENT

Pursuant to 310 CMR 40.1000 (Subpart J)

Release Tracking Number

3 - **3939**

E. RESPONSE ACTION OUTCOME CLASS (cont.):

☐ **5. Class B-1 RAO: Specify one of the following:**

- ☐ a. Contamination is consistent with background levels ☐ b. Contamination is **NOT** consistent with background levels.

☐ **6. Class B-2 RAO: You **MUST** provide an implemented AUL.**

☐ **7. Class B-3 RAO: You **MUST** provide an implemented AUL and justification that reducing contamination to less than Upper Concentration Limits (UCLs) 15 feet below ground surface is infeasible.**

☐ **8. Class C-1 RAO: You must submit a plan as specified at 310 CMR 40.0861(2)(h). Indicate type of ongoing response actions.**

- ☐ a. Active Remedial System ☐ b. Active Remedial Monitoring Program ☐ c. None
☐ d. Other Specify: _____

☐ **9. Class C-2 RAO: You must hold a valid Tier I Permit or Tier II Classification to continue response actions toward a Permanent Solution.**

F. RESPONSE ACTION OUTCOME INFORMATION:

1. Specify the Risk Characterization Method(s) used to achieve the RAO described above:

- ☐ a. Method 1 ☐ b. Method 2 ☒ c. Method 3
☐ d. Method Not Applicable-Contamination reduced to or consistent with background, or Threat of Release abated

2. Specify all Soil Category(ies) applicable. More than one Soil Category may apply at a Site. Be sure to check off all **APPLICABLE categories:**

- ☐ a. S-1/GW-1 ☐ d. S-2/GW-1 ☐ g. S-3/GW-1
☐ b. S-1/GW-2 ☐ e. S-2/GW-2 ☐ h. S-3/GW-2
☐ c. S-1/GW-3 ☒ f. S-2/GW-3 ☒ i. S-3/GW-3

3. Specify all Groundwater Category(ies) impacted. A site may impact more than one Groundwater Category. Be sure to check off all **IMPACTED categories:**

- ☐ a. GW-1 ☐ b. GW-2 ☒ c. GW-3 ☐ d. No Groundwater Impacted

4. Specify remediation conducted:

- ☐ a. Check here if soil remediation was conducted.
☐ b. Check here if groundwater remediation was conducted.

5. Specify whether the analytical data used to support the Response Action Outcome was generated pursuant to the Department's Compendium of Analytical Methods (CAM) and 310 CMR 40.1056:

- ☒ a. CAM used to support all analytical data. ☐ b. CAM used to support some of the analytical data.
☐ c. CAM not used.

☒ **6. Check here to certify that the Class A, B or C Response Action Outcome includes a Data Usability Assessment and Data Representativeness Evaluation pursuant to 310 CMR 40.1056.**

7. Estimate the number of acres this RAO Statement applies to: **5.65**



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC104

RESPONSE ACTION OUTCOME (RAO) STATEMENT

Release Tracking Number

3 - 3939

Pursuant to 310 CMR 40.1000 (Subpart J)

G. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B indicates that either an **RAO Statement, Phase I Completion Statement and/or Periodic Review Opinion** is being provided, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 5407

2. First Name: FRED K

3. Last Name: TAYLOR

4. Telephone: 8607471800

5. Ext.:

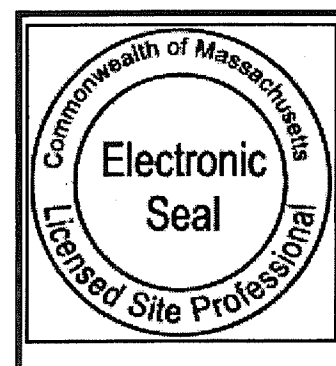
6. FAX:

7. Signature: FRED K TAYLOR

8. Date: 01/25/2007

mm/dd/yyyy

9. LSP Stamp:



H. PERSON MAKING SUBMITTAL:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions

2. Name of Organization: GENERAL MOTORS CORP

3. Contact First Name: JAMES

4. Last Name: HARTNETT

5. Street: 1 GENERAL MOTORS DR

6. Title:

7. City/Town: SYRACUSE

8. State: NY

9. ZIP Code: 132060000

10. Telephone: 3154632391

11. Ext.:

12. FAX:



RESPONSE ACTION OUTCOME (RAO) STATEMENT

Pursuant to 310 CMR 40.1000 (Subpart J)

Release Tracking Number

3

- 3939

I. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON MAKING SUBMITTAL:

☒ 1. RP or PRP ☒ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☐ e. Other RP or PRP Specify: _____

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Making Submittal Specify Relationship: _____

J. REQUIRED ATTACHMENT AND SUBMITTALS:

☒ 1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☐ 2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of an RAO Statement that relies on the public way/rail right-of-way exemption from the requirements of an AUL.

☒ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of a RAO Statement with instructions on how to obtain a full copy of the report.

☒ 4. Check here to certify that documentation is attached specifying the location of the Site, or the location and boundaries of the Disposal Site subject to this RAO Statement. If submitting an RAO Statement for a PORTION of a Disposal Site, you must document the location and boundaries for both the portion subject to this submittal and, to the extent defined, the entire Disposal Site.

☒ 5. Check here to certify that, pursuant to 310 CMR 40.1406, notice was provided to the owner(s) of each property within the disposal site boundaries, or notice was not required because the disposal site boundaries are limited to property owned by the party conducting response actions. (check all that apply)

☒ a. Notice was provided prior to, or concurrent with the submittal of a Phase II Completion Statement to the Department.

☒ b. Notice was provided prior to, or concurrent with the submittal of this RAO Statement to the Department.

☐ c. Notice not required. d. Total number of property owners notified, if applicable: 1

☒ 6. Check here if required to submit one or more AULs. You must submit an AUL Transmittal Form (BWSC113) and a copy of each implemented AUL related to this RAO Statement. Specify the type of AUL(s) below: (required for Class A-3, A-4, B-2, B-3 RAO Statements)

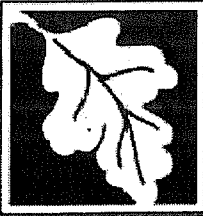
☒ a. Notice of Activity and Use Limitation b. Number of Notices submitted: 2

☐ c. Grant of Environmental Restriction d. Number of Grants submitted: _____

☐ 7. If an RAO Compliance Fee is required for any of the RTNs listed on this transmittal form, check here to certify that an RAO Compliance Fee was submitted to DEP, P. O. Box 4062, Boston, MA 02211.

☐ 8. Check here if any non-updatable information provided on this form is incorrect, e.g. Site Address/Location Aid. Send corrections to the DEP Regional Office.

☒ 9. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC104

RESPONSE ACTION OUTCOME (RAO) STATEMENT

Pursuant to 310 CMR 40.1000 (Subpart J)

Release Tracking Number

3 - 3939

K. CERTIFICATION OF PERSON MAKING SUBMITTAL:

1. I, **FRED TAYLOR**, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: **FRED TAYLOR**
Signature

3. Title:

4. For: **GENERAL MOTORS CORP**
(Name of person or entity recorded in Section H)

5. Date: **01/25/2007**
mm/dd/yyyy

☒ 6. Check here if the address of the person providing certification is different from address recorded in Section H.

7. Street: **45 FARMINGTON VALLEY DRIVE**

8. City/Town: **PLAINVILLE** 9. State: **CT** 10. ZIP Code: **06062-0000**

11. Telephone: **860 7471800** 12. Ext.: 13. FAX: **860 7471900**

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

Received by DEP on

1/25/2007 3:44:56 PM

Submittal Summary & Receipt

Your submission is complete. Thank you for using DEP's online reporting system. You can select "My Homepage" to review your status.

DEP Transaction ID: 113813
Date and Time Submitted: 1/25/2007 3:44:56 PM
User Email : ftaylor@croworld.com

Form Name: BWSC 104 RAO Transmittal Form

RTN: 3-3939
Location: GMC FMR LANDFILL
Address: 63 WESTERN AVE, FRAMINGHAM, 01701

Person Making Submittal
GENERAL MOTORS CORP
JAMES HARTNETT
1 GENERAL MOTORS DR
SYRACUSE, NY 132060000

LSP
LSP #: 5407
LSP Name: FRED K TAYLOR

Person Making Certification
GENERAL MOTORS CORP
FRED TAYLOR
45 FARMINGTON VALLEY DRIVE
PLAINVILLE, CT 060620000

Ancillary Document Uploaded/Mailed
BWSC-104 Ques.B2 - RAO Report - By Mail
BWSC-104 Ques.J1 - Statement of Provisions - By Mail

print receipt

cancel



Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

To retain a copy of this file you must save and/or print.

Username: **CRAWORLDPMH**

Transaction ID: **113819**

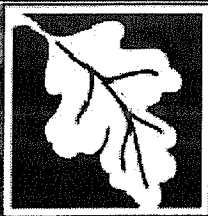
Document: **BWSC Comprehensive Response Action Transmittal**

Size of File: **135.585 K**

Status of Transaction: **SUBMITTED**

Date and Time Created: **1/25/2007::5:18:31 PM**

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Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

3 - 3939

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

A. SITE LOCATION:

1. Site Name: **GMC FMR LANDFILL**

2. Street Address: **63 WESTERN AVE**

3. City/Town: **FRAMINGHAM**

4. ZIP Code: **01701-0000**

5. UTM Coordinates: a. UTM N: **4684872** b. UTM E: **795754**

☒ 6. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.

☐ a. Tier IA ☐ b. Tier IB ☒ c. Tier IC ☐ d. Tier II

7. If applicable, provide the Permit Number: **W 066581 ISSUED SEPTEMBER 26, 2005**

B. THIS FORM IS BEING USED TO: (check all that apply)

- ☐ 1. Submit a **Phase I Completion Statement**, pursuant to 310 CMR 40.0484.
- ☐ 2. Submit a **Revised Phase I Completion Statement**, pursuant to 310 CMR 40.0484.
- ☐ 3. Submit a **Phase II Scope of Work**, pursuant to 310 CMR 40.0834.
- ☐ 4. Submit an **interim Phase II Report**. This report does not satisfy the response action deadline requirements in 310 CMR 40.0500.
- ☐ 5. Submit a **final Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.
- ☐ 6. Submit a **Revised Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.
- ☐ 7. Submit a **Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.
- ☐ 8. Submit a **Revised Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.
- ☐ 9. Submit a **Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.
- ☐ 10. Submit a **Modified Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.
- ☒ 11. Submit an **As-Built Construction Report**, pursuant to 310 CMR 40.0875.
- ☐ 12. Submit a **Phase IV Status Report**, pursuant to 310 CMR 40.0877.
- ☒ 13. Submit a **Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.

Specify the outcome of Phase IV activities: (check one)

- ☐ a. Phase V Operation, Maintenance or Monitoring of the Comprehensive Remedial Action is necessary to achieve a Response Action Outcome.
- ☒ b. The requirements of a Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
- ☐ c. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
- ☐ d. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and that further progress is made toward a Permanent Solution. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.

(All sections of this transmittal form must be filled out unless otherwise noted above)



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT**

Release Tracking Number

3

- 3939

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

- ☐ 14. Submit a **Revised Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.
- ☐ 15. Submit a **Phase V Status Report**, pursuant to 310 CMR 40.0892.
- ☐ 16. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP.)
- a. Type of Report: (check one) ☐ i. Initial Report ☐ ii. Interim Report ☐ iii. Final Report
- b. Frequency of Submittal: (check all that apply)
- ☐ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.
- ☐ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.
- ☐ iii. A Remedial Monitoring Report(s) submitted concurrent with a Status Report.
- c. Status of Site: (check one) ☐ i. Phase V ☐ ii. Remedy Operation Status ☐ iii. Class C RAO
- d. Number of Remedial Systems and/or Monitoring Programs:

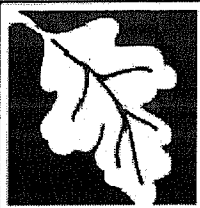
A separate BWSC108A, CRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

- ☐ 17. Submit a **Remedy Operation Status**, pursuant to 310 CMR 40.0893.
- ☐ 18. Submit a **Status Report to maintain a Remedy Operation Status**, pursuant to 310 CMR 40.0893(2).
- ☐ 19. Submit a **Modification of a Remedy Operation Status**, pursuant to 310 CMR 40.0893(5).
- ☐ 20. Submit a **Termination of a Remedy Operation Status**, pursuant to 310 CMR 40.0893(6).
- ☐ 21. Submit a **Phase V Completion Statement**, pursuant to 310 CMR 40.0894.

Specify the outcome of Phase V activities: (check one)

- ☐ a. The requirements of a Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement (BWSC104) will be submitted to DEP.
- ☐ b. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
- ☐ c. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and/or that further progress is made toward a Permanent Solution. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
- ☐ 22. Submit a **Revised Phase V Completion Statement**, pursuant to 310 CMR 40.0894.
- ☐ 23. Submit a **Post-Class C Response Action Outcome Status Report**, pursuant to 310 CMR 40.0898.

(All sections of this transmittal form must be filled out unless otherwise noted above)



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

3

- 3939

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

C. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B indicates that a **Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B indicates that a **Phase II Scope of Work** or a **Phase IV Remedy Implementation Plan** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B indicates that an **As-Built Construction Report, a Remedy Operation Status, a Phase IV, Phase V or Post-Class C RAO Status Report, a Status Report to Maintain a Remedy Operation Status and/or a Remedial Monitoring Report** is being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 5407

2. First Name: FRED K

3. Last Name: TAYLOR

4. Telephone: 8607471800

5. Ext.:

6. FAX:

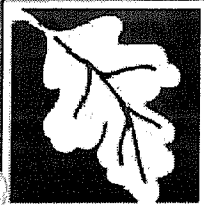
7. Signature: FRED K TAYLOR

8. Date: 01/25/2007

(mm/dd/yyyy)

9. LSP Stamp:





Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

3 - 3939

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

D. PERSON UNDERTAKING RESPONSE ACTIONS:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions

2. Name of Organization: GENERAL MOTORS CORP

3. Contact First Name: JAMES

4. Last Name: HARTNETT

5. Street: 1 GENERAL MOTORS DR

6. Title:

7. City/Town: SYRACUSE

8. State: NY

9. ZIP Code: 13206-0000

10. Telephone: 3154632391

11. Ext.:

12. FAX:

E. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTIONS:

☒ 1. RP or PRP ☒ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☐ e. Other RP or PRP

Specify:

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking Response Actions Specify Relationship:

F. REQUIRED ATTACHMENT AND SUBMITTALS:

☒ 1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☒ 2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.

☐ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase III Remedial Action Plan.

☐ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase IV Remedy Implementation Plan.

☐ 5. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of any field work involving the implementation of a Phase IV Remedial Action.

☐ 6. If submitting a Modification of a Remedy Operation Status, check here to certify that a statement detailing the compliance history, as per 310 CMR 40.0893(5), for the person making this submittal is attached.

☐ 7. If submitting a Modification of a Remedy Operation Status, check here to certify that written consent of the person who submitted the Remedy Operation Status submittal, as per 310 CMR 40.0893(5), is attached.

☐ 8. Check here if any non-updatable information provided on this form is incorrect, e.g. Site Name. Send corrections to the DEP Regional Office.

☒ 9. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

3 - 3939

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

G. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. I, **FRED TAYLOR**, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: **FRED TAYLOR**

Signature

3. Title:

4. For: **GENERAL MOTORS CORP**

(Name of person or entity recorded in Section D)

5. Date: **01/25/2007**

(mm/dd/yyyy)

☒ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street: **45 FARMINGTON VALLEY DRIVE**

8. City/Town: **PLAINVILLE**

9. State: **CT**

10. ZIP Code: **06062-0000**

11. Telephone: **860 7471800**

12. Ext.:

13. FAX: **860 7471900**

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

Received by DEP on

1/25/2007 3:40:04 PM

Submittal Summary & Receipt

Your submission is complete. Thank you for using DEP's online reporting system. You can select "My Homepage" to review your status.

DEP Transaction ID: 113819
Date and Time Submitted: 1/25/2007 3:40:04 PM
User Email : ftaylor@croworld.com

Form Name: BWSC 108 CRA Transmittal Form & Phase I CS

RTN: 3-3939
Location: GMC FMR LANDFILL
Address: 63 WESTERN AVE, FRAMINGHAM, 017010000

Person Making Submittal
GENERAL MOTORS CORP
JAMES HARTNETT
1 GENERAL MOTORS DR
SYRACUSE, NY 132060000

LSP
LSP #: 5407
LSP Name: FRED K TAYLOR

Person Making Certification
GENERAL MOTORS CORP
FRED TAYLOR
GENERAL MOTORS CORP
FRED TAYLOR
45 FARMINGTON VALLEY DRIVE
PLAINVILLE, CT 060620000

Ancillary Document Uploaded/Mailed

BWSC-108 Ques.B11 - Phase IV As-Built Construction Report - By Mail
BWSC-108 Ques.B13 - Phase IV Final Inspection Report - By Mail
BWSC-108 Ques.F1 - Statement of Provisions - By Mail

[print receipt](#)[cancel](#)



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC122

This notice is related to:
Release Tracking Number

INFORMATIONAL NOTICE TO PROPERTY OWNERS

3 - 3939

As Required by 310 CMR 40.1406 of the Massachusetts Contingency Plan (MCP)

A. DISPOSAL SITE ADDRESS: (associated with Release Tracking Number provided above)

1. Street Address: 63 Western Avenue
2. City/Town: Framingham 3. ZIP Code: 01702-7403

B. THIS NOTICE IS BEING PROVIDED TO THE FOLLOWING PROPERTY OWNER:

1. Name of Property Owner: ASSET HOLDINGS III LP (ADESA)
2. Address of Property For Which This Notice is Being Provided Owned by Property Owner named in B1:
a. Street Address: 63 Western Avenue
b. City/Town: Framingham c. ZIP Code: 01702-7403

C. THIS NOTICE IS BEING GIVEN : (check one)

- ☐ 1. Upon Completion of a Phase II Comprehensive Site Assessment.
☒ 2. Upon Submittal of a Response Action Outcome (i.e., Site Closure Report).
☐ 3. Upon Completion of Additional Investigation showing that Oil or Hazardous Material is not Present at the Property.

D. DESCRIPTION OF OIL AND/OR HAZARDOUS MATERIAL PRESENT OR LIKELY TO BE PRESENT AT THE PROPERTY :
(check all that apply)

AFFECTED ENVIRONMENTAL MEDIA

PRINCIPAL CHEMICAL(S) PRESENT

- ☒ 1. Soil Metals, PAHs and petroleum hydrocarbons
☐ 2. Groundwater _____
☐ 3. Surface Water _____
☐ 4. Sediment _____
☐ 5. Indoor Air _____
☐ 6. Other: _____
(specify)

E. ATTACHMENTS PROVIDED WITH THIS NOTICE. AS REQUIRED BY 310 CMR 40.1406:

- ☒ 1. A Copy of the Map Showing or a Description Describing the Area where the Oil and/or Hazardous is or is likely to be Present.
☒ 2. A Copy of the Phase II Completion Site Assessment or Response Action Outcome Conclusions.

F. CONTACT INFORMATION RELATED TO THE PARTY PROVIDING THIS NOTICE:

1. Contact Name: Fred Taylor 2. Street: 45 Farmington Valley Drive
3. City/Town: Plainville 4. State: CT 5. ZIP Code: 06062-0000
6. Telephone: (860) 747-1800 7. Email: ftaylor@craworld.com



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC122

This notice is related to:
Release Tracking Number

INFORMATIONAL NOTICE TO PROPERTY OWNERS

3 - 3939

As Required by 310 CMR 40.1406 of the Massachusetts Contingency Plan (MCP)

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1406. The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party(ies) who is/are addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form.

PURPOSE OF THIS NOTICE

Parties who are taking actions to respond to releases of oil or hazardous material to the environment are required by state regulations (referred to above) to notify the owners of property where the oil or hazardous material is or is likely to be present. These same parties are also required to notify property owners upon completion of actions to address the oil or hazardous material, or if additional investigations show that the oil or hazardous material is not, as previously suspected, present at a property. **Section C** on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time.

INFORMATION RELATED TO YOUR PROPERTY

Section D on the reverse side of this form indicates the type(s) of oil or hazardous material that is or is likely to be present at your property, and the environmental medium (e.g., soil or groundwater) where it is or is likely to be present. **Please note** when an investigation indicates that the oil or hazardous material is or is likely to be present at your property, this does not mean that the oil or hazardous material is posing a health risk to you. Parties who are taking actions to address oil and hazardous material releases are required by state regulations to adequately investigate these releases and take necessary actions to ensure that affected properties meet standards that are protective of human health and the environment.

ATTACHED MAP OR DESCRIPTION AND REPORT CONCLUSIONS

The party providing this notice to you is required to attach a map or description that indicates the boundaries of the area where the oil or hazardous material is or is likely to be present, and the conclusions of the site investigation or closure report (**Section E**). These attachments should give you additional information about the nature and location of the oil or hazardous material with respect to your property.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>.

For more information regarding this notice, you may contact the party listed in **Section F** on the reverse side of this form. Information about the disposal site identified in **Section A** is also available in files at the Massachusetts Department of Environmental Protection.

See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.



**CONESTOGA-ROVERS
& ASSOCIATES**

45 Farmington Valley Drive, Plainville, CT 06062
Telephone: 860.747.1800 Facsimile: 860.747.1900
www.CRAworld.com

January 30, 2007

Reference No. 012618-05

Mr. Robert T. Cooper
Framingham Board of Health
150 Concord Street
Memorial Building, Room 221
Framingham, Massachusetts 01702-8379

Dear Mr. Cooper:

Re: Comprehensive Response Action Notification
Availability of As-Built Construction Report and Response Action Outcome Statement
63 Western Avenue RTN: 3-3939 Former Landfill, Framingham, Massachusetts

Conestoga-Rovers & Associates (CRA) has prepared this letter, on behalf of General Motors Corporation (GM), to provide a notice of the availability of the As-Built Construction and Class A-4 Response Action Outcome (RAO) Report as part of this Massachusetts Contingency Plan (MCP) submittal for the above-referenced Site.

The As-Built Construction Report documents the tests and measurements and provides the as-recorded or as-built engineering drawings of the remedial construction activities completed as part of the comprehensive response actions. The response action included the construction of an engineered barrier and related activities.

This Report also provides an RAO Statement prepared in support of the Class A-4 RAO achieved for the Site. Two Notices of Activity and Use Limitations (AULs) also have been registered for the Site. The AULs include an Operation, Maintenance and Monitoring (OMM) Plan to maintain the integrity of the remedy and a condition of No Significant Risk for the Site.

Please contact the undersigned if you require further information and/or would like a copy of this As-Built Construction and RAO Statement Report (860-747-1800 or ftaylor@craworld.com).

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Fred K. Taylor, LSP

FKT/ca/10

Encl.

c.c. Stephen Johnson, MADEP
Jim Hartnett, GM

Randy Moore, CRA

EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

REGISTERED COMPANY
ISO 9001
ENGINEERING DESIGN



**CONESTOGA-ROVERS
& ASSOCIATES**

45 Farmington Valley Drive, Plainville, CT 06062
Telephone: 860.747.1800 Facsimile: 860.747.1900
www.CRAworld.com

January 30, 2007

Reference No. 012618-05

Mr. Dennis Giombetti, Chairperson
Board of Selectmen
Town of Framingham
150 Concord Street
Framingham, MA 01702

Dear Mr. Giombetti:

Re: Comprehensive Response Action Notification
Availability of As-Built Construction and Response Action Outcome Report
63 Western Avenue RTN: 3-4356 Beaverdam Brook, Framingham, Massachusetts

Conestoga-Rovers & Associates (CRA) has prepared this letter, on behalf of General Motors Corporation (GM), to provide a notice of the availability of the As-Built Construction and Class A-4 Response Action Outcome (RAO) Report as part of this Massachusetts Contingency Plan (MCP) submittal for the above-referenced Site.

The As-Built Construction Report documents the tests and measurements and provides the as-recorded or as-built engineering drawings of the remedial construction activities completed as part of the comprehensive response actions. The response action included the construction of an engineered barrier and related activities.

This Report also provides an RAO Statement prepared in support of the Class A-4 RAO achieved for the Site. Two Notices of Activity and Use Limitations (AULs) also have been registered for the Site. The AULs include an Operation, Maintenance and Monitoring (OMM) Plan to maintain the integrity of the remedy and a condition of No Significant Risk for the Site.

Please contact the undersigned if you require further information and/or would like a copy of this As-Built Construction and RAO Statement Report (860-747-1800 or ftaylor@craworld.com).

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES



Fred K. Taylor, LSP

FKT/ca/3

Encl.

c.c. Stephen Johnson, MADEP
Jim Hartnett, GM

Randy Moore, CRA

EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

REGISTERED COMPANY
ISO 9001
ENGINEERING DESIGN

APPENDIX B

RESPONSE ACTION OUTCOME STATEMENT

TABLE OF CONTENTS

	<u>Page</u>
1.0 RESPONSE ACTION OUTCOME STATEMENT	B-1
1.1 INTRODUCTION.....	B-1
1.1.1 RELATED RTNS.....	B-1
1.1.2 PREVIOUS SUBMITTALS.....	B-2
1.2 SITE DESCRIPTION	B-3
1.2.2 PHYSICAL SETTING.....	B-4
1.2.3 ENVIRONMENTAL SETTING	B-5
1.2.4 CURRENT AND FUTURE LAND USE	B-6
1.3 NATURE AND EXTENT OF CONTAMINATION.....	B-6
1.4 RISK CHARACTERIZATION	B-8
1.4.1 HHRA	B-8
1.4.2 ERA.....	B-10
1.5 REMEDIAL RESPONSE ACTION.....	B-11
1.6 NOTICE OF AUL	B-11
1.7 UNCONTROLLED SOURCES	B-11
1.8 NO SIGNIFICANT RISK	B-12
1.9 LSP OPINION.....	B-12
1.10 ACHIEVEMENT OF UCLS.....	B-12
1.11 DATA USABILITY ASSESSMENT AND REPRESENTATIVENESS.....	B-13
1.11.1 ANALYTICAL DATA USABILITY ASSESSMENT.....	B-13
1.11.2 FIELD QUALITY CONTROL DATA USABILITY ASSESSMENT.....	B-14
1.11.3 DATA QUALITY OBJECTIVES.....	B-15
1.11.4 REPRESENTATIVENESS EVALUATION.....	B-15

1.0 RESPONSE ACTION OUTCOME STATEMENT

1.1 INTRODUCTION

Conestoga-Rovers & Associates (CRA) has prepared this Response Action Outcome (RAO) Statement in accordance with 310 CMR 40.1056 for the comprehensive response actions completed for the Former Landfill (Site) located at the 63 Western Avenue in the Town of Framingham, Middlesex County, Massachusetts (Property). The Former Landfill Site consists of a 5.0-acre area located on an approximately 7-acre area on the southwest side of the Property. The Former Landfill has been assigned Massachusetts Department of Environmental Protection (MADEP) Bureau of Waste Site Cleanup (BWSC) Release Tracking Number (RTN) 3-3939. The Site has been investigated and remediated in accordance with the Massachusetts Contingency Plan (MCP) under the supervision of an MADEP Licensed Site Professional (LSP). The LSP of Record is Mr. Fred K. Taylor of CRA.

The Phase III Remedial Action Plan (RAP) (CRA, September 2005) determined that a Class A-4 RAO Permanent Solution was appropriate for the Site. Based on the completion of the Phase IV Remedial Implementation (RIP) (CRA, October 2005) activities this RAO Statement supports the achievement of a Class A-4 RAO. The final Conceptual Site Model (CSM) for the Site (Section 2.0) and the other sections of this report also support the RAO.

The Class A-4 RAO is contingent upon the Activity Use and Limitation (AUL) and associated Operations and Maintenance (O&M) Plan that have been implemented for the Site to maintain a level of No Significant Risk.

1.1.1 RELATED RTNS

There also are two additional RTNs associated with the Property that GM has previously and is currently conducting environmental investigations and remediation under, as follows:

<i>Site</i>	<i>Description</i>	<i>Current Status</i>
3-3940	Former Settling Lagoon	Tier II Classification Extension September 2004
3-4356	Beaverdam Brook	Tier II Classification Extension September 2006

In April 2006, GM entered into Administrative Consent Orders with Penalty (ACOPs) with MADEP, which governs the completion of comprehensive response actions for these two sites.

GM currently owns the property where the majority of the Site is located and a portion of the Site, approximately 0.2 acres, extends into adjacent ADESA Auction's Inc. (ADESA) property. There were four historic RTNs on other areas of ADESA's property for which GM or ADESA previously completed comprehensive response actions.

RTN: 3-0317 is associated with the ADESA property adjacent to the Site. During excavation activities conducted to provide increased stormwater management capacity for the North Pond, waste material/impacted soil was encountered on the southeast bank. Approximately 1,000 CY of waste/soil was excavated, removed and managed by ADESA under a Release Abatement Measure (RAM) approved by MADEP. The RAM was completed in April 2006.

1.1.2 PREVIOUS SUBMITTALS

The following are a list of recent submittals and agency approvals/permits completed as part of comprehensive response actions for the Site:

August 03, 2004	Tier II Reclassification Extension
August 03, 2004	Phase II Comprehensive Site Assessment (CSA) Notice of Intent Wetlands and Waterways
August 31, 2004	Phase II CSA Notice of Intent Supplement Report
September 27, 2004	Phase II CSA Scope of Work
October 1, 2004	FCC/MADEP Phase II Order of Conditions (DEP 158-1033)
March 28, 2005	Phase II CSA Scope of Work Addendum No. 1
April 06, 2005	Interim Phase II CSA Report (Wetland Delineation Report) and Phase II CSA Scope of Work Plan Addendum No. 2
July 05, 2005	Phase IV CRA Notice of Intent Wetlands and Waterways
July 29, 2005	Interim Phase II CSA Report/Tier 1C Permit Application
July 2005	Phase IV CRA Notice of Intent Supplement - Additional Information for Remedial Design
August 10, 2005	FCC/MADEP Phase IV Order of Conditions (DEP 158-1061)
August 29, 2005	Final Phase II CSA Report
September 23, 2005	MADEP notification of Permit approval

September 2005	Phase III RAP
October 2005	Phase IV RIP
November 28, 2006	Request for Certificate of Compliance August 2005 Phase II Order of Conditions (DEP 158-1033)
January 16, 2007	Notice of Activity and Use Limitations Registrations

On August 23, 2005, MADEP issued an Amended Notice of Non-Compliance requiring that a RAO Statement be submitted for the Site by January 1, 2006. In a letter dated September 23, 2005, MADEP indicated presumptive approval of the Tier IC Permit and provided a completion deadline for the comprehensive remedial actions of September 27, 2007.

On May 4, 2006, MADEP and GM entered into an ACOP (ACOP-NE-05-3A004) for the completion of MCP comprehensive response actions for the Site. The submittal of this As-Built Construction Report and RAO Statement, including the AUL and other documentation provided herein provides full compliance with Section VII (Disposition and Order) of the ACOP. No further actions are required with respect to the ACOP. The portion of the Site property owned by GM as been transferred to ADESA. ADESA has the responsibility of maintaining the AUL and associated O&M Plan for the Site.

The Comprehensive Response Actions for the Site have been conducted in accordance with the Public involvement requirements specified in CMR 40.1400 as provided in Section 1.4 of the Interim Phase II CSA Report (CRA, July 2005) and the Phase III RAP (CRA, September 2005). Certain public notices are required by the MCP for the implementation of comprehensive response actions and these have been followed for all submittals to date. The previous notices provided to local officials [(Chief Municipal Officer (CMO) and the Board of Health (BOH)], the public by notices published in the Metro West Daily News, and the Environmental monitor are described and copies of the notices are provided in previous Phase I/II and III submittals. Certain public notices also were required for the Phase IV RIP activities and the AUL activities.

1.2 SITE DESCRIPTION

The Former GM Assembly plant operated from the 1940s to 1994 when GM sold the approximately 90-acre Property to ADESA. As part of the sale, GM retained ownership of the Site and approximately 30 acres of wetland located to the south of the Site, as well as the responsibility for addressing certain environmental issues. An approximately 0.2 acre portion of the Site extends into adjacent ADESA property (Property). Prior to

and after the sale, GM conducted environmental investigation and remediation activities at the Site and other areas of the Property.

The Property borders the Site to the north and east, and Beaverdam Brook runs along a Riverfront and buffer zone area on the west side of the Site (east side of the Brook). The Consolidated Rail Corporation (Conrail), owned by CSX Corporation and Norfolk Southern Corporation, owns the properties to the west of Beaverdam Brook.

1.2.2 PHYSICAL SETTING

The Property can be accessed by Western Avenue located on the east border through the entrance of the east parking lot. There is security with guard patrols present on the Property 24 hours a day, seven days a week. A 6-foot (ft) high chain link perimeter fence topped with three strands of barbed wire restricts access to the Site.

Former railroad tracks and track base materials substantially surround the Site on the west, north, and south boundaries and provide both physical and hydraulic barriers to the potential migration of waste. Approximately 32,000 square feet of the Site is located within the 100 to 200 ft Riverfront Area located along the east bank of Beaverdam Brook.

There are no protected open spaces or Areas of Critical Environmental Concern (ACEC) in the area of the Site. There are no special-concern species or protected habitats within a one-mile radius of the Site.

There are a number of wetlands in the area of the Site as presented in the Interim Phase II CSA Report (CRA, April 2005) and as amended in the Notice of Intent (NOI) (CRA, July 2005) and the Final Phase II CSA Report (CRA, August 2005). Wetland delineation activities are presented in the Wetland Delineation Report submitted as the first Interim Phase II CSA Report (CRA, April 2005). There is an approximately 30-acre wetland (Wetland "A") located adjacent to the south side of the Site. As described in the Interim Phase II CSA (CRA, July 2005), the required comprehensive responses for Wetland "A" are being conducted as part of the response actions for RTN: 3-4356 (Beaverdam Brook) since these features are hydraulically connected.

Wetland areas "B" and "C" are located within the Former Landfill and total approximately 4,440 square feet (0.1 acres). Wetlands "B" and "C" have been replicated as part of ADESA's Wetland Replication project on a different portion of the Property. Additionally, Wetlands "D" and "E" located within the North Stormwater Pond (North Pond), a managed stormwater structure, were considered incidental and

non-jurisdictional wetlands. Wetlands "B", "C", "D", and "E" were addressed as part of the Site comprehensive response actions.

Stormwater runoff drains primarily by sheet flow to a historic stormwater retention pond (North Pond) located to the northeast of the Site and to a stormwater retention pond (South Pond) located to the southeast of the Site. The South Pond was permitted by ADESA to control stormwater drainage from a newly paved area located to the east of the Site.

There is some sheet flow from the Site to the south, towards Wetland "A". There are no known discharges to municipal sewers, wastewater treatment plants, or any other disposal or treatment facility.

A 3 to 4-ft diameter storm sewer transects the central portion of the Site, generally from south to north, and hydraulically connects Wetland "A" to Beaverdam Brook. It is believed that the stormwater sewer was installed to maintain the drainage connection from the wetland to the Brook that existed prior to landfilling and to prevent both on and off-Site flooding.

1.2.3 ENVIRONMENTAL SETTING

The surface topography in the area of the Former Landfill is relatively flat. There was some larger vegetative growth in the central area of Former Landfill, in the vicinity of a storm sewer manhole. Larger vegetation is also present along the western boundary of the Site and in Wetland "A".

The subsurface conditions in perimeter areas of the Former Landfill generally consists of from 4 to 14 ft of granular fill comprised of fine to coarse sand with varying amounts of silt, gravel and clay. The underlying waste materials vary in thickness from 0 ft to approximately 20 ft. A peat layer approximately 2 ft thick underlies a portion of the waste materials, consistent with the historical presence of water in a low-lying area. A medium dense sand and silt deposit underlies most of the waste material to a thickness ranging from approximately 15 to 25 ft below the peat layer. Bedrock underlies the sand and silt deposit and consists of an undulating surface covered with varying thicknesses of glacial till. Auger refusals were encountered at 3 ft (northwest end) and 13.5 ft (southwest end) below ground surface (bgs) during historical drilling activities. Bedrock coring was not conducted during drilling; however, the refusals encountered during drilling are likely indicative of the top of bedrock. Bedrock outcrops are present to the northwest of the Site.

Shallow groundwater was encountered at approximate depths ranging from 3.4 to 14 ft bgs depending on location and seasonal fluctuations. Shallow groundwater generally flows to the east on the west side, and to the west on the east side of the Former Landfill towards the stormwater sewer that bisects the Site. Groundwater in the vicinity of the Site is not located in a Drinking Water used Source Area and the groundwater classification is GW-3.

A component of groundwater also flows to the south to Wetland "A". The shallow groundwater flow velocity is approximately 0.4 ft/day.

1.2.4 CURRENT AND FUTURE LAND USE

There were no historical buildings and there are no current buildings at the Site. Land uses surrounding the Property are primarily industrial and commercial with some residential use. The Site is currently paved and used by ADESA for temporary parking of vehicles to be auctioned. The Site will continue to be used for industrial/commercial purposes in the foreseeable future. The development and subsequent use of the Site for residential purposes is not currently planned for the foreseeable future. The Site also is not in a Current or Potential Drinking Water Source Area and municipal water supply is available.

1.3 NATURE AND EXTENT OF CONTAMINATION

Two railroad spurs bound the south, west and north ends of the Site and were installed when the Former GM Assembly Plant was constructed in the 1940s. Between 1947 and 1970, waste material from the Former GM Assembly Plant was placed into a depression in the ground between two rail spurs ranging from approximately 12 ft deep at the eastern end to level with the ground surface at the western end. Between 1947 and 1964, waste materials deposited in the Former Landfill were reported to be burned. The use of the former landfill for waste disposal was discontinued in 1970. In approximately 1990, the Former Landfill was capped with 3 to 5 ft of an unspecified low permeability soil. In 1992, the Former Landfill was closed and covered with low permeability soil.

Historical investigations reported ash fill (bluish silt-like material, glass, metal, and soil) and debris fill (wood, asphalt, concrete, and soil) as being generally encountered in the western and eastern parts of the Site, respectively. Based on previous environmental investigations, the nature of the waste at the Site is ash fill, and debris fill over an

approximately 5.0 acre area to a depth of up to 20 ft. Approximately 170,000 CY of soil, fill, and solid waste containing oil and/or hazardous material (OHM) are present in the Former Landfill, of which approximately one-half of the volume is below the groundwater table. The nature of the waste materials were solid waste that was typical of wastes generated from automotive assembly manufacturing operations and related activities. The types of waste materials included: ash fill; fractured glass; fractured brick; refractory brick; asphalt; fractured railroad ties; corroded, rusty, crushed 55-gallon drums; fractured concrete slab; fractured 5-gallon pails; wood; plastic bottles; plastic bags; various paint waste; railroad slag; metal wires and pipes; cloth; metal drum lids; rebar; car parts; ceramics; and newspaper. The waste and debris encountered are at locations and of types consistent with knowledge of historic waste disposal activities. The waste and debris are readily apparent in the field, generally as dark brown, grey or black material in comparison to light to medium brown or light grey native soil and fill adjacent to the waste.

Detailed horizontal and vertical delineation and characterization evaluations of OHM associated with the Site are provided in the Interim Phase II CSA (CRA, April 2005), Interim Phase II CSA (CRA, July 2005) and the Final Phase II CSA (CRA, August 2005) and are briefly summarized herein.

Soil

Chemical analysis indicated that soils below the existing 12-inch cover material (0-3 feet bgs) have concentrations of lead and benzo(a)pyrene at concentrations which exceed S3/GW 3 and/or S-2/GW-3 numerical standards and lead, aluminum, and iron exceed Upper Concentration Limits (UCLs). In subsurface soils, chemical analysis indicated that antimony, arsenic, benzo(a)pyrene, chrysene, lead, total chromium, and zinc were present at concentrations above MCP S3/GW 3 and/or S-2/GW-3 numerical standards and lead exceeded the UCLs. The Phase II CSA activities concluded that surface and subsurface soil within the horizontal and vertical extent of the Former Landfill is impacted with OHM. There were detections of PAHs and petroleum hydrocarbons unrelated to the Site in soil samples collected to the south and west of the Site on ADESA owned property.

Sediment

Chemical analysis indicated that sediment samples from the stormwater sewer have polycyclic aromatic hydrocarbons (PAHs) (benzo(a)anthracene, benzo(a)pyrene, fluoranthene, fluorene, phenanthrene, and pyrene), arsenic, lead, and zinc at concentrations exceeding the (MCP) freshwater sediment screening benchmark values.

The Phase II CSA activities concluded that surface and subsurface soil within the horizontal and vertical extent of the Former Landfill is impacted with OHM.

Groundwater

Xylene was detected in one monitoring well in the one groundwater monitoring round conducted in 2004 at a concentration exceeding the GW-3 numerical standard. In the 2005 monitoring round, groundwater quality monitoring did not indicate any exceedances of GW-3 numerical standards. No exceedances of UCLs were observed based on historic and 2004/2005 groundwater quality monitoring rounds.

Surface Water

Surface water/stormwater analyses indicated that concentrations of total and dissolved aluminum, total and dissolved copper, total and dissolved iron, lead, and zinc exceeded the Massachusetts Surface Water Standards for protection of aquatic life.

The surface soil/sediment sample analyses for the samples collected in 2005 in the off-Site north stormwater retention pond (North Pond) indicated that metals and PAHs were present at concentrations exceeding S-2/GW-3 and S-3/GW-3 numerical standards.

It is noted that much of the surficial and subsurface soil, sediment, groundwater and surface water analytical data had infrequent detections of pesticides and PCBs at low or estimated concentrations.

There were detections of PAHs and petroleum hydrocarbons unrelated to the Site in soil samples collected to the south and west of the Site on ADESA owned property.

1.4 RISK CHARACTERIZATION

The Human Health Risk Assessment (HHRA) and the Ecological (ERA) were presented in the Final Phase II CSA Report (CRA, August 2005).

1.4.1 HHRA

A Method 3 HHRA was completed in accordance with MCP 310 CMR 40.0993 to characterize the risk of harm to health, safety and public welfare associated with

potential exposures to OHM present in soil, groundwater, sediment, and surface water associated with the Site. Zero to three feet was used for exposures associated with surface soil and zero to fifteen feet for exposures associated with excavation scenarios such as utility installation and repair and building construction. Air was also considered a potentially impacted medium based on the soil and groundwater impacts, and the subsequent potential for vapor release into ambient air.

The results of the HHRA determined that:

- a condition of No Significant Risk (NSR) to human health was not achieved for the Site since:
 - there were no applicable or suitably analogous public health standards (GW-3) for comparisons of groundwater exposure point concentrations,
 - there were no applicable or suitably analogous health standards for comparisons of soil, surface water, or sediment exposure point concentrations (EPC), and
 - the cumulative receptor non-cancer risk was greater than the cumulative receptor non-cancer risk limit for the trespassers exposure to surface soils, sediment, and surface water, and the construction workers exposure to soils and groundwater during potential future construction activities;
- a condition of NSR to Public Welfare does currently and for the foreseeable future exists at the Site; and
- a condition of NSR of Harm to Safety does currently and for the foreseeable future exists at the Site.

The reasonable maximum exposure (RME) cumulative hazard index (HI) of 1.1 for the trespasser resulted in a condition of Significant Risk for the Site and is due primarily to exposure to metals (i.e., antimony, arsenic, manganese, and nickel) in surface soil, sediment, and surface water at the Site.

The RME cumulative HI of 2.7 for the future construction worker exposure also resulted in no condition of Significant Risk for the Site. This cumulative HI of 2.7 is due primarily to exposure to metals (i.e., cadmium, lead, manganese, and zinc) in soil and secondarily from surface water, sediment, and groundwater.

The other current and future receptors (industrial/commercial worker and utility worker) had cumulative non-cancer risk limits (HIs) below the cumulative HI of 1.0 and had cumulative cancer risk values below the excess lifetime cancer risk of 10^{-5} for exposure to impacted soil, sediment, surface water, and groundwater.

1.4.2 ERA

An ERA or Stage I Environmental Screening was conducted to determine the extent to which Site-related releases of OHM pose an ecological risk to receptors in soil, sediment and groundwater/surface associated with the Site and adjacent areas potentially affected by OHM releases, migration, and exposure. The ERA incorporated the results from the wetland delineation, habitat assessment, evidence of harm, and effects-based screening.

The results of the ERA were presented in the Final Phase II CSA Report (CRA, August 2005). It was determined that:

- habitat is extremely limited at the Site and of low environmental quality in the associated wetlands and North Pond;
- extensive industrial, commercial, and urban development in the vicinity of the Property has resulted in severe habitat fragmentation;
- wildlife corridors are limited to small birds and mammals common to urban environments;
- no rare plants or animals are known to occur in the vicinity of the Site or Property;
- there are no ACECs or Protected Open Spaces in the vicinity of the Site; and
- a condition of NSR can be assumed to exist for the Site and the North Pond.

It was also determined that a Stage II ERA is required for the sediment and surface water associated with Wetland "A" located to the south of the Site. OHM present in media associated with Wetland "A" will be addressed as part of the comprehensive response action for the Beaverdam Brook Site (RTN: 3-4356). However, OHM present in sediment and surface water in the storm sewer, which transects the Site and potential OHM migration/infiltration into the storm sewer from Site soil and groundwater, was addressed as part of the Site comprehensive response actions.

The Phase III RAP (CRA, September 2005) evaluated remedial alternatives and selected an alternative that achieved a condition of No Significant Risk, including the potentially uncontrolled risk associated with migration/infiltration of OHM impacted media to the storm sewer and migration in the sewer.

1.5 REMEDIAL RESPONSE ACTION

The RAO Statement has been prepared in support of the permanent solution/Class A-4 RAO achieved for the Site. The identification and detailed evaluation of RAO alternatives for the Site in the Phase III RAP (CRA, September 2005) selected the appropriate remedial action alternative as an engineered barrier and other remedial components. The engineering design, construction plans and specifications, and AUL/O&M requirements for the preferred engineered barrier alternative were provided in the Phase IV RIP Report (CRA, October 2005). This As-Built Construction Report included herein, documents the completion of the remedial construction activities, tests and measurements, and provides the as-recorded or as-built engineering drawings of the remedial construction activities completed as part of the comprehensive response actions as well as the AUL.

In accordance with 310 CMR 40.1066, there are no fees required to be submitted with this RAO Statement and fees will no longer be assessed for the Site since active O&M of the remedial action is not required.

1.6 NOTICE OF AUL

An AUL is required for the Site since OHM remains at the Site and the risk characterization was used to support the Class A-4 RAO. Two Notices of AULs have been implemented for the Site as described in Section 9.0. The RAO is based on restrictions and limitations of Site activities provided for by the Notices of AULs and associated O&M Plan that require maintaining the Permanent Solution to provide ongoing achievement of a level of NSR. Copies of the AULs are provided as Appendix C.

The area will be used for temporary parking of vehicles by ADESA.

1.7 UNCONTROLLED SOURCES

OHM impacted surface water and sediment present in the storm sewer transecting the Site were addressed by video inspection, pressure cleaning, double-epoxy lining of the sewer pipe, and abandonment/repair of catchbasins and manholes. Potential future migration/infiltration of OHM impacted media within the Former Landfill into the sewer were also addressed by the sewer rehabilitation activities. The details of the

sewer rehabilitation activities were provided in the Phase IV RIP Report (CRA, October 2005) and the construction activities documented in this report.

1.8 NO SIGNIFICANT RISK

The achievement of NSR has been demonstrated by the construction of the engineered barrier which prevents direct contact of receptors with OHM impacted waste, soil, and groundwater. The removal of OHM impacted surface water and sediment from the storm sewer and rehabilitation to prevent migration/infiltration also demonstrates and supports the conclusion that NSR has been achieved. The implementation of the AUL with its restrictions and allowable uses and the associated O&M Plan also support the ongoing achievement of NSR in support of the Class A-4 RAO.

1.9 LSP OPINION

The LSP's opinion is that the implementation of the comprehensive response action for the Site, including the Final Phase II CSA (CRA, August 2005), Phase III RAP (CRA, September 2005), Phase IV RIP (CRA, October 2005), engineered barrier, AUL and As-Built Construction Report meet the applicable requirements of a Class A-4 RAO. The long-term maintenance and monitoring of the engineered barrier and other remedial components as provided for by the O&M Plan and the restriction of allowable uses required by the AUL will provide for ongoing achievement of No Significant Risk and maintaining the Class A-4 RAO. The certification of completion of the MADEP/FCC October 2004 and October 2005 Orders of Condition for investigation and remediation activities, respectively also support the achievement of a Class A-4 RAO.

1.10 ACHIEVEMENT OF UCLS

The demonstration that the achievement of remedial actions to decrease the concentrations of COPCs in the soil below the UCLs, located at a depth greater than 15 ft from the ground surface or in the area beneath the engineered barrier, is not feasible as provided in the Phase III RAP (CRA, September 2005).

1.11 DATA USABILITY ASSESSMENT AND REPRESENTATIVENESS

The Data Usability Assessment (DUA) has been prepared to consolidate the information that was generated and evaluated throughout the Site comprehensive response action process to support this RAO statement. The DUA has been prepared based on the "Draft Interim Data Usability Guidance, May 8, 2006", and revisions. The objective of the DUA is to support the comprehensive response action with the following RAO Statement requirements for a Class A-4 RAO:

- *delineation of disposal site boundaries;*
- *elimination/control of OHM source(s); and*
- *achievement of No Significant Risk.*

An Analytical Data Usability Assessment (ADUA), a Field Quality Control Data Usability Assessment (FQCDDUA), an evaluation of the Data Quality Objectives (DQO) and a Representativeness Evaluation are included in the DUA and are provided below.

1.11.1 ANALYTICAL DATA USABILITY ASSESSMENT

The ADUA evaluates the scientific validity and defensibility and the precision, accuracy, and sensitivity of the data collected to support the Class A-4 RAO. All of the analytical data was analyzed in accordance with the Quality Assurance Project Plan (QAPP) provided in the Phase II CSA Work Plan (CRA, September 2004). The QAPP addressed the quality assurance/quality control (QA/QC) elements consistent with USEPA and MADEP guidance, and in particular the:

- "The Compendium of Quality Assurance and Quality Control Requirements and Performances Standards for Selected Analytical Methods Used in Support Response Actions for MCP" (MADEP, BWSC, WSC-02-320); and
- "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations" (USEPA, EPA QA/R-5, Interim Final, November 1999).

The QAPP presented the organization, objectives, planned activities, and specific QA/QC procedures associated with the Phase II CSA activities for the Site. Protocols for sample collection, sample handling and storage, chain-of-custody procedures, and laboratory and field analyses were detailed.

Independent data assessment and validation memorandums for the 2004 and 2005 Phase II investigation activities are provided in the Interim Phase II CSA Report (CRA, July 2005). The data assessment and validation evaluations assessed the uncertainty associated with the analytical quality control and the accuracy and precision of the analytical data.

All of the Phase II CSA analytical data collected were CAM Compliant and therefore are considered to be data with "*Presumptive Certainty*" indicating that they are "*data for which the precision, accuracy, and sensitivity have been adequately determined.*"

With respect to historical (pre-Phase II CSA 2004/2005) analytical data, certain QA/QC information was available on which to independently access and validate the data. However, for the purposes of completeness with respect to Site characterization, the historical data were used since the data provided additional Site characterization information and were used, in part, for the development of the Phase II CSA Scope of Work. These data also were consistent with the types and concentrations of OHM determined from Phase II CSA activities, and this also support their use.

1.11.2 FIELD QUALITY CONTROL DATA USABILITY ASSESSMENT

The FQCDUA evaluates the integrity of the data collection in the field and includes an assessment of the sampling procedures and sample manipulation in the field. Sampling procedures were detailed in the Sampling and Analysis Plan (SAP) and QAPP as provided in the Phase II CSA Work Plan (CRA, September 2004) and the Remedial Construction Quality Assurance Plan as provided in Phase IV RIP Report (CRA, October 2005). These sampling and QA/QC plans included specifications on the field sampling procedures, field equipment standard operating procedures (SOPs) and calibration, and sample containers and preservation, holding times and sample preservation and field QC sample collection [equipment/trip blanks, field duplicates, field matrix spike/matrix spike duplicates (MS/MSD) sample collection].

All of the field samples were collected in accordance with the Field Sampling and Analysis Plan (SAP) as provided in the Phase II CSA Work Plan (CRA, September 2004). The SAP outlined the protocols and standard operating procedures (SOP) during the following field activities:

- test pit installation and sampling;
- overburden monitoring well installations;

- monitoring well development;
- single well response testing at selected monitoring well locations;
- groundwater sampling;
- sewer survey and sampling, including manholes and catchbasins; and
- surface water and sediment sampling.

The field data were reviewed as collected and evaluated for compliance with the SAP and QAPP, as well as considered in the assessment of the analytical data collected. Based on these evaluations, the field data including the FQC data were determined to be representative, valid and usable for the purposes of the comprehensive response action.

1.11.3 DATA QUALITY OBJECTIVES

The Site DQOs were identified and the analytical methods used were selected in the Phase II CSA Work Plan (CRA, September 2004) to determine the extent of OHM and Exposure Point Concentrations. All of the data collected during the comprehensive response actions for the Site were compared to the DQOs.

A CRA chemist in accordance with CAM/USEPA SW 846 data validation guidelines completed independent analytical data assessment and validations. The chemist prepared data assessment and validation memoranda to document the data assessment and validation procedures and protocols. Data assessment and validation memoranda for the 2004 and 2005 investigation activities are provided in the Interim Phase II CSA Report (CRA, July 2005). The data validation memorandum evaluated various aspects of the laboratory analysis and qualified the data if appropriate. In general the reporting limits were sensitive enough to meet the DQOs.

1.11.4 REPRESENTATIVENESS EVALUATION

The objective of the representativeness evaluation is to determine whether the analytical data and other data and information, collected over the course of the comprehensive response actions, combined with the Site CSM accurately characterizes the Site and supports the Class A-4 RAO.

A CSM for the Site is provided in Section 2.0 and describes the Site's physical and environmental setting, nature and extent of contamination, the fate and transport of COPCs within the Site system and the risk to human health, public welfare, safety and

the environment. This As-Built Construction Report provides the details of the comprehensive response action, including the engineered barrier.

Over the course of the comprehensive response action, the work plans for investigation activities were presented and technical evaluations conducted as provided in the following reports:

- Phase II CSA Work Plan (CRA, September 2004);
- Phase II CSA Work Plan Addendum Number 1 (CRA, March 2005); and
- Phase II CSA Work Plan Addendum Number 2 (CRA, April 2005).

The results of the investigation activities were presented in the following reports:

- Interim Phase II CSA (CRA, April 2005);
- Interim Phase II CSA Report and Tier 1C Permit Application (CRA, July 2005); and
- Final Phase II CSA (CRA, August 2005).

Investigation activities included borehole drilling, test pit installation, groundwater monitoring well installation and concurrent collection of sample media for field and chemical analysis.

For soils and solid matrices, field parameters included visual observations, olfactory identification, and VOC screening using handheld monitoring equipment. For aqueous samples (surface water and groundwater), at a minimum, the following parameters were measured with field testing equipment: pH, specific conductance, and temperature. The low-flow purging techniques utilized for groundwater sampling, included additional field parameters including turbidity, dissolved oxygen, (DO), and oxidation/reduction potential (ORP). Since the field screening data was collected concurrent to the collection of sample for chemical analyses, it was used as a compliment to the chemical laboratory analysis.

The sample locations were selected to evaluate the extent of refuse and contamination at the Site and to determine the exposure point concentrations to support Method 3 risk assessment. As shown on the cross-sections (Figures 2.1 through 2.4) and data evaluation the horizontal and vertical extent of the historical waste materials were adequately determined. Additionally, the groundwater, surface water, and sediment information and data were evaluated and determined to be essentially as expected for the Site conditions based on the knowledge of current and historic Site conditions and

the waste and soil information and data. The waste characterization information and data collected during the comprehensive response actions for vegetative waste, railroad ties, non-hazardous wastewater, and investigation-derived waste also were evaluated and were consistent with expected Site conditions and support the determination of data representativeness.

Since the data evaluation included the use of historical data as well as recently collected data from multiple sampling rounds, it is determined that the Phase II Site characterization was adequate and representative of the Site conditions and extent of OHM with respect to potential temporal changes, migration and seasonal variability.

Critical samples include the samples collected from the Site where the chemical concentrations exceeded the UCLs as described in the CSM (Section 2.0). To justify the Class A-4 RAO, the sample where the concentration exceeded the UCL from a sample collected greater than 15 ft bgs is considered a critical sample. Field verification of the extent of waste/OHM also was critical in the evaluation of alternative and selection/implementation of the remedy.

The Phase II CSA Work Plan (CRA, September 2004) identified and addressed data gaps within the historical investigations. The data collected as part of the 2004 and 2005 Phase II CSA were evaluated and determined to adequately address the data gaps.

There was minimal uncertainty associated with the samples collected as part of comprehensive response action activities, as presented in the Phase II CSA reports. The historical data also were consistent with more recent Phase II CSA data.

The results of this representativeness assessment conclude that the data collected throughout the comprehensive response action were representative of the Site conditions and supports the Class A-4 RAO.

APPENDIX C

NOTICES OF ACTIVITY AND USE LIMITATIONS

C-1: GM REGISTERED AUL AND BWSC FORMS 113 AND 113A

C-2: ADESA REGISTERED AUL AND BWSC FORMS 113 AND 113A

C-3: REGISTERED PLAN AND RECIEPT OF PAYMENT

AUL Forms

310 CMR 40.1099



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Return to
James F. HARTNETT
General Motors Corp
Worldwide Facilities Group
1 General Motors Dr., STE 2
Syracuse, NY 13206-1127

Form 1075

NOTICE OF ACTIVITY AND USE LIMITATION

M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Name: Former LandfillDEP Release Tracking No.(s): RTN 3-3939

This Notice of Activity and Use Limitation ("Notice") is made as of this 15th day of December, 2006, by General Motors Corporation, a Delaware corporation, 1 General Motors Drive, STE 2, Syracuse, New York, 13206-1127 together with his/her/its/their successors and assigns (collectively "Owner").

WITNESSETH:

WHEREAS, General Motors Corporation (Name of Owner(s)), is the owner(s) in fee simple of that certain parcel(s) of land located in Framingham (Town/City), Middlesex County, Massachusetts with the buildings and improvements thereon, pursuant to a deed recorded with the Middlesex South Registry of Deeds in Book 6911, Page 572;

WHEREAS, said parcel(s) of land, which is more particularly bounded and described in Exhibit A, attached hereto and made a part hereof ("Property") is subject to this Notice of Activity and Use Limitation. The Property is shown on a plan recorded in the Middlesex South County Registry of Deeds in Plan Book 25074, Plan 1270;

WHEREAS, a portion of the Property ("Portion of the Property") is subject to this Notice of Activity and Use Limitation. The Portion of the Property is more particularly bounded and described in Exhibit A-1, attached hereto and made a part hereof. The Portion of the Property is shown on a plan recorded with the Middlesex South Registry of Deeds in Plan Book 25074, Plan 1270, and/or on a sketch plan attached hereto and filed herewith for registration;

WHEREAS, the Portion of the Property comprises all a disposal site as the result of a release of oil and/or hazardous material. Exhibit B is a sketch plan showing the relationship of the Portion of the Property subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site existing within the limits of the Property and to the extent such boundaries have been established. Exhibit B is attached hereto and made a part hereof; and

The language in these forms are part of promulgated regulations and cannot be modified in any way unless so noted (by brackets []) in the form itself.

3/24/06 (Effective 4/3/06)

Western Avenue, Framingham, MA

WHEREAS, one or more response actions have been selected for the Disposal Site in accordance with M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil and/or groundwater and/or (b) the restriction of certain activities occurring in, on, through, over or under the Portion of the Property. The basis for such restrictions is set forth in an Activity and Use Limitation Opinion ("AUL Opinion"), dated December 8, 2006, (which is attached hereto as Exhibit C and made a part hereof);

NOW, THEREFORE, notice is hereby given that the activity and use limitations set forth in said AUL Opinion are as follows:

1. Activities and Uses Consistent with the AUL Opinion. The AUL Opinion provides that a condition of No Significant Risk to health, safety, public welfare or the environment exists for any foreseeable period of time (pursuant to 310 CMR 40.0000) so long as any of the following activities and uses occur on the Property:

(i) vehicular parking and vehicular traffic which do not compromise the structural integrity of the asphalt engineered barrier and/or do not disturb contaminated soil located beneath the asphalt barrier. To meet this requirement, no more than 3 trucks with a combined maximum gross vehicle weight (GVW) of 40 tons can use the parking lot in any 24-hour period and no truck with an individual GVW exceeding 40 tons can use the parking lot;

(ii) 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 Health and Safety Plan 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;

(iii) Such other activities or uses which, in the Opinion of an LSP, shall present no greater risk of harm to health, safety, public welfare or the environment than the activities and uses set forth in this Paragraph; and

(iv) Such other activities and uses not identified in Paragraph 2 as being Activities and Uses Inconsistent with the AUL.

2. Activities and Uses Inconsistent with the AUL Opinion. Activities and uses which are inconsistent with the objectives of this Notice of Activity and Use Limitation, and which, if implemented at the Portion of the Property, may result in a significant risk of harm to health, safety, public welfare or the environment or in a substantial hazard, are as follows:

(i) use of the portion of the property as a residence, school (except for adult education), daycare, nursery, recreational area, and/or any other use at which a child's presence is likely;

(ii) any activity including, but not limited to excavation and removal of the soil and asphalt barrier and any activity associated with the lined storm sewer 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

The language in these forms are part of promulgated regulations and cannot be modified in any way unless so noted (by brackets []) in the form itself.

3/24/06 (Effective 4/3/06)

Management Plan and a Health and Safety Plan; and

(iii) any activity which is likely to disturb contaminated soil/waste located beneath the engineered barrier for a period of time greater than three months, 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.

3. Obligations and Conditions Set Forth in the AUL Opinion. If applicable, obligations and/or conditions to be undertaken and/or maintained at the Portion of the Property to maintain a condition of No Significant Risk as set forth in the AUL Opinion shall include the following:

(i) continued Operation, Maintenance and Monitoring (OMM) of the Site remedy must be conducted in accordance with the Final OMM Plan (Appendix to the As-Built Construction Report and Response Action Outcome Statement, Conestoga-Rovers & Associates, December 2006);

(ii) 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 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

(iii) contaminated soil/waste located below the engineered barrier must remain and may not be relocated, unless such activity is first evaluated by an LSP who renders an Opinion which states that such activity poses no greater risk of harm to health, safety, public welfare or the environment.

4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the Portion of the Property which may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by an LSP who shall render an Opinion, in accordance with 310 CMR 40.1080 *et seq.*, as to whether the proposed changes will (select one) present a significant risk of harm to health, safety, public welfare or the environment. Any and all requirements set forth in the Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.

5. Violation of a Response Action Outcome. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by an LSP in accordance with 310 CMR 40.1080 *et seq.*, and without additional response actions, if necessary, to achieve or maintain a condition of No Significant Risk or to eliminate substantial hazards.

If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by an LSP in accordance with 310 CMR 40.1080 *et seq.*, the owner or operator of the Portion of the Property subject to this Notice at the time that the activities, uses and/or exposures change, shall comply with the requirements set forth in 310 CMR 40.0020.

6. Incorporation Into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Property or a portion thereof is conveyed.

AUL Forms

310 CMR 40.1099

Owner hereby authorizes and consents to the filing and recordation and/or registration of this Notice, said Notice to become effective when executed under seal by the undersigned LSP, and recorded and/or registered with the appropriate Registry(ies) of Deeds and/or Land Registration Office(s).

WITNESS the execution hereof under seal this 15TH day of DECEMBER 2006.

William J. McFarland
 William J. McFarland, Director
 Remediation Services
 General Motors Corporation

STATE OF MICHIGAN

Pontiac, ss

12-15, 2006

On this 15 day of December, 2006, before me, the undersigned notary public, personally appeared William J. McFarland (name of document signer), proved to me through satisfactory evidence of identification, which were person known to me, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)

(as _____ for _____, a corporation)

(as attorney in fact for _____, the principal)

(as _____ for _____, (a) (the) _____)

Sandra Kay Ludd official signature and seal of notary

SANDRA KAY LUDD
 Notary Public, State of Michigan
 County of Oakland
 My Commission Expires Apr. 23, 2013
 Acting in the County of Oakland

AUL Forms

310 CMR 40.1099

The undersigned LSP hereby certifies that he executed the aforesaid Activity and Use Limitation Opinion attached hereto as Exhibit C and made a part hereof and that in his Opinion this Notice of Activity and Use Limitation is consistent with the terms set forth in said Activity and Use Limitation Opinion.

Date: Jan 5, 2007

Frederick K. Taylor
Frederick K. Taylor, LSP

PROVINCE OF ONTARIO

Waterloo, ON, ssJan 5, 2007

On this 5 day of Jan, 2007, before me, the undersigned notary public, personally appeared Frederick Taylor (name of document signer), proved to me through satisfactory evidence of identification, which were personally known to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)

(as _____ for _____, a corporation)

(as attorney in fact for _____, the principal)

(as LSP for the title, (a) (the) _____)

(official signature and seal of notary)

Upon recording, return to:

James F. Hartnett
General Motors Corporation
Worldwide Facilities Group
1 General Motors Drive, STE 2
Syracuse, New York 13206-1127

Diana Winifred Fedy, Notary Public. It is effective only in the Regional Municipality of Waterloo, and only while you are working for Conestoga-Rovers & Associates Limited and is limited to the attestation of instruments and the taking of affidavits in connection with the business of that company and its associated companies. Expires July 12, 2007.

The language in these forms are part of promulgated regulations and cannot be modified in any way unless so noted (by brackets []) in the form itself.

3/24/06 (Effective 4/3/06)

EXHIBIT A



25074 235

EXHIBIT "C"

Legal Description

Lot 2

A certain parcel of land located off Western Avenue in the Town of Framingham, County of Middlesex, Commonwealth of Massachusetts and shown on a plan entitled "Plan of Land in Framingham and Sherborn, MA; Prepared for General Motors Corporation by Schofield Brothers of New England, Inc.; dated August 31, 1994; Scale 1" = 150' "; Revised September 7, 1994 and September 16, 1994. Said parcel of land being bounded and described as follows:

Beginning at a point at the northwest corner of the parcel near the southwesterly corner of the General Motors Assembly Plant; thence

S 64° 42' 49" E a distance of 567.50 feet to a point; thence

S 25° 14' 29" W a distance of 220.00 feet to a point; thence

S 03° 54' 40" E a distance of 78.11 feet to a point; thence

N 64° 27' 03" W a distance of 371.47 feet to a point of curvature; thence

Southwesterly by a curve to the left having a radius of 480.00 feet, an arc length of 786.71 feet and a central angle 93° 54' 26" to a point; thence

N 21° 38' 31" E a distance of 309.81 feet to a point of curvature which point is not tangent; thence

Northeasterly by a curve to the right having a radius of 480.00 feet, an arc length of 592.88 feet, a central angle of 70° 46' 11", a chord bearing of N 53° 56' 44" E and a chord distance of 555.90 feet to the point of beginning.

The above described parcel of land contains an area of 5.084± acres more or less and is shown as Lot 2 on the above referenced plan.

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EXHIBIT A-1

22447

**Parcel Description
Activity and Use Limitation Easement 1
(A.U.L. 1)**

A certain parcel of land located on the westerly side of Western Avenue in the Town of Framingham, County of Middlesex, Commonwealth of Massachusetts, being shown as A.U.L. 1 on a plan entitled "Activity and Use Limitation Plan in Framingham, Massachusetts, (Middlesex County), Prepared for: Conestoga-Rovers Associates, Scale: 1" = 40' Date: December 6, 2006, Schofield Brothers of New England, Inc." said parcel of land being bounded and described as follows:

Commencing at the northwesterly side of said parcel on the westerly side of the Lot 2 at land of now or formerly Asset Holdings III LP said point being 81.44 feet southwest of a steel survey marker set (SSM(S)), said point being the POINT OF BEGINNING; thence

N 30° 40' 11" E a distance of two hundred forty three and eleven hundredths feet (243.11') to a point; thence

N 32° 24' 47" E a distance of fifty-seven and two hundredths feet (57.02') to a point at a curve; thence

Northeasterly along a curve to the right having a radius of three hundred eighteen and no hundredths feet (318.00'), a length of fifty and seventeen hundredths feet (50.17') and a delta angle of 09° 02' 20" to a point on a curve; thence

Northeasterly along a curve said curve being the northwesterly property line of Lot 2 at land of now or formerly Asset Holdings III LP as shown on said plan having a radius of four hundred eighty and no hundredths feet (480.00') a length of three hundred eighteen and ninety-five hundredths feet (318.95') and a delta angle of 38° 04' 18" to a magnetic nail set (MAG(S)); thence

- S 64° 42' 49" E a distance of three hundred forty-eight and eighty-eight hundredths feet (348.88') by land of said Asset Holdings III LP and Lot 2 to a point; thence
- S 40° 28' 30" E a distance of sixty three and fourteen hundredths feet (63.14') to a point; thence
- S 36° 28' 14" E a distance of fifty five and fifty-three hundredths feet (55.53') to a point, said point being distant to a magnetic nail set at the northeast corner of Lot 2 at land of said Asset Holdings III LP, S 89° 40' 32" E a distance of one hundred twenty three and sixty-eight hundredths feet (123.68'); thence
- S 31° 07' 23" E a distance of eighty three and fifty-nine hundredths feet (83.59') to a point; thence
- S 20° 41' 07" W a distance of one hundred ninety and six hundredths feet (190.06') to a point, said point being distant to a steel survey marker found at the southeast corner of Lot 2 at land of said Asset Holdings III LP, a distance of sixty five and fifty-three hundredths feet (65.53'); thence
- N 64° 27' 03" W a distance of three hundred five and ninety-four hundredths feet (305.94') along the southerly property line of said Lot 2 to a point at a curve; thence
- Southwesterly along a curve to the left having a radius of four hundred eighty and no hundredths feet (480.00'), a length of six hundred eight and seventy-four hundredths feet (608.74') and a delta angle of 72° 39' 46" along the southerly property line of said Lot 2 to a point; thence
- N 47° 18' 15" W a distance of thirty four and ninety-five hundredths feet (34.95') to a point at land of said Asset Holdings III LP, said point being the southwesterly property line of said Lot 2; thence
- N 21° 38' 31" E a distance of forty-one and ninety hundredths feet (41.90') by Lot 2 to the point of beginning.

The above described parcel of land contains an area of 237,890 square feet (5.46 acres), more or less, according to said plan.

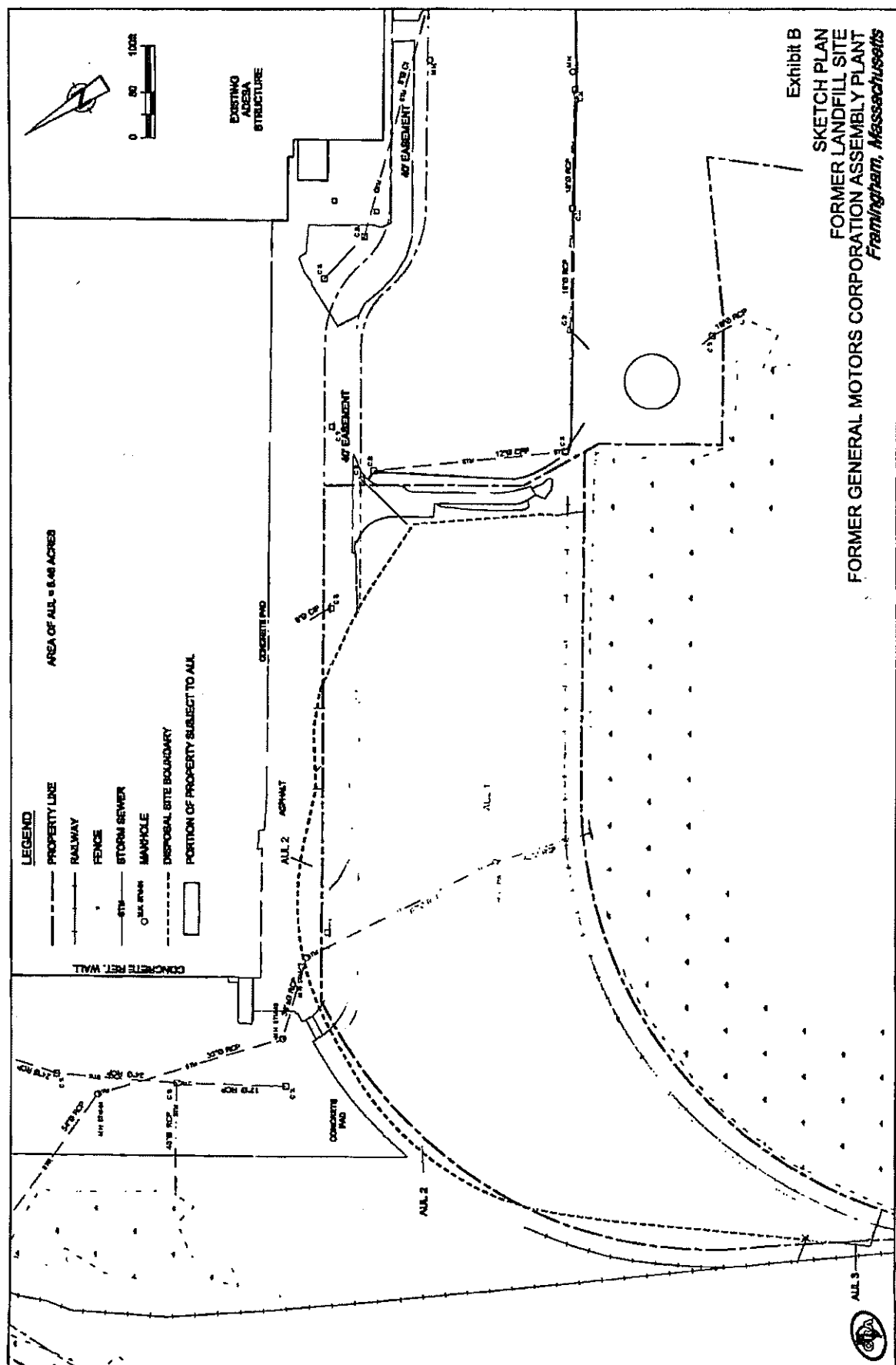


EXHIBIT C**ACTIVITY AND USE LIMITATION OPINION**

In accordance with the requirements of 310 CMR 40.1074, this Activity and Use Limitation (AUL) Opinion has been prepared to support a Notice of AUL for a portion of a parcel of land owned by General Motors Corporation (GM), located at 63 Western Avenue, Framingham, Middlesex County, Massachusetts, 01702-7403 (Site).

Site History

The Site consists of an approximately 5-acre area located on the southwest side of the property. Between 1947 and 1970, waste material from the former GM assembly plant was placed into a depression in the ground between two rail spurs up to approximately 25 feet (ft) in maximum depth and typically 15 ft in depth consistent with accepted business practices. Between 1947 and 1964, waste materials deposited at the Site were reportedly burned as part of disposal activities. Waste disposal activities were discontinued in 1970. In accordance with the Massachusetts Solid Waste Regulations and guidance, former landfill sites that were not used on or after 1971 are adequately regulated if they are investigated and remediated in accordance with the Massachusetts Contingency Plan (MCP). In 1990, the Site was graded with fill and covered with approximately one foot of granular/fill material. In 1994, ASSET Holdings III LP purchased a portion of the GM property where the disposal Site is located.

Massachusetts Contingency Plan Comprehensive Response Action

The historical and existing Site conditions, based on extensive environmental investigations including waste material types and oil and/or hazardous materials (OHM) types and levels were described in the Interim and Final Phase II Comprehensive Site Assessment (CSA) Reports by Conestoga-Rovers & Associates (CRA), that were submitted to the Massachusetts Department of Environmental Protection (MA DEP) in July 2005 and August 2005, respectively. The Phase II CSA Report included a Method 3 Risk Characterization (both human health and ecological risk assessments). The primary potential threats to human health and the

environment are direct exposure to surficial waste and contaminated soils and potential infiltration to stormwater in the stormwater sewer, which transects the Site. Contaminants of concern in soil/waste include polynuclear aromatic hydrocarbons (PAHs), antimony, cadmium, lead, manganese, nickel, and zinc. Historical and two current rounds of groundwater monitoring data indicate that there are no impacts to groundwater at or in the vicinity of the Site. The wetlands adjacent to the Site are addressed as part of the Comprehensive Response Action for a separate disposal site (RTN: 3-4356) Beaverdam Brook.

Reason for Activity and Use Limitation

Based on the Method 3 Risk Characterization, a condition of No Significant Risk was not achieved for a trespasser's cumulative exposure to surface soils, sediment, and surface water, and a construction worker's exposure to soils and groundwater during potential future construction activities. Exposure routes for the trespasser included ingestion and dermal contact and for the construction worker exposure routes included ingestion, dermal contact, and inhalation. A level of No Significant Risk was determined for public welfare and safety, and it was determined that there was no potential for significant harm to environmental receptors from the Ecological Risk Assessment. In order to evaluate appropriate alternatives and select the preferred response action to achieve a level of No Significant Risk for all current and foreseeable future activities, a Phase III Remedial Action Plan/Feasibility Study was completed. The Remedial Action Plan/Feasibility Study determined that an engineered barrier with and AUL and ongoing Operation, Maintenance and Monitoring was the preferred remedial alternative. A Phase IV Remedy Implementation Plan (RIP) was prepared based on the selected remedy. The remedy included an engineered barrier consisting of soil and/or asphalt pavement layers over the former disposal Site, and the lining of the storm sewer to prevent the infiltration of OHM into storm water.

In order to ensure that a level of No Significant Risk is maintained at the Site, an AUL is necessary to restrict future Site activities and uses consistent with the conclusions of the Phase II CSA Risk Characterization and Phase III Remedial Action Plan/Feasibility Study, and maintain the response actions implemented in accordance with the Phase IV RIP.

Permitted Uses and Activities

- (i) vehicular parking and vehicular traffic which do not compromise the structural integrity of the asphalt engineered barrier and/or do not disturb contaminated soil located beneath the asphalt barrier. To meet this requirement, no more than 3 trucks with a combined maximum gross vehicle weight (GVW) of 40 tons can use the parking lot in

any 24-hour period and no truck with an individual GVW exceeding 40 tons can use the parking lot;

- (ii) 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 Health and Safety Plan 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;
- (iii) activities and uses which are not identified by this Opinion as being inconsistent with maintaining a condition of No Significant Risk; and
- (iv) such other activities and uses which, in the Opinion of an 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.

Restricted Uses and Activities

- (i) 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;
- (ii) any activity including, but not limited to excavation and removal of the soil and asphalt barrier and any activity associated with the lined storm sewer 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 Health and Safety Plan; and
- (iii) 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.

Obligations and Conditions

- (i) Continued Operation, Maintenance and Monitoring (OMM) of the Site remedy must be conducted in accordance with the Final OMM Plan (Appendix to the As-Built Construction Report and Response Action Outcome Statement, Conestoga-Rovers & Associates, December 2006);

- (ii) 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:
- (a) 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
- (b) 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 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;
- (ii) 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.

LSP:

Fred K. Taylor
Fred K. Taylor, Licensed Site Professional

Date:

December 8, 2006



James C. Brown
Attest: Middlesex S. Register



Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

To retain a copy of this file you must save and/or print.

Username: **CRAWORLDPMH**

Transaction ID: **108511**

Document: **BWSC AUL Transmittal & Opinion Form - 113 & 113A**

Size of File: **122.76 K**

Status of Transaction: **SUBMITTED**

Date and Time Created: **1/25/2007::9:22:57 AM**

Note: This file only includes forms that were part of your transaction as of the date and time indicated above. If you need a more current copy of your transaction, return to eDEP and select to "Download a Copy" from the Current Submittals page.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC113

ACTIVITY & USE LIMITATION (AUL) TRANSMITTAL FORM

Release Tracking Number

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

3

- 3939

A. DISPOSAL SITE LOCATION:

1. Disposal Site Name: GMC FMR LANDFILL

2. Street Address: 63 WESTERN AVE

3. City/Town: FRAMINGHAM

4. ZIP Code: 01701-0000

☒ 5. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.

☐ a. Tier 1A ☐ b. Tier 1B ☒ c. Tier 1C ☐ d. Tier 2

6. If a Tier I Permit has been issued, provide Permit Number: W 066581 ISSUED SEPT. 26, 2005

B. THIS FORM IS BEING USED TO: (check one)

☒ 1. Submit a certified copy of a **Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1074.

☐ 2. Submit an **Evaluation of Changes in Land Uses/Activities and/or Site Conditions after a Response Action Outcome Statement** has been filed pursuant to 310 CMR 40.1080.

☐ 3. Submit a certified copy of an **Amended Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1081

☐ 4. Submit a certified copy of a **Partial Termination of a Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1083(3).

☐ 5. Submit a certified copy of a **Termination of a Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1083(1)(d).

☐ 6. Submit a certified copy of a **Grant of Environmental Restriction**, pursuant to 310 CMR 40.1071.

☐ 7. Submit a certified copy of an **Amendment of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1081(3).

☐ 8. Submit a certified copy of a **Partial Release of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1083(2).

☐ 9. Submit a certified copy of a **Release of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1083(1)(c).

☐ 10. Submit a certified copy of a **Confirmatory Activity and Use Limitation**, pursuant to 310 CMR 40.1085(4).

11. Provide Additional RTNs:

☐ a. Check here if this AUL Submittal covers additional Release Tracking Numbers (RTNs).

b. Provide the additional Release Tracking Number(s) covered by this AUL Submittal.

☐ - ☐ -

(All sections of this transmittal form must be filled out unless otherwise noted above.
BWSC113A is required for all submittals listed above)



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC113

ACTIVITY & USE LIMITATION (AUL) TRANSMITTAL FORM

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

Release Tracking Number

3

-

3939

C. AUL INFORMATION:

1. Document (per Section B) Recording and/or Registration Information:

a. Name of Registry of Deeds and/or Land Registration Office: **MIDDLESEX SOUTH**

b. Book and Page Number and/or Document Number: **BOOK 48839 PAGES 241-256**

c. Date of recording and/or registration: **1/16/2007**

mm/dd/yyyy

2. Is the address of the property subject to AUL different from the disposal site address listed above?

☒ a. No ☐ b. Yes If yes, then fill out address section below.

3. Street Address: _____

4. City/Town: _____

5. ZIP Code: _____

D. PERSON SUBMITTING AUL TRANSMITTAL FORM:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions

2. Name of Organization: **GENERAL MOTORS CORP**

3. Contact First Name: **JAMES**

4. Last Name: **HARTNETT**

5. Street: **1 GENERAL MOTORS DR**

6. Title: _____

7. City/Town: **SYRACUSE**

8. State: **NY**

9. ZIP Code: **13206-0000**

10. Telephone: **3154632391**

11. Ext.: _____

12. FAX: _____

13. Is the person described in this section the owner of the property?

☒ a. Yes ☐ b. No, if checked then Section G must be filled out by at least one owner.

☐ c. Check here if providing names and addresses of any additional owners in an attachment.

E. RELATIONSHIP TO DISPOSAL SITE OF PERSON SUBMITTING AUL TRANSMITTAL FORM: (check one)

☒ 1. RP or PRP ☒ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☐ e. Other RP or PRP Specify: _____

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Submitting AUL Specify: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC113

ACTIVITY & USE LIMITATION (AUL) TRANSMITTAL FORM

Release Tracking Number

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

3

3939

F. REQUIRED ATTACHMENT AND SUBMITTALS:

- ☒ 1. Check here to certify that notice of the proposed Activity and Use Limitation (AUL) was given to all record-interest holders, if any, in accordance with 310 CMR 40.1074(1)(e), via certified mail.
- ☐ a. Check here if there were no record interest holders. b. Date of certified mailing: 9/18/2006
mm/dd/yyyy
- ☒ c. Check here to certify that names and addresses of all record holders notified is attached.
- ☒ 2. Check here to certify that within 30 days of recording and/or registering the AUL, including amending, releasing or terminating the AUL, a copy of the AUL was/will be provided to the Chief Municipal Officer, the Board of Health, the Zoning Official, and the Building Code Enforcement Official in the community(ies) where the property subject to such Activity and Use Limitation is located.
- ☒ 3. Check here to certify that within 30 days of recording and/or registering the AUL, including amending, releasing or terminating the AUL, a Legal Notice was/will be published in a newspaper with circulation in the community(ies) where the property subject to the AUL is located.
- ☒ 4. Check here to certify that within 7 days of publishing a Legal Notice in a newspaper with circulation in the community(ies) where the property subject to the AUL is located, a copy of the notice was/will be submitted to DEP.
- ☒ 5. Check here to certify that within 30 days of recording and/or registering the AUL, including amending, releasing or terminating the AUL, a certified copy of the AUL, including the LSP Opinion containing the material facts, data, and other information, will be submitted to DEP.
- ☐ 6. Check here if any non-updatable information provided on this form is incorrect, e.g. Site Address/Location Aid. Send corrections to the DEP Regional Office.
- ☐ 7. If an **Evaluation of Changes in Land Uses/Activities and/or Site Conditions after a Response Action Outcome Statement** is being submitted, check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

G. CERTIFICATION OF OWNER OF PROPERTY, IF NOT PERSON SUBMITTING AUL TRANSMITTAL FORM:

1. I, _____, attest under the pains and penalties of perjury that I am the owner of said property(ies), subject to the AUL

2. _____ 3. Date: _____
Signature mm/dd/yyyy

4. Name of Organization: _____

5. Contact First Name: _____ 6. Last Name: _____

7. Street: _____ 8. Title: _____

9. City/Town: _____ 10. State: _____ 11. ZIP Code: _____

12. Telephone: _____ 13. Ext.: _____ 14. FAX: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC113

ACTIVITY & USE LIMITATION (AUL) TRANSMITTAL FORM

Release Tracking Number

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

3 - 3939

H. CERTIFICATION OF PERSON MAKING SUBMITTAL:

1. I, **FRED TAYLOR**, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

Pursuant to 310 CMR 40.1074 (1)(f), I also hereby certify under penalties of perjury, that either I (if person submitting the AUL Transmittal Form is the property owner), or

2. Name of Property Owner

am/is identified on the Notice of AUL as the owner of the property subject to the AUL, owned such property on the date that the AUL was recorded and /or registered

3. By: **FRED TAYLOR**

Signature

4. Title:

5. For: **GENERAL MOTORS CORP**

(Name of person or entity recorded in Section D)

6. Date: **01/25/2007**

mm/dd/yyyy

☒ 7. Check here if the address of the person providing certification is different from address recorded in Section D.

8. Street: **45 FARMINGTON VALLEY DRIVE**

9. City/Town: **PLAINVILLE**

10. State: **CT**

11. ZIP Code: **06062-0000**

12. Telephone: **860 7471800**

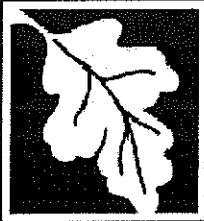
13. Ext.: _____

14. FAX: **860 7471900**

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

Received by DEP on
1/25/2007 9:14:21 AM



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC113A

ACTIVITY & USE LIMITATION (AUL) OPINION FORM

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

Release Tracking Number

3 - 3939

A. DISPOSAL SITE LOCATION:

1. Disposal Site Name: GMC FMR LANDFILL

2. Street Address: 63 WESTERN AVE

3. City/Town: FRAMINGHAM

4. ZIP Code: 01701-0000

B. THIS FORM IS BEING USED TO: (check one)

- ☒ 1. Provide the LSP Opinion for a **Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1074.
- ☐ 2. Provide the LSP Opinion for an **Evaluation of Changes in Land Uses/Activities and/or Site Conditions after a Response Action Outcome Statement**, pursuant to 310 CMR 40.1080. Include BWSC113A as an attachment to BWSC113. Section A and C do not need to be completed.
- ☐ 3. Provide the LSP Opinion for an **Amended Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1081(4).
- ☐ 4. Provide the LSP Opinion for a **Partial Termination of a Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1083(3).
- ☐ 5. Provide the LSP Opinion for a **Termination of a Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1083(1)(d).
- ☐ 6. Provide the LSP Opinion for a **Grant of Environmental Restriction**, pursuant to 310 CMR 40.1071.
- ☐ 7. Provide the LSP Opinion for an **Amendment of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1081(3).
- ☐ 8. Provide the LSP Opinion for a **Partial Release of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1083(2).
- ☐ 9. Provide the LSP Opinion for a **Release of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1083(1)(c).
- ☐ 10. Provide the LSP Opinion for a **Confirmatory Activity and Use Limitation**, pursuant to 310 CMR 40.1085(4).

(Unless otherwise noted above, all sections of this form (BWSC113A) must be completely filled out, printed, stamped, signed with black ink and attached as an exhibit to the AUL Document to be recorded and/or registered with the Registry of Deeds and/or Land Registration Office.)

C. AUL INFORMATION:

1. Is the address of the property subject to AUL different from the disposal site address listed above?

☒ a. No ☐ b. Yes If yes, then fill out address section below.

2. Street Address:

3. City/Town:

4. ZIP Code:



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC113A

ACTIVITY & USE LIMITATION (AUL) OPINION FORM

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

Release Tracking Number

3 - 3939

D. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B indicates that a **Notice of Activity and Use Limitation** is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1074;

> if Section B indicates that an **Evaluation of Changes in Land Uses/Activities and/or Site Conditions after a Response Action Outcome Statement** is being submitted, this evaluation was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1080;

> if Section B indicates that an **Amended Notice of Activity and Use Limitation or Amendment to a Grant of Environmental Restriction** is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 40.1081;

> if Section B indicates that a **Termination or a Partial Termination of a Notice of Activity and Use Limitation, or a Release or Partial Release of a Grant of Environmental Restriction** is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1083;

> if Section B indicates that a **Grant of Environmental Restriction** is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1071;

> if Section B indicates that a **Confirmatory Activity and Use Limitation** is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1085(4);

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 5407

2. First Name: FRED K

3. Last Name: TAYLOR

4. Telephone: 8607471800

5. Ext.:

6. FAX:

7. Signature:

8. Date:

mm/dd/yyyy

9. LSP Stamp:

AUL Forms.



Bk: 48839 Pg: 214 Doc: NOT
Page: 1 of 27 01/16/2007 01:43 PM

Return to
310 CMR 40.1099

James F. HARTNETT

General Motors Corp.
Worldwide Facilities Group
1 General Motors Dr. STE 2
Syracuse, NY.
13206-1127

Form 1075

NOTICE OF ACTIVITY AND USE LIMITATION

M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Name: Former Landfill
DEP Release Tracking No.(s): RTN 3-3939

This Notice of Activity and Use Limitation ("Notice") is made as of this 15th day of December, 2006, by ASSET Holdings III LP, an Ohio Limited partnership, 13085 Hamilton Crossing Boulevard, Carmel, Indiana, 46032-1447 together with his/her/its/their successors and assigns (collectively "Owner").

WITNESSETH:

WHEREAS, General Motors Corporation (Name of Owner(s)), is the owner(s) in fee simple of that certain parcel(s) of land located in Framingham (Town/City), Middlesex County, Massachusetts with the buildings and improvements thereon, pursuant to a deed recorded with the Middlesex South Registry of Deeds in Book 25074, Page 228;

WHEREAS, said parcel(s) of land, which is more particularly bounded and described in Exhibit A, attached hereto and made a part hereof ("Property") is subject to this Notice of Activity and Use Limitation. The Property is shown on a plan recorded in the Middlesex South County Registry of Deeds in Plan Book 25074, Plan 1270;

WHEREAS, a portion of the Property ("Portion of the Property") is subject to this Notice of Activity and Use Limitation. The Portion of the Property is more particularly bounded and described in Exhibit A-1, attached hereto and made a part hereof. The Portion of the Property is shown on a plan recorded with the Middlesex South Registry of Deeds in Plan Book 25074, Plan 1270, and/or on a sketch plan attached hereto and filed herewith for registration;

WHEREAS, the Portion of the Property comprises all a disposal site as the result of a release of oil and/or hazardous material. Exhibit B is a sketch plan showing the relationship of the Portion of the Property subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site existing within the limits of the Property and to the extent such boundaries have been established. Exhibit B is attached hereto and made a part hereof; and

The language in these forms are part of promulgated regulations and cannot be modified in any way unless so noted (by brackets []) in the form itself.

3/24/06 (Effective 4/3/06)

WESTERN AVENUE, FRAMINGHAM, MASS.

WHEREAS, one or more response actions have been selected for the Disposal Site in accordance with M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil and/or groundwater and/or (b) the restriction of certain activities occurring in, on, through, over or under the Portion of the Property. The basis for such restrictions is set forth in an Activity and Use Limitation Opinion ("AUL Opinion"), dated December 8, 2006, (which is attached hereto as Exhibit C and made a part hereof);

NOW, THEREFORE, notice is hereby given that the activity and use limitations set forth in said AUL Opinion are as follows:

1. Activities and Uses Consistent with the AUL Opinion. The AUL Opinion provides that a condition of No Significant Risk to health, safety, public welfare or the environment exists for any foreseeable period of time (pursuant to 310 CMR 40.0000) so long as any of the following activities and uses occur on the Property:

(i) vehicular parking and vehicular traffic which do not compromise the structural integrity of the asphalt engineered barrier and/or do not disturb contaminated soil located beneath the asphalt barrier. To meet this requirement, no more than 3 trucks with a combined maximum gross vehicle weight (GVW) of 40 tons can use the parking lot in any 24-hour period and no truck with an individual GVW exceeding 40 tons can use the parking lot;

(ii) 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 Health and Safety Plan 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;

(iii) Such other activities or uses which, in the Opinion of an LSP, shall present no greater risk of harm to health, safety, public welfare or the environment than the activities and uses set forth in this Paragraph; and

(iv) Such other activities and uses not identified in Paragraph 2 as being Activities and Uses Inconsistent with the AUL.

2. Activities and Uses Inconsistent with the AUL Opinion. Activities and uses which are inconsistent with the objectives of this Notice of Activity and Use Limitation, and which, if implemented at the Portion of the Property, may result in a significant risk of harm to health, safety, public welfare or the environment or in a substantial hazard, are as follows:

(i) use of the portion of the property as a residence, school (except for adult education), daycare, nursery, recreational area, and/or any other use at which a child's presence is likely;

(ii) any activity including, but not limited to excavation and removal of the soil and asphalt barrier and any activity associated with the lined storm sewer 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 Health and Safety Plan; and

(iii) any activity which is likely to disturb contaminated soil/waste located beneath the engineered barrier for a period of time greater than three months, 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.

3. Obligations and Conditions Set Forth in the AUL Opinion. If applicable, obligations and/or conditions to be undertaken and/or maintained at the Portion of the Property to maintain a condition of No Significant Risk as set forth in the AUL Opinion shall include the following:

(i) continued Operation, Maintenance and Monitoring (OMM) of the Site remedy must be conducted in accordance with the Final OMM Plan (Appendix to the As-Built Construction Report and Response Action Outcome Statement, Conestoga-Rovers & Associates, December 2006);

(ii) 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 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

(iii) contaminated soil/waste located below the engineered barrier must remain and may not be relocated, unless such activity is first evaluated by an LSP who renders an Opinion which states that such activity poses no greater risk of harm to health, safety, public welfare or the environment.

4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the Portion of the Property which may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by an LSP who shall render an Opinion, in accordance with 310 CMR 40.1080 *et seq.*, as to whether the proposed changes will (select one) present a significant risk of harm to health, safety, public welfare or the environment. Any and all requirements set forth in the Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.

5. Violation of a Response Action Outcome. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by an LSP in accordance with 310 CMR 40.1080 *et seq.*, and without additional response actions, if necessary, to achieve or maintain a condition of No Significant Risk or to eliminate substantial hazards.

If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by an LSP in accordance with 310 CMR 40.1080 *et seq.*, the owner or operator of the Portion of the Property subject to this Notice at the time that the activities, uses and/or exposures change, shall comply with the requirements set forth in 310 CMR 40.0020.

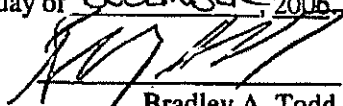
6. Incorporation Into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Property or a portion thereof is conveyed.

AUL Forms

310 CMR 40.1099

Owner hereby authorizes and consents to the filing and recordation and/or registration of this Notice, said Notice to become effective when executed under seal by the undersigned LSP, and recorded and/or registered with the appropriate Registry(ies) of Deeds and/or Land Registration Office(s).

WITNESS the execution hereof under seal this 15th day of DECEMBER, 2006


Bradley A. Todd
Executive Vice President of ADESA, Inc.
General Partner of Asset Holdings III LP

[STATE OF INDIANA]

HAMILTON, ss

DECEMBER 15, 2006

On this 15th day of DECEMBER, 2006, before me, the undersigned notary public, personally appeared BRADLEY A. TODD (name of document signer), proved to me through satisfactory evidence of identification, which were PERSONALLY KNOWN, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

Cheryl A. Shady (official signature and seal of notary)

CHERYL A. SHADY, Notary Public
Resident of Hamilton County, Indiana
My Commission Expires 3-24-2010

The language in these forms are part of promulgated regulations and cannot be modified in any way unless so noted (by brackets []) in the form itself.

3/24/06 (Effective 4/3/06)

ASSISTANT SECRETARY'S CERTIFICATE

I, Michelle Mallon, hereby certify that I am the duly elected, qualified and acting Assistant Secretary of ADESA, Inc. ("the Corporation"). I further certify that attached hereto as Exhibit A is the resolution of the Board of Directors effective May 17, 2006, and such resolution has not been amended or rescinded since the effective date.

Dated: December 18, 2006

Michelle Mallon
Michelle Mallon, Assistant Secretary

STATE OF INDIANA)
) SS:
COUNTY OF HAMILTON)

Before me the undersigned Notary Public, personally appeared Michelle Mallon and acknowledged the execution of this instrument this 18th day of December, 2006.

My Commission Expires:

9/24/08

Cheryl A. Shradin
CHEYL A. SHRADIN Notary Public
Resident of TIPTON County, IN

Exhibit A

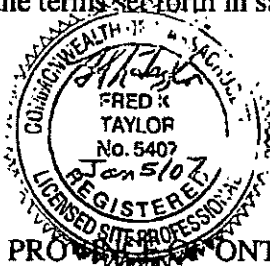
RESOLVED, that the following persons be, and they hereby are, elected to the offices set forth opposite their respective names, to serve in accordance with the By-Laws and at the discretion of the Board:

David G. Gartzke	Chairman of the Board and Chief Executive Officer
Angel R. Sales	President and Chief Operating Officer
Cameron C. Hitchcock	Executive Vice President and Chief Financial Officer
Brenda Flayton	Executive Vice President and Chief Administrative Officer
George J. Lawrence	Executive Vice President, General Counsel and Corporate Secretary
Ron Beaver	Executive Vice President and Chief Information Officer
Charles Tapp	Executive Vice President of Sales and Marketing
Bradley A. Todd	Executive Vice President
Cheryl Munce	Executive Vice President
Curtis L. Phillips	Treasurer
Scott A. Anderson	Controller
Michelle Mallon	Assistant Secretary
Becca C. Polak	Assistant Secretary

AUL Forms

310 CMR 40.1099

The undersigned LSP hereby certifies that he executed the aforesaid Activity and Use Limitation Opinion attached hereto as Exhibit C and made a part hereof and that in his Opinion this Notice of Activity and Use Limitation is consistent with the terms set forth in said Activity and Use Limitation Opinion.

Date: Jan 5, 2007

Frederick K. Taylor
Frederick K. Taylor, LSP

PROVINCE OF ONTARIO

Waterloo, ON, ssJan 5, 2007

On this 5 day of Jan, 2007, before me, the undersigned notary public, personally appeared Frederick Taylor (name of document signer), proved to me through satisfactory evidence of identification, which were personally known, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)

(as _____ for _____, a corporation)

(as attorney in fact for _____, the principal)

(as LSP for the site, (a) (the) _____)

[Signature]

(official signature and seal of notary)

James F. Hartnett, Notary Public. It is effective only in the Regional Municipality of Waterloo, and only while you are working for Conestoga-Rovers & Associates Limited and is limited to the attestation of instruments and the taking of affidavits in connection with the business of that company and its associated companies. Expires July 12, 2007.

Upon recording, return to:

James F. Hartnett
General Motors Corporation
Worldwide Facilities Group
1 General Motors Drive, STE 2
Syracuse, New York 13206-1127



EXHIBIT A

250746228

QUITCLAIM DEED

GENERAL MOTORS CORPORATION, a corporation duly established under the laws of Delaware, as Grantor, and having its principal place of business at 3044 West Grand Boulevard, Detroit, Michigan 48202, for consideration paid, and in full consideration of Eight Million One Hundred Fifty Thousand Dollars (\$8,150,000), grants to **ASSET HOLDINGS III, L.P.**, an Ohio limited partnership, as Grantee, with its principal place of business at c/o I.H. Management Corporation, One International Place, Boston, Massachusetts 02110-2624, with quitclaim covenants the land in Sherborn and Framingham, Commonwealth of Massachusetts, more particularly described on Exhibit "A" hereto, subject to the matters more particularly described on Exhibit "B" hereto.

*doing business in Massachusetts as Asset Holdings III, Limited Partnership

All owners, tenants and other occupants of the property herein conveyed hereby covenant and agree for themselves and those persons claiming by, through or under such parties that during the period of their respective ownership and/or occupancy, they shall not "treat," "store" or "dispose" of any "hazardous substances," "hazardous waste" or "toxic substance," as those terms are defined and regulated under CERCLA, 42 U.S.C. §9601 et seq., RCRA, 42 U.S.C. §6901 et seq., or TSCA, 15 U.S.C. §26.01 et seq., on or below the property herein conveyed and shall maintain generator-only status; provided, however, that such parties may: (i) accumulate such substances or wastes as allowed under applicable laws and regulations, and (ii) use commercial products and raw materials on-site which may contain such substances. In the event any wastewater treatment would constitute treatment under RCRA, such parties may continue to treat wastewater which is generated on-site by such parties so long as such treatment is in accordance with the FWPCA, 33 U.S.C. §1251 et seq. and similar state statutes and such parties shall not be considered in breach of this provision; provided that such wastewater treatment must be in accordance with such revised provisions of RCRA and must be consistent with all other restrictions of this provision. The foregoing provisions shall run with the property herein conveyed for the benefit of the property retained by Grantor more particularly described on Exhibit "C" hereto and be binding on subsequent owners, tenants and users.

The above described premises do not constitute all or substantially all of the assets of General Motors Corporation within the Commonwealth of Massachusetts.

For Grantor's Title see Deeds referenced in Exhibit "A."

IN WITNESS WHEREOF, said General Motors Corporation has caused its corporate seal to be hereto affixed and these presents to be signed, acknowledged and delivered in its name and behalf by Harry J. Pearce & Kelly Smith, its Executive Vice President and ART TREASURER hereto duly authorized, this 29th day of November, 1994 and effective as of the 21st day of December, 1994.

Signed and sealed in presence of:

GENERAL MOTORS CORPORATION,
a Delaware corporation

Claudia Z. Killen
CLAUDIA Z. KILLEEN

By: Harry J. Pearce
Harry J. Pearce

Patricia M. Chastney
PATRICIA M. CHASTNEY

Its: Executive Vice President

and

Claudia Z. Killen
CLAUDIA Z. KILLEEN

By: E. Follin Smith
E. FOLLIN SMITH

Kathleen Gallagher
KATHLEEN GALLAGHER

Its: ASSISTANT TREASURER

TAX 37164.00
CASH 37164.00
91418015 16:27
EXCISE TAX
DEEDS REC 15
MIDDLE SOUTH
12/21/94

EXECUTION RECOMMENDED
ARGONAUT REALTY
BY C. J. Killen

12/21/94 PLN NUMBER: 88001278
25074
12/21/94 01:42:49 562 30.00
Property Address: 63 Western Avenue, Framingham and Sherborn, MA

EX 25074 PG 229

STATE OF MICHIGAN

Wayne County, SS

November 29, 1994

Then personally appeared the above-named HARRY J. TEAROE, EXECUTIVE,
VIC & PRESIDENT of General Motors Corporation, a Delaware corporation, and acknowledged
 the foregoing instrument to be the free act and deed of General Motors Corporation, before me.

Mimi Kelly Moustakas

Notary Public

My Commission expires: 6/27/95

MIMI KELLY MOUSTAKAS
 Notary Public, State of Michigan

STATE OF MICHIGAN

~~NEW YORK~~
~~NEW YORK~~
 Wayne County, SS

November 30, 1994

Then personally appeared the above-named E. FALLIN SMITH
ASSISTANT TREASURER of General Motors Corporation, a Delaware corporation, and acknowledged
 the foregoing instrument to be the free act and deed of General Motors Corporation, before me.

John Russell

Notary Public

My Commission expires:

JOHN RUSSELL
 Notary Public, State of New York
 No. 31-4827619
 Qualified in New York County
 Commission Expires March 30, 1995

25074-230

EXHIBIT "A"

Legal Description

16847

Lot 1

A certain parcel of registered and unregistered land located on Western Avenue and Loring Drive in the Towns of Framingham and Sherborn, County of Middlesex, Commonwealth of Massachusetts and shown on a plan entitled "Plan of Land in Framingham and Sherborn, MA. Prepared for General Motors Corporation by Schofield Brothers of New England, Inc.; dated August 31, 1994; Scale 1" = 150'". Revised September 7, 1994 and September 16, 1994." Said parcel of land being bounded and described as follows:

Beginning at a point at the Southeast corner of the parcel at the Northeast corner of Lot 3 as shown on above referenced plan on Western Avenue in Sherborn; thence

- N 75° 57' 59" W a distance of 64.34 feet to a point; thence
- N 66° 56' 13" W a distance of 770.87 feet to a point; thence
- N 06° 04' 17" E a distance of 105.00 feet to a point; thence
- N 15° 47' 59" W a distance of 140.00 feet to a point; thence
- N 33° 10' 01" E a distance of 250.00 feet crossing the town line into Framingham to a point; thence
- N 70° 50' 52" W a distance of 179.19 feet to a point; thence
- N 64° 27' 04" W a distance of 135.00 feet to a point; thence
- N 25° 32' 56" E a distance of 135.00 feet to a point; thence
- N 03° 54' 40" W a distance of 95.56 feet to a point; thence
- N 25° 14' 29" E a distance of 220.00 feet to a point; thence
- N 64° 42' 49" W a distance of 567.50 feet to a point of curvature which point is non-tangent; thence
- Southwesterly by a curve to the left having a radius of 460.16 feet, an arc length of 592.88 feet, a central angle of 73° 46' 11", a chord bearing of S 53° 56' 44" W and a chord distance of 555.90 feet to a point; thence
- S 21° 38' 31" W a distance of 330.53 feet to a disk in a concrete bound at land of The Boston & Albany Railroad; the last thirteen courses by other land of General Motors and shown as Lots 2 and 3 on the above referenced plan; thence
- N 77° 34' 01" W a distance of 100.00 feet to a steel survey marker; thence

16847-1.000

BX 25074 231

EXHIBIT "A"

Legal Description

N 12° 25' 59" E a distance of 934.31 feet to a steel survey marker at land of Consolidated Rail Corporation; the last two courses by land of The Boston & Albany Railroad; thence

 Northeasterly by a non-tangent curve to the right having a radius of 237.61 feet, an arc length of 68.81 feet, a central angle of 16° 35' 36", a chord bearing of N 49° 26' 09" E and a chord distance of 68.57 feet to a point; thence

 N 57° 43' 57" E a distance of 615.03 to a point of curvature; thence

 Northerly by a curve to the left having a radius of 255.28 feet, an arc length of 190.62 feet and a central angle of 42° 47' 00" to a point; thence

 N 14° 56' 57" E a distance of 441.20 feet to a point of curvature; thence

 Northerly by a curve to the right having a radius of 810.54 feet, an arc length of 98.99 feet and a central angle of 06° 59' 50" to a point; thence

 N 59° 37' 16" W A distance of 518.97 feet to a steel survey marker; thence

 N 12° 25' 59" E a distance of 455.62 feet to a steel survey marker; thence

 S 55° 28' 07" E a distance of 244.27 feet to a drill hole in a concrete bound; thence

 S 56° 20' 12" E a distance of 420.86 feet to a non-tangent point of curvature; thence

 Northeasterly by a curve to the right having a radius of 505.42 feet, an arc length of 55.35 feet, a central angle of 06° 16' 30", a chord bearing of N 48° 17' 36" E and a chord length of 55.32 feet to a point; thence

 N 51° 33' 34" E a distance of 75.31 feet to a point of curvature; thence

 Northeasterly by a curve to the left having a radius of 392.32 feet, an arc length of 10.15 feet, and a central angle of 01° 28' 58" to a point at land of the Commonwealth of Massachusetts, the last twelve courses by land of Consolidated Rail Corporation; thence

 S 81° 52' 57" E a distance of 119.82 feet to a point; thence

 N 51° 37' 03" E a distance of 62.50 feet to a point; thence

 N 22° 52' 57" W a distance of 45.00 feet to a point; thence

14847-4.D2D

BK 25074 PG 232

EXHIBIT "A"

Legal Description

N 82° 52' 56" W a distance of 85.31 feet to a non-tangent point of curvature at land of Consolidated Rail Corporation. The last four courses by land of Commonwealth of Massachusetts; thence

Northeasterly by a curve to the left having a radius of 392.32 feet, an arc length of 87.08 feet, a central angle of 12° 43' 03", a chord bearing of N 29° 13' 03" E and a chord length of 86.90 feet to a point; thence

N 22° 51' 31" E a distance of 598.48 feet to a point at land of Multi Realty Trust, the last two courses by land of Consolidated Rail Corporation; thence

S 48° 25' 08" E a distance of 116.42 feet to a disk in a concrete bound; thence

S 02° 50' 05" W a distance of 160.04 to a disk in a concrete bound; thence

S 24° 25' 25" E a distance of 148.17 feet to a disk in a concrete bound at land of Anchor Motor Freight, Inc., the last three courses by land of the Trustees of Multi Realty Trust; thence

S 25° 48' 37" E a distance of 242.98 feet to a point; thence

N 49° 57' 18" E a distance of 35.35 feet to a point; thence

S 40° 03' 30" E a distance of 100.00 feet to a point at the sideline of Aaron Street, the last three courses by land of Anchor Motor Freight, Inc.; thence

S 49° 56' 30" W a distance of 59.17 feet to a railroad spike; thence

S 25° 54' 29" E a distance of 37.32 feet to a point at land of Anchor Motor Freight, Inc., the last two courses by Aaron Street; thence

S 25° 28' 39" W a distance of 215.86 feet to a point; thence

S 64° 32' 44" E a distance of 479.26 feet to a ship spike; thence

S 25° 27' 16" W a distance of 319.33 feet to a ship spike; thence

S 70° 24' 29" E a distance of 470.55 feet to a ship spike; thence

N 24° 56' 54" E a distance of 356.15 feet to a steel survey marker at the sideline of Loring Drive, the last five courses by land of Anchor Motor Freight, Inc.; thence

S 11° 05' 46" E a distance of 279.27 feet to a stone bound at a point of curvature; thence

CN 25074 PC 233

EXHIBIT "A"

Legal Description

Southwesterly by a curve to the right having a radius of 970.00 feet, an arc length of 59.82 feet and a central angle of 03° 32' 00" to a point of compound curvature; thence

Southwesterly by a curve to the right having a radius of 43.05 feet, an arc length of 88.15 feet, and a central angle of 117° 19' 30" to a point; thence

S 19° 45' 44" W a distance of 75.01 feet to a point of curvature; thence

Southeasterly by a curve to the right having a radius of 126.92 feet, an arc length of 171.97 feet and a central angle of 77° 38' 04" to a point of compound curvature; thence

Southerly by a curve to the right having a radius of 970.00 feet, an arc length of 306.55 feet and a central angle of 18° 06' 26" to a disk in a concrete bound; thence

S 25° 30' 14" W a distance of 1187.14 feet to a point of curvature; thence

Southwesterly by a curve to the left having a radius of 1811.76 feet, an arc length of 145.55 feet and a central angle of 04° 36' 10" to a point on the townline of Framingham and Sherborn, the last eight courses by the sideline of Loring Drive and Western Avenue in Framingham; thence

S 88° 00' 26" E a distance of 21.15 feet along the town line to a point of curvature; thence

Southwesterly by a curve to the left having a radius of 1791.76 feet, an arc length of 96.13 feet and a central angle of 03° 04' 28" to a point; thence

S 18° 02' 44" W a distance of 628.21 feet to the point of beginning, the last three courses by the sideline of Western Avenue.

The above described parcel of land contains an area of 120.371 acres more or less, according to said plan. There is included within the land described above as Lot 1, the parcel of registered land shown as Lot 5 on Land Court Plan No. J0261C described in Certificate of Title No. 187792.

For Grantor's title see the deeds recorded with the Middlesex County (Southern District) Registry of Deeds at Book 6911, Page 572, Book 6911, Page 574, Book 6911, Page 576, Book 7172, Page 565, Book 7172, Page 577, Book 11640, Page 18 and Book 20521, Page 575 and Certificate of Title No. 187792 on file with the Middlesex County (Southern District) Registry District of the Land Court.

BK 25074 Pg 234

EXHIBIT "B"

EXCEPTIONS TO TITLE

1. Real estate taxes, if any, not yet due and payable.
2. Any special assessments imposed upon or becoming a lien against said premises after the date hereof.
3. Rights of the public and adjoining property owners in streets and highways abutting and adjacent to the premises.
4. Easements, covenants, and restrictions of public record.

DET05/5279.1

25074 P: 235

EXHIBIT "C"

Legal Description

Lot 2

A certain parcel of land located off Western Avenue in the Town of Framingham, County of Middlesex, Commonwealth of Massachusetts and shown on a plan entitled "Plan of Land in Framingham and Sherborn, MA; Prepared for General Motors Corporation by Schofield Brothers of New England, Inc.; dated August 31, 1994; Scale 1" = 150' "; Revised September 7, 1994 and September 16, 1994. Said parcel of land being bounded and described as follows:

Beginning at a point at the northwest corner of the parcel near the southwesterly corner of the General Motors Assembly Plant; thence

S 64° 42' 49" E a distance of 567.50 feet to a point; thence

S 25° 14' 29" W a distance of 220.00 feet to a point; thence

S 03° 54' 40" E a distance of 78.11 feet to a point; thence

N 64° 27' 03" W a distance of 371.47 feet to a point of curvature; thence

Southwesterly by a curve to the left having a radius of 480.00 feet, an arc length of 786.71 feet and a central angle 93° 54' 26" to a point; thence

N 21° 38' 31" E a distance of 309.81 feet to a point of curvature which point is not tangent; thence

Northeasterly by a curve to the right having a radius of 480.00 feet, an arc length of 592.88 feet, a central angle of 70° 46' 11", a chord bearing of N 53° 56' 44" E and a chord distance of 555.90 feet to the point of beginning.

The above described parcel of land contains an area of 6.084± acres more or less and is shown as Lot 2 on the above referenced plan.

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BK 25074 PG 236

EXHIBIT "C"

Legal Description

Lot 3 -

A certain parcel of land located on Western Avenue in the Towns of Framingham and Sherborn, County of Middlesex, Commonwealth of Massachusetts and shown on a plan entitled "Plan of Land in Framingham and Sherborn, MA; Prepared for General Motors Corporation by Schofield Brothers of New England, Inc.; dated August 31, 1994; Scale 1" = 150' "; Revised September 7, 1994 and September 16, 1994. Said parcel of land being bounded and described as follows:

Beginning at a point at the southeasterly corner of the parcel on the westerly line of Western Avenue in Sherborn at land of Boston Edison Company, said point being the Point of Beginning (P.O.B.); thence

N 79° 50' 05" W a distance of 1307.72 feet to a disk in a concrete bound;
thence

N 57° 47' 05" W a distance of 741.95 feet to a disk in a concrete bound;
thence

N 77° 58' 36" W a distance of 33.83 to a steel survey marker, at land of Boston & Albany Railroad, the last three courses by land now or formerly of Boston Edison Company; thence

N 12° 25' 59" E a distance of 320.51 feet by land of Boston and Albany Railroad crossing the townline from Sherborn into Framingham to a disk in a concrete bound at other land of General Motors; thence

N 21° 38' 31" E a distance of 20.72 feet to a point; thence

Northeasterly by a curve to the right having a radius of 480.00 feet, an arc length of 786.71 feet and a central angle of 93° 54' 26"; thence

S 64° 27' 03" E a distance of 371.47 feet to a point; thence

S 03° 54' 40" E a distance of 17.45 feet to a point; thence

S 25° 32' 56" W a distance of 135.00 feet to a point; thence

S 64° 27' 04" E a distance of 135.00 feet to a point; thence

S 70° 50' 52" E a distance of 179.19 feet to a point; thence

S 33° 10' 01" W a distance of 250.00 feet crossing the town line into Sherborn to a point; thence

S 15° 47' 59" E a distance of 140.00 feet to a point; thence

S 06° 04' 17" W a distance of 105.00 feet to a point; thence

S 66° 50' 13" E a distance of 770.87 feet to a point; thence

S 75° 57' 59" E a distance of 64.34 feet to a point on the westerly line of Western Avenue, the last twelve courses by other land of General Motors; thence

S 18° 02' 44" W a distance of 40.00 feet by the westerly line of Western Avenue to the point of beginning.

The above described parcel of land contains an area of 24.246± acres more or less and is shown as Lot 3 on the above referenced plan.

**EXHIBIT A-1
PART 1**

22447

**Parcel Description
Activity and Use Limitation Easement 2
(A.U.L. 2)**

A certain parcel of land located on the westerly side of Western Avenue in the Town of Framingham, County of Middlesex, Commonwealth of Massachusetts, being shown as A.U.L. 2 on a plan entitled "Activity and Use Limitation Plan in Framingham, Massachusetts, (Middlesex County), Prepared for: Conestoga-Rovers Associates, Scale: 1" = 40' Date: December 6, 2006, Schofield Brothers of New England, Inc." said parcel of land being bounded and described as follows:

Commencing at the northwesterly side of said parcel on the northerly side of Lot 2 at land of now or formerly Asset Holdings III LP said point being on a curve 313.11 feet southwest of a magnetic nail set (MAG(S)), said point being the POINT OF BEGINNING; thence

Northeasterly along a curve to the right having a radius of three hundred eighteen and no hundredths feet (318.00'), a length of two hundred forty four and thirty-eight hundredths feet (294.55') and a delta angle of 44° 05' 53" to a point; thence

N 85° 29' 01" E a distance of forty-one and twenty-four hundredths feet (41.24') to a point at a curve; thence

Southeasterly along a curve to the right having a radius of three hundred one and no hundredths feet (301.00') a length of two hundred eighteen and eighty-four hundredths feet (218.84') and a delta angle of 41° 39' 24" to a point; thence

S 52° 51' 35" E a distance of sixty-one and forty-eight hundredths feet (61.48') to a point; thence

S 66° 49' 08" E a distance of sixty-seven and sixty-three hundredths feet (67.63') to a point; thence

S 55° 31' 59" E a distance of forty-one and forty-nine hundredths feet (41.49') to a point; thence

S 40° 28' 30" E a distance of seven and sixty-nine hundredths feet (7.69') to a point said point being the northerly property line of Lot 2 at said land of Asset Holdings III LP; thence

N 64° 42' 49" W a distance of three hundred forty eight and eighty-eight hundredths feet (348.88') along the northerly property line of Lot 2 at said land of Asset Holdings III LP to a magnetic nail set at a non tangent curve; thence

Southwesterly along a curve to the left having a radius of four hundred eighty and no hundredths feet (480.00'), a length of three hundred eighteen and ninety-five hundredths feet (318.95') a delta angle of 38° 04' 18" a chord bearing of S 70° 17' 41" W and a chord distance of three hundred thirteen and eleven hundredths feet (313.11') to the point of beginning.

The above described parcel of land contains an area of 8,229 square feet, more or less, according to said plan.

**EXHIBIT A-1
PART 2**

22447

**Parcel Description
Activity and Use Limitation Easement 3
(A.U.L. 3)**

A certain parcel of land located on the westerly side of Western Avenue in the Town of Framingham, County of Middlesex, Commonwealth of Massachusetts, being shown as A.U.L. 3 on a plan entitled "Activity and Use Limitation Plan in Framingham, Massachusetts, (Middlesex County), Prepared for: Conestoga-Rovers Associates, Scale: 1" = 40' Date: December 6, 2006, Schofield Brothers of New England, Inc." said parcel of land being bounded and described as follows:

Commencing at the northerly corner of said parcel on the westerly side of the Lot 2 at land of now or formerly Asset Holdings III LP said point being 81.44 feet southwest of a steel survey marker set (SSM(S)), said point being the POINT OF BEGINNING; thence

S 21° 38' 31" W a distance of forty-one and ninety hundredths feet (41.90') by Lot 2 to a point; thence

N 47° 18' 15" W a distance of six and seventy-two hundredths feet (6.72') to a point; thence

N 30° 40' 11" E a distance of thirty-nine and ninety-eight hundredths feet (39.98') to the point of beginning.

The above described parcel of land contains an area of 131 square feet, more or less, according to said plan.

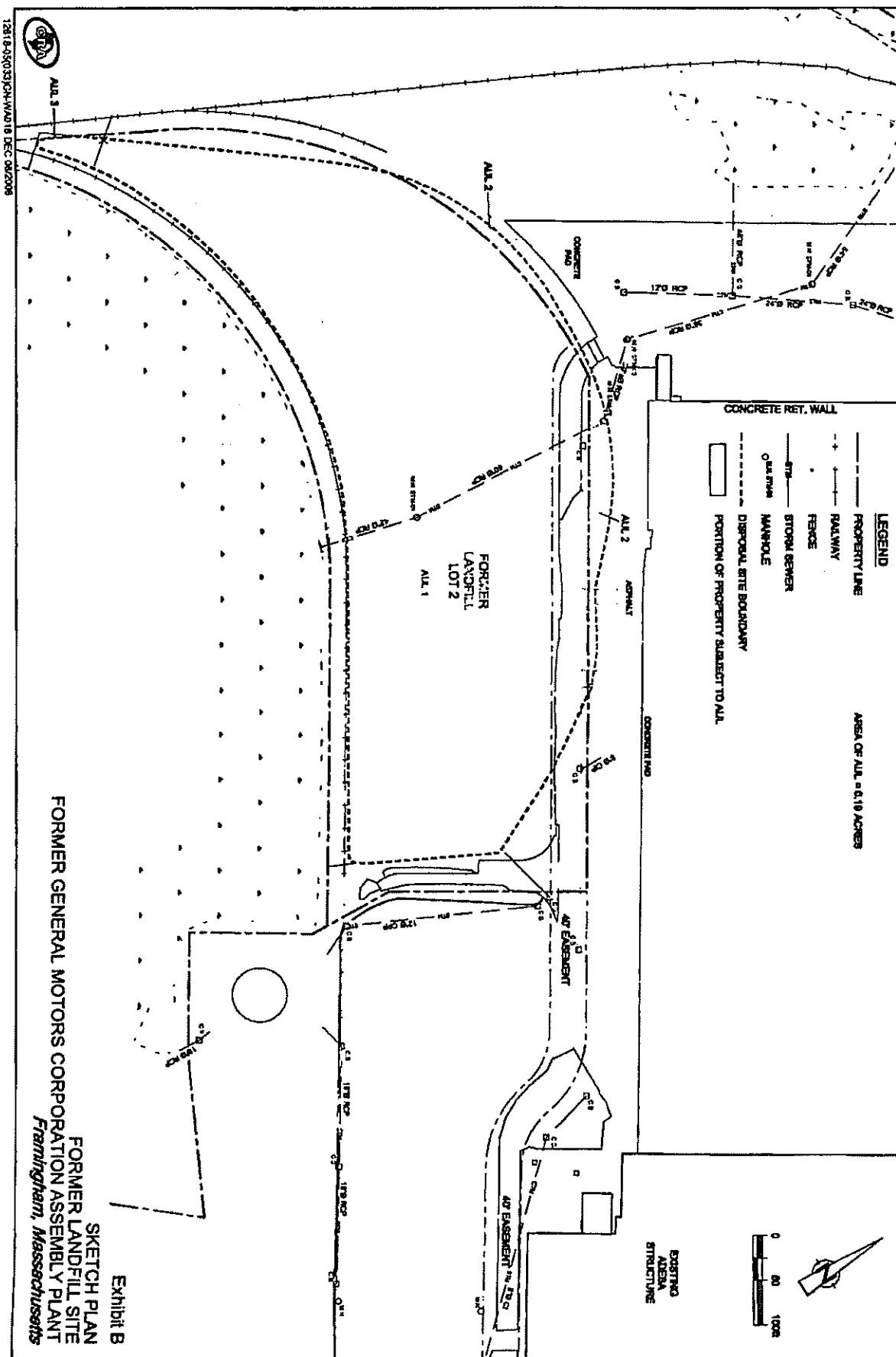


EXHIBIT C

ACTIVITY AND USE LIMITATION OPINION

In accordance with the requirements of 310 CMR 40.1074, this Activity and Use Limitation (AUL) Opinion has been prepared to support a Notice of AUL for a portion of a parcel of land owned by ASSET Holdings III, LP (ASSET), located at 63 Western Avenue, Framingham, Middlesex County, Massachusetts, 01702-7403 (Site).

Site History

The Site consists of an approximately 5-acre area located on the southwest side of the property. Between 1947 and 1970, waste material from the former General Motors Corporation (GM) assembly plant was placed into a depression in the ground between two rail spurs up to approximately 25 feet (ft) in maximum depth and typically 15 ft in depth consistent with accepted business practices. Between 1947 and 1964, waste materials deposited at the Site were reportedly burned as part of disposal activities. Waste disposal activities were discontinued in 1970. In accordance with the Massachusetts Solid Waste Regulations and guidance, former landfill sites that were not used on or after 1971 are adequately regulated if they are investigated and remediated in accordance with the Massachusetts Contingency Plan (MCP). In 1990, the Site was graded with fill and covered with approximately one foot of granular/fill material. In 1994, ASSET purchased a portion of the GM property where the disposal Site is located.

Massachusetts Contingency Plan Comprehensive Response Action

The historical and existing Site conditions, based on extensive environmental investigations including waste material types and oil and/or hazardous materials (OHM) types and levels were described in the Interim and Final Phase II Comprehensive Site Assessment (CSA) Reports by Conestoga-Rovers & Associates (CRA), that were submitted to the Massachusetts Department of Environmental Protection (MA DEP) in July 2005 and August 2005, respectively. The Phase II CSA Report included a Method 3 Risk Characterization (both human health and ecological risk assessments). The primary potential threats to human health and the

environment are direct exposure to surficial waste and contaminated soils and potential infiltration to stormwater in the stormwater sewer, which transects the Site. Contaminants of concern in soil/waste include polynuclear aromatic hydrocarbons (PAHs), antimony, cadmium, lead, manganese, nickel, and zinc. Historical and two current rounds of groundwater monitoring data indicate that there are no impacts to groundwater at or in the vicinity of the Site. The wetlands adjacent to the Site are addressed as part of the Comprehensive Response Action for a separate disposal site (RTN: 3-4356) Beaverdam Brook.

Reason for Activity and Use Limitation

Based on the Method 3 Risk Characterization, a condition of No Significant Risk was not achieved for a trespasser's cumulative exposure to surface soils, sediment, and surface water, and a construction worker's exposure to soils and groundwater during potential future construction activities. Exposure routes for the trespasser included ingestion and dermal contact and for the construction worker exposure routes included ingestion, dermal contact, and inhalation. A level of No Significant Risk was determined for public welfare and safety, and it was determined that there was no potential for significant harm to environmental receptors from the Ecological Risk Assessment. In order to evaluate appropriate alternatives and select the preferred response action to achieve a level of No Significant Risk for all current and foreseeable future activities, a Phase III Remedial Action Plan/Feasibility Study was completed. The Remedial Action Plan/Feasibility Study determined that an engineered barrier with and AUL and ongoing Operation, Maintenance and Monitoring was the preferred remedial alternative. A Phase IV Remedy Implementation Plan (RIP) was prepared based on the selected remedy. The remedy included an engineered barrier consisting of soil and/or asphalt pavement layers over the former disposal Site, and the lining of the storm sewer to prevent the infiltration of OHM into storm water.

In order to ensure that a level of No Significant Risk is maintained at the Site, an AUL is necessary to restrict future Site activities and uses consistent with the conclusions of the Phase II CSA Risk Characterization and Phase III Remedial Action Plan/Feasibility Study, and maintain the response actions implemented in accordance with the Phase IV RIP.

Permitted Uses and Activities

- (i) vehicular parking and vehicular traffic which do not compromise the structural integrity of the asphalt engineered barrier and/or do not disturb contaminated soil located beneath the asphalt barrier. To meet this requirement, no more than 3 trucks with a combined maximum gross vehicle weight (GVW) of 40 tons can use the parking lot in

any 24-hour period and no truck with an individual GVW exceeding 40 tons can use the parking lot;

- (ii) 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 Health and Safety Plan 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;
- (iii) activities and uses which are not identified by this Opinion as being inconsistent with maintaining a condition of No Significant Risk; and
- (iv) such other activities and uses which, in the Opinion of an 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.

Restricted Uses and Activities

- (i) 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;
- (ii) any activity including, but not limited to excavation and removal of the soil and asphalt barrier and any activity associated with the lined storm sewer 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 Health and Safety Plan; and
- (iii) 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.

Obligations and Conditions

- (i) Continued Operation, Maintenance and Monitoring (OMM) of the Site remedy must be conducted in accordance with the Final OMM Plan (Appendix to the As-Built Construction Report and Response Action Outcome Statement, Conestoga-Rovers & Associates, December 2006);

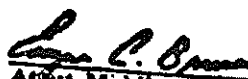
- (ii) A Health and Safety Plan and a Soil Management Plan must be prepared and implemented prior to the commencement of any excavation and removal of the soil and asphalt barrier which is likely to disturb contaminated soil/waste located below the engineered barrier, associated with underground utility 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:
- (a) 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
- (b) 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 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;
- (ii) 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.

LSP:



Fred K. Taylor, Licensed Site Professional

Date:

December 8, 2006
Arthur C. Brown
Assoc. Middlesex S. Registrar



Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

To retain a copy of this file you must save and/or print.

Username: **CRAWORLD**

Transaction ID: **113725**

Document: **BWSC AUL Transmittal & Opinion Form - 113 & 113A**

Size of File: **122.71 K**

Status of Transaction: **SUBMITTED**

Date and Time Created: **1/25/2007::5:08:27 PM**

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Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC113

ACTIVITY & USE LIMITATION (AUL) TRANSMITTAL FORM

Release Tracking Number

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

3 - 3939

A. DISPOSAL SITE LOCATION:

1. Disposal Site Name: **GMC FMR LANDFILL**

2. Street Address: **63 WESTERN AVE**

3. City/Town: **FRAMINGHAM**

4. ZIP Code: **01701-0000**

☒ 5. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.

☐ a. Tier 1A ☐ b. Tier 1B ☒ c. Tier 1C ☐ d. Tier 2

6. If a Tier I Permit has been issued, provide Permit Number: **W 066581 ISSUED SEPT. 26, 2005**

B. THIS FORM IS BEING USED TO: (check one)

☒ 1. Submit a certified copy of a **Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1074.

☐ 2. Submit an **Evaluation of Changes in Land Uses/Activities and/or Site Conditions after a Response Action Outcome Statement** has been filed pursuant to 310 CMR 40.1080.

☐ 3. Submit a certified copy of an **Amended Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1081

☐ 4. Submit a certified copy of a **Partial Termination of a Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1083(3).

☐ 5. Submit a certified copy of a **Termination of a Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1083(1)(d).

☐ 6. Submit a certified copy of a **Grant of Environmental Restriction**, pursuant to 310 CMR 40.1071.

☐ 7. Submit a certified copy of an **Amendment of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1081(3).

☐ 8. Submit a certified copy of a **Partial Release of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1083(2).

☐ 9. Submit a certified copy of a **Release of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1083(1)(c).

☐ 10. Submit a certified copy of a **Confirmatory Activity and Use Limitation**, pursuant to 310 CMR 40.1085(4).

11. Provide Additional RTNs:

☐ a. Check here if this AUL Submittal covers additional Release Tracking Numbers (RTNs).

b. Provide the additional Release Tracking Number(s) covered by this AUL Submittal.

☐ - ☐ -

(All sections of this transmittal form must be filled out unless otherwise noted above.
BWSC113A is required for all submittals listed above)



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC113

ACTIVITY & USE LIMITATION (AUL) TRANSMITTAL FORM

Release Tracking Number

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

3 - 3939

C. AUL INFORMATION:

1. Document (per Section B) Recording and/or Registration Information:

a. Name of Registry of Deeds and/or Land Registration Office: MIDDLESEX SOUTH

b. Book and Page Number and/or Document Number: BOOK 48839 PAGES 214-240

c. Date of recording and/or registration: 1/16/2007

mm/dd/yyyy

2. Is the address of the property subject to AUL different from the disposal site address listed above?

☒ a. No ☐ b. Yes If yes, then fill out address section below.

3. Street Address:

4. City/Town: 5. ZIP Code:

D. PERSON SUBMITTING AUL TRANSMITTAL FORM:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☒ c. change in the person undertaking response actions

2. Name of Organization: ASSET HOLDINGS III LP (ADESA)

3. Contact First Name: RANDY

4. Last Name: MILLER

5. Street: 63 WESTERN AVENUE

6. Title: DIRECTOR OF RISK MANAGEMENT

7. City/Town: FRAMINGHAM

8. State: MA

9. ZIP Code: 01701-0000

10. Telephone: 317 2494242

11. Ext.:

12. FAX: 317 8159650

13. Is the person described in this section the owner of the property?

- ☒ a. Yes ☐ b. No, if checked then Section G must be filled out by at least one owner.
☐ c. Check here if providing names and addresses of any additional owners in an attachment.

E. RELATIONSHIP TO DISPOSAL SITE OF PERSON SUBMITTING AUL TRANSMITTAL FORM: (check one)

☒ 1. RP or PRP ☒ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☐ e. Other RP or PRP Specify:

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Submitting AUL Specify:



ACTIVITY & USE LIMITATION (AUL) TRANSMITTAL FORM

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

Release Tracking Number

3 - 3939

F. REQUIRED ATTACHMENT AND SUBMITTALS:

- ☐ 1. Check here to certify that notice of the proposed Activity and Use Limitation (AUL) was given to all record-interest holders, if any, in accordance with 310 CMR 40.1074(1)(e), via certified mail.
- ☒ a. Check here if there were no record interest holders. b. Date of certified mailing: _____
mm/dd/yyyy
- ☐ c. Check here to certify that names and addresses of all record holders notified is attached.
- ☒ 2. Check here to certify that within 30 days of recording and/or registering the AUL, including amending, releasing or terminating the AUL, a copy of the AUL was/will be provided to the Chief Municipal Officer, the Board of Health, the Zoning Official, and the Building Code Enforcement Official in the community(ies) where the the property subject to such Activity and Use Limitation is located.
- ☒ 3. Check here to certify that within 30 days of recording and/or registering the AUL, including amending, releasing or terminating the AUL, a Legal Notice was/will be published in a newspaper with circulation in the community(ies) where the property subject to the AUL is located.
- ☒ 4. Check here to certify that within 7 days of publishing a Legal Notice in a newspaper with circulation in the community(ies) where the property subject to the AUL is located, a copy of the notice was/will be submitted to DEP.
- ☒ 5. Check here to certify that within 30 days of recording and/or registering the AUL, including amending, releasing or terminating the AUL, a certified copy of the AUL, including the LSP Opinion containing the material facts, data, and other information, will be submitted to DEP.
- ☐ 6. Check here if any non-updatable information provided on this form is incorrect, e.g. Site Address/Location Aid. Send corrections to the DEP Regional Office.
- ☐ 7. If an **Evaluation of Changes in Land Uses/Activities and/or Site Conditions after a Response Action Outcome Statement** is being submitted, check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

G. CERTIFICATION OF OWNER OF PROPERTY, IF NOT PERSON SUBMITTING AUL TRANSMITTAL FORM:

1. I, _____, attest under the pains and penalties of perjury that I am the owner of said property(ies), subject to the AUL

2. _____ 3. Date: _____
Signature mm/dd/yyyy

4. Name of Organization: _____

5. Contact First Name: _____ 6. Last Name: _____

7. Street: _____ 8. Title: _____

9. City/Town: _____ 10. State: _____ 11. ZIP Code: _____

12. Telephone: _____ 13. Ext.: _____ 14. FAX: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC113

ACTIVITY & USE LIMITATION (AUL) TRANSMITTAL FORM

Release Tracking Number

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

3

- 3939

H. CERTIFICATION OF PERSON MAKING SUBMITTAL:

1. I, **RANDY MILLER**, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

Pursuant to 310 CMR 40.1074 (1)(f), I also hereby certify under penalties of perjury, that either I (if person submitting the AUL Transmittal Form is the property owner), or

2. Name of Property Owner

am/is identified on the Notice of AUL as the owner of the property subject to the AUL, owned such property on the date that the AUL was recorded and /or registered

3. By: **RANDY MILLER**

Signature

4. Title: **DIRECTOR OF RISK MANAGEM**

5. For: **ASSET HOLDINGS III LP (ADESA)**

(Name of person or entity recorded in Section D)

6. Date: **01/25/2007**

mm/dd/yyyy

☐ 7. Check here if the address of the person providing certification is different from address recorded in Section D.

8. Street: _____

9. City/Town: _____ 10. State: _____ 11. ZIP Code: _____

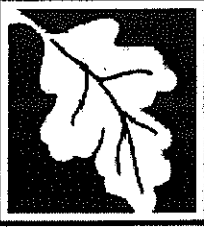
12. Telephone: _____ 13. Ext.: _____ 14. FAX: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

Received by DEP on

1/25/2007 10:23:10 AM



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC113A

ACTIVITY & USE LIMITATION (AUL) OPINION FORM

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

Release Tracking Number

3 - 3939

A. DISPOSAL SITE LOCATION:

1. Disposal Site Name: GMC FMR LANDFILL

2. Street Address: 63 WESTERN AVE

3. City/Town: FRAMINGHAM

4. ZIP Code: 01701-0000

B. THIS FORM IS BEING USED TO: (check one)

- ☒ 1. Provide the LSP Opinion for a **Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1074.
- ☐ 2. Provide the LSP Opinion for an **Evaluation of Changes in Land Uses/Activities and/or Site Conditions after a Response Action Outcome Statement**, pursuant to 310 CMR 40.1080. Include BWSC113A as an attachment to BWSC113. Section A and C do not need to be completed.
- ☐ 3. Provide the LSP Opinion for an **Amended Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1081(4).
- ☐ 4. Provide the LSP Opinion for a **Partial Termination of a Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1083(3).
- ☐ 5. Provide the LSP Opinion for a **Termination of a Notice of Activity and Use Limitation**, pursuant to 310 CMR 40.1083(1)(d).
- ☐ 6. Provide the LSP Opinion for a **Grant of Environmental Restriction**, pursuant to 310 CMR 40.1071.
- ☐ 7. Provide the LSP Opinion for an **Amendment of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1081(3).
- ☐ 8. Provide the LSP Opinion for a **Partial Release of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1083(2).
- ☐ 9. Provide the LSP Opinion for a **Release of a Grant of Environmental Restriction**, pursuant to 310 CMR 40.1083(1)(c).
- ☐ 10. Provide the LSP Opinion for a **Confirmatory Activity and Use Limitation**, pursuant to 310 CMR 40.1085(4).

(Unless otherwise noted above, all sections of this form (BWSC113A) must be completely filled out, printed, stamped, signed with black ink and attached as an exhibit to the AUL Document to be recorded and/or registered with the Registry of Deeds and/or Land Registration Office.)

C. AUL INFORMATION:

1. Is the address of the property subject to AUL different from the disposal site address listed above?

☒ a. No ☐ b. Yes If yes, then fill out address section below.

2. Street Address: _____

3. City/Town: _____

4. ZIP Code: _____



ACTIVITY & USE LIMITATION (AUL) OPINION FORM

Pursuant to 310 CMR 40.1056 & 40.1070 - 40.1084 (Subpart J)

Release Tracking Number

3 - 3939

D. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B indicates that a **Notice of Activity and Use Limitation** is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1074;

> if Section B indicates that an **Evaluation of Changes in Land Uses/Activities and/or Site Conditions after a Response Action Outcome Statement** is being submitted, this evaluation was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1080;

> if Section B indicates that an **Amended Notice of Activity and Use Limitation or Amendment to a Grant of Environmental Restriction** is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 40.1081;

> if Section B indicates that a **Termination or a Partial Termination of a Notice of Activity and Use Limitation, or a Release or Partial Release of a Grant of Environmental Restriction** is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1083;

> if Section B indicates that a **Grant of Environmental Restriction** is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1071;

> if Section B indicates that a **Confirmatory Activity and Use Limitation** is being registered and/or recorded, the Activity and Use Limitation that is the subject of this submittal (i) is being provided in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (ii) complies with 310 CMR 40.1085(4);

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 5407

2. First Name: FRED K

3. Last Name: TAYLOR

4. Telephone: 8607471800

5. Ext.:

6. FAX:

7. Signature:

8. Date:

mm/dd/yyyy

9. LSP Stamp:

RECORDING OFFICE
 FIELD CHART: MAG. BOTH
 COMPUTED BY: DEH. APPROVED BY: DWH

Legend

SYMBOLS AND ABBREVIATIONS SHOWN ON THIS PLAN:
 SSM STEEL SURVEY MARKER
 MAG MAGNETIC SURVEY MARK
 SET
 (F) FUNDING
 (P) POINT OF FORMERLY
 (M) MONITOR WIRE
 (A) ACTIVITY AND USE LIMITATION
 (L) LIGHT POLE

Address: Register of Deeds,
 County of Middlesex,
 Commonwealth of Massachusetts
 Plan No. 22447
 Date: 11/16/2007
 Book: 25074, Page: 228
 Sheet: 1 of 1
 Project No. 22447
 FOR REGISTRY USE ONLY

N/F
 Asset Holdings III LP
 Book 25074, Page 228

A.U.L. 2
 8,229 ± S.F.

N/F
 General Motors, Corp.
 Book 6911, Page 572

A.U.L. 1
 (Area Within Lot 2)
 213,400 ± S.F.
 4.90 ± Acres

N/F
 Asset Holdings III LP
 Book 25074, Page 228

N/F
 General Motors, Corp.
 Book 6911, Page 572

Lot 2
 Area=6.08 Acres

Activity And Use
 Limitation Area

Notes

- 1.) RECORD OWNERS ARE GENERAL MOTORS CORP. & ASSET HOLDINGS III LP. SEE DEED IN BOOK 6911 PAGE 572 & BOOK 25074 PAGE 228.
- 2.) FLOOD ZONE "C" AS SHOWN ON FIRM 250133-118 FEBRUARY 3, 1982.
- 3.) SEE PLAN #1720 OF 1994 RECORDED IN DEED BOOK 25074 PAGE 227 (LOT 2).
- 4.) SEE FRAMINGHAM ASSESSORS SHEET 112, MAY 71, MAP 62, LOT 2418 & SHEET 119, MAP 62, BLOCK 2.
- 5.) RECORDS OF FRAMINGHAM ASSESSORS ARE ACCORDING TO CURRENT ASSESSORS RECORDS.
- 6.) SEE MONUMENTED SOUTH RECORDS OF DEEDS FOR RECORD DOCUMENTS.
- 7.) LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON FIELD LOCATION OF POSSIBLE STRUCTURES SUCH AS CEMENT, CONCRETE, METAL, PLASTIC, ETC. WHICH WERE IDENTIFIED AND CORRELATED TO THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON. THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON IS NOT GUARANTEED BY THE ASSESSORS. THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON IS NOT GUARANTEED BY THE ASSESSORS. THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON IS NOT GUARANTEED BY THE ASSESSORS.
- 8.) SEE FRAMINGHAM ASSESSORS SHEET 112, MAY 71, MAP 62, LOT 2418 & SHEET 119, MAP 62, BLOCK 2.
- 9.) SEE FRAMINGHAM ASSESSORS SHEET 112, MAY 71, MAP 62, LOT 2418 & SHEET 119, MAP 62, BLOCK 2.
- 10.) SEE FRAMINGHAM ASSESSORS SHEET 112, MAY 71, MAP 62, LOT 2418 & SHEET 119, MAP 62, BLOCK 2.
- 11.) LEGAL STATUS OF EASEMENTS, RIGHTS AND RESTRICTIONS NOT DETERMINED BY THIS SURVEY.

I CERTIFY THAT THE PREPARATION OF THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTER OF DEEDS AS ESTABLISHED JANUARY 12, 1982.



David M. Jones
 PROFESSIONAL LAND SURVEYOR
 DATE: 11/16/2007

I CERTIFY THAT THIS PLAN SHOWS THE PROPERTY LINES THAT ARE THE LINES OF EXISTING OWNERSHIP, AND THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE LOTS FOR PURPOSE OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.

David M. Jones
 PROFESSIONAL LAND SURVEYOR
 DATE: 11/16/2007

THE CORPORATIONS SHOWN HEREON ARE INTENDED TO MEET THE REQUIREMENTS OF MASSACHUSETTS AND ANY OTHER STATE TO TITLE OR OWNERSHIP OF THE PROPERTY SHOWN. OWNERS OF ALIENABLE INTERESTS ARE ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.



Record Owners:
 General Motors
 &
 Asset Holdings III LP

Activity and Use Limitation Plan
 Framingham, Massachusetts
 Prepared For: Constanga-Rovers Associates
 (Framingham, County)
 Scale: 1" = 40' Date: November 27, 2006

SCHOFFEL BROTHERS OF NEW ENGLAND, INC.
 ENGINEERING, SURVEYING, PLANNING
 1071 BUCKENBURY ROAD
 FRAMINGHAM, MASSACHUSETTS 01901
 Telephone: (508) 754-1100
 Fax: (508) 754-1197
 E-mail: info@schoffel.com
 Project No. 22447
 Sheet No. 1 of 1

22447

Official Receipt for Recording In:

Middlesex South Registry of Deeds
208 Cambridge St.

Cambridge, Massachusetts 02141

Issued To: W

Recording Fees			
Document Description	Number	Book/Page	Recording Amount
PLAN	00000051	2007 51	\$75.00
Collected Amounts			\$75.00
Payment Type			Amount
Check	1287		\$75.00
			\$75.00

Total Received : \$75.00
Less Total Recordings: \$75.00
Change Due : \$.00

Thank You
EUGENE C. BRUNE - Register of Deeds

By: Joseph S

Receipt# Date Time
0694767 01/16/2007 11:41a

Official Receipt for Recording In:

Middlesex South Registry of Deeds
208 Cambridge St.

Cambridge, Massachusetts 02141

Issued To: W

Recording Fees			
Document Description	Number	Book/Page	Recording Amount
NOT	00009696	48839 214	\$75.00
CERT	00009696	48839 214	\$75.00
NOT	00009697	48839 241	\$75.00
Collected Amounts			\$225.00

Payment Type Amount
Check 6362 \$225.00
\$225.00
Total Received : \$225.00
Less Total Recordings: \$225.00
Change Due : \$.00

Thank You
EUGENE C. BRUNE - Register of Deeds

By: Carol Di

Receipt# Date Time
0894951 01/16/2007 01:43p

APPENDIX D

OPERATION, MAINTENANCE, AND MONITORING PLAN

APPENDIX E

FRAMINGHAM CONSERVATION COMMISSION PHASE IV AUGUST 2005 ORDER OF CONDITIONS DOCUMENTATION

- E-1: CRA FINAL INSPECTIONS MEMORANDUM (JANUARY 26, 2007)
- E-2: CRA REQUEST FOR CERTIFICATE OF COMPLIANCE (NOVEMBER 28, 2006)
- E-3: FCC MEMORADUM (DECEMBER 6, 2006)

APPENDIX F

AS-RECORDED DRAWINGS

DRAWING 1 PRE-CONSTRUCTION CONDITIONS

DRAWING 2 SITE WORKS

DRAWING 3 SPOILS PLACEMENT

DRAWING 4 GRADING

DRAWING 5 CAP SECTIONS

DRAWING 6 CAP DETAILS

DRAWING 7 STORMWATER AND FENCE DETAILS

DRAWING 8 NORTH POND GRADING

DRAWING 9 NORTH AND SOUTH POND DETAILS

DRAWING 10 STORMWATER ALIGNMENT

APPENDIX G

REMEDIATION CONSTRUCTION SCHEDULES

G-1: PROPOSED (2005)

G-2: ACTUAL (2006)

APPENDIX H

OFF-SITE DISPOSAL DOCUMENTATION (BOLS)

H-1: FEBRUARY 28, 2006

H-2: MARCH 13, 2006

H-3: JUNE 8, 2006

APPENDIX I

CRA SUPERINTENDENT DAILY LOGS

I-1: OCTOBER 3, 2005 TO DECEMBER 23, 2005

I-2: APRIL 4, 2006 TO JUNE 1, 2006

APPENDIX J

SOIL LAYERS GEOTECHNICAL LABORATORY REPORTS

J-1: GZA QC REPORTS

J-2: UMASS TOPSOIL QC REPORT

J-3: CRA QA REPORTS

J-4: GZA QA REPORTS (SPRING 2006 TEST PIT LOCATIONS)

APPENDIX K

SOIL LAYERS GEOTECHNICAL FIELD REPORTS

K-1: TABLE K-1 - 2005/2006 QC COMPACTION TESTS SUMMARY

K-2: FIGURES 1-21 (GZA FIELD REPORTS)

K-2: GZA QC REPORTS

K-3: ATC QA REPORTS

APPENDIX L

SOIL LAYERS ANALYTICAL CHEMISTRY REPORTS AND COMPLIANCE ASSESSMENTS

- L-1: WST QC REPORTS
- L-2: ACCUTEST QA REPORTS
- L-3: CRA COMPLIANCE ASSESSMENTS

APPENDIX M

AGGREGATE INDUSTRIES ASPHALT JOB MIX FORMULAS

M-1: BINDER COURSE (2005)

M-2: LEVELING AND TOP COURSES (2006)

APPENDIX N

ASPHALT LAYERS GEOTECHNICAL AND FIELD LABORATORY REPORTS

N-1: DATA SUMMARY TABLES

TABLE N-1-1: BINDER COURSE COMPACTION AND MARSHALL PROPERTIES RESULTS

TABLE N-1-2: BINDER COURSE ASPHALT CONTENT AND GRADATION TEST RESULTS

TABLE N-1-3: LEVELING COURSE COMPACTION AND MARSHALL PROPERTIES
RESULTS

TABLE N-1-4: LEVELING COURSE ASPHALT CONTENT AND GRADATION TEST RESULTS

TABLE N-1-5: TOP COURSE COMPACTION AND MARSHALL PROPERTIES RESULTS

TABLE N-1-6: TOP COURSE ASPHALT CONTENT AND GRADATION TEST RESULTS

TABLE N-1-7: ASPHALT STRUCTURAL EVALUATION

N-2: BRIGGS QC REPORTS

N-2: ATC QA REPORTS

APPENDIX O

SEVENSON/ AGGREGATE INDUSTRIES ASPHALT WARRANTY

APPENDIX P

CRA ASPHALT REPAIR MEMORANDUM (APRIL 25, 2006)

APPENDIX Q

INSITUFORM STORM SEWER LINING FAILURE REPORT (MARCH 7, 2006)

AS-BUILT CONSTRUCTION AND RESPONSE ACTION OUTCOME REPORT

**FORMER GENERAL MOTORS LANDFILL
FRAMINGHAM, MASSACHUSETTS**

**VOLUME II
APPENDICES H THROUGH Q**

**Prepared For:
General Motors Corporation**

JANUARY 2007

REF. NO. 012618 (33)

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