Revision 1
May 16, 2008

PARCELS 201 AND 204
INTERIM MEASURES WORK PLAN

GENERAL MOTORS POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Prepared for:

General Motors Corporation

MAY 16, 2008
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LIST OF ACRONYMS/SHORT FORMS

AAQMP	-	Ambient Air Quality Monitoring Program
AOC	-	Administrative Order on Consent
Bedford Facility	-	General Motors Corporation Powertrain Bedford Facility
CA	-	Corrective Action
CERCLA	-	Comprehensive Environmental Response, Compensation, and Liability Act
Certification Report	-	Final Construction Certification Report
CRA	-	Conestoga-Rovers & Associates, Inc.
cubic yards	-	cy
DNAPL	-	Dense Non-Aqueous Phase Liquid
EZ	-	Exclusion Zone
FML	-	Flexible Membrane Liner
GM	-	General Motors Corporation
HASP	-	Health and Safety Plan
HI	-	Hazard Index
IDEM	-	Indiana Department of Environmental Management
IM	-	Interim Measure
LNAPL	-	Light Non-Aqueous Phase Liquid
mg/kg	-	milligrams per kilogram
NAPL	-	Non-Aqueous Phase Liquid
OSHA	-	Occupational Safety & Health Administration
PCBs	-	Polychlorinated Biphenyls
PUF	-	Polyurethane Foam
QAPP	-	Quality Assurance Project Plan
RA	-	Removal Action
RCRA	-	Resource Conservation and Recovery Act
SAP	-	Sampling and Analysis Plan
SHHRA	-	Screening Human Health Risk Assessment
Site	-	Parcels 201 and 204
SOPs	-	Standard Operating Procedures
SOW	-	Scope of Work
SVOCs	-	Semi-Volatile Organic Compounds
TAL	-	Total Analyte List
TCL	-	Target Compound List
TSCA	-	Toxic Substances Control Act
TSPs	-	Total Suspended Particulates

LIST OF ACRONYMS/SHORT FORMS

U.S. EPA	-	United States Environmental Protection Agency
Vault	-	Toxic Substances Control Act Compliant Vault in the East Plant Area
VOCs	-	Volatile Organic Compounds
WMP	-	Waste Management Plan
Work Plan	-	Parcels 201 and 204 Interim Measures Work Plan

1.0 INTRODUCTION

This Work Plan presents the Scope of Work (SOW) to be completed as an Interim Measure (IM) for Parcels 201 (in the East Plant Area) and 204, which is located southeast of the East Plant Area at the General Motors Corporation (GM) Powertrain Bedford Facility (Facility) in Bedford, Indiana. Conestoga-Rovers & Associates, Inc. (CRA) has prepared this Work Plan on behalf of GM, in accordance with the Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) activities being conducted under the Performance Based Agreement (effective March 20, 2001, as amended October 1, 2002, and February 28, 2007) between United States Environmental Protection Agency (U.S. EPA) and GM for the GM Powertrain Bedford Facility (Bedford Facility or Facility).

The locations of Parcels 201 and 204 (Site) are presented on Figure 1.1. A Site Plan is presented on Figure 1.2.

1.1 GENERAL

The purpose of this Work Plan is to present an overview of the current conditions and to provide the details related to the proposed IM for Parcel 201 excavation and containment of soil at specific areas within Parcel 201. In addition, a small excavation of material that extends from Parcel 201 to Parcel 204 will be completed. Soil excavated from Parcel 204 will be consolidated onto Parcel 201. This Work Plan summarizes the information obtained during Site investigation activities conducted by GM.

This Work Plan includes the following elements:

i) review of the delineation of the extent of areas impacted by Polychlorinated Biphenyls (PCBs);
ii) description of remedy components for Parcels 201 and 204;
iii) Site preparation activities;
iv) construction support facilities;
v) installation of environmental controls;
vi) implementation of Site safety and contingency plans;
vii) development of soil excavation, handling, and backfilling approaches for selected areas;
viii) preparation for transportation and staging requirements;

ix) preparation of quality assurance measures; and

x) development of an IM implementation schedule.

1.2 WORK PLAN ORGANIZATION

The remainder of this Work Plan is organized as follows:

Section 2.0 – Review of Existing Conditions
This section presents a description of Parcels 201 and 204 and a review of previous investigations that have formed the basis for this Work Plan.

Section 3.0 – Interim Measure Scope of Work
This section presents a description of the SOW for the IM to be completed under this Work Plan.

Section 4.0 - Approvals
This section outlines the approval requirements for construction within the flood plain as well as other approval requirements.

Section 5.0 – Reporting
This section presents the reporting activities required under the Work Plan.

Section 6.0 – Project Team
This section presents the Project Team and organizational structure for implementation of the activities required under the Work Plan.

Section 7.0 – Project Schedule
This section presents the schedule for implementation of the activities required under the Work Plan.

Section 8.0 – References
This section presents references cited in the Work Plan.

The existing Site-specific Consolidated Health and Safety Plan (HASP) (CRA, April 2007) (Appendix A), Sampling and Analysis Plan (SAP) (Appendix B), Waste Management Plan (WMP) (Appendix C), and other plans provided in the Downstream Parcels Removal Action Work Plan (CRA, May 2004), and East Plant Area IMs or approved amendments to these plans, will apply, as appropriate, to Work Plan activities outlined in this report.

The existing Quality Assurance Project Plan (QAPP) (CRA, July 2006) will apply to all sampling and analysis activities on Parcels 201 and 204.

2.0 REVIEW OF EXISTING CONDITIONS

2.1 PARCELS 201 AND 204 DESCRIPTION

2.1.1 PHYSICAL SETTING

Parcel 201 is located in the southernmost portion of the GM property East Plant Area, east of GM Drive. An unnamed tributary runs through the Parcel beginning at the southern boundary and flowing north where it eventually discharges to Bailey's Branch.

Parcel 204 is located directly east of Parcel 201. This residential property is located at the northern end of F Street off of GM Drive.

An aerial photograph of Parcels 201 and 204 is presented on Figure 1.3.

2.1.2 LAND USE

Parcel 201 is bordered to the west by GM Drive and railroad tracks; bordered to the south by Parcel 417 and GM drive; bordered to the east by Parcels 3 and 204; and bordered to the north by Parcel 200 which houses the Facility's water treatment plant. Parcel 201 is part of the Facility property East of GM drive designated as the East Plant Area. It does not house any specific Facility services, however, temporary support facilities for the ongoing RCRA and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) work were located on the parcel.

Parcel 204 is bordered to the east and north by Parcel 3; bordered to the west by Parcel 201; and bordered to the south by Parcel 203. The parcel is a residential property and is currently owned by GM.

2.1.3 HYDROLOGIC SETTING

Parcel 201 includes the headwaters of an unnamed tributary to Bailey's Branch, a sub-basin to the Pleasant Run Watershed. Additional stormwater from the City is directed here as well, through a culvert at the road. The creek flows through Parcel 201 from the southernmost tip into Parcel 200 to the north and eventually to the confluence with Bailey's Branch on Parcel 3, approximately 60 feet downstream of Outfall 002. Three springs have been identified along the creek's reach through Parcel 201 which formerly contributed to the creek's flow. Samples collected from these springs have been identified as having PCBs and water from these springs is currently collected and treated. The creek is ephemeral, with overland storm flow contributing to the majority of flow.

Parcel 204 is also within the Pleasant Run Watershed and surface water runoff is primarily via overland sheet-flow to the unnamed tributary on Parcel 201 and then to Bailey's Branch Creek. There are no distinct streams or ditches on this Parcel.

2.2 SITE CHARACTERIZATION ACTIVITIES

Surficial soil and sediment sampling has been completed within Parcels 201 and 204 as part of the creek investigation. Borings were also completed and samples were collected for the proposed perimeter groundwater trench design at the north end of Parcel 201 and in fill area on the southwest quadrant of Parcel 201. Additional delineation borings were completed on Parcel 201 to define the horizontal and vertical limits of the ≥50 milligrams per kilogram (mg/kg) PCBs soil. Figure 2.1 identifies soil sampling locations on Parcels 201, 204, and surrounding parcels. The PCB analytical results summary for these locations is presented in Table 2.1. Figure 2.1 also identifies groundwater monitoring locations where non-aqueous phase liquid (NAPL) has been observed. A databox figure in Appendix D presents the PCB analytical results in more detail.

Samples from Parcel 204 identified small areas with PCB concentrations exceeding the residential soil cleanup criteria of 1.8 mg/kg. In addition, a fill area with PCB concentrations ≥50 mg/kg was delineated on the southern and western portion of Parcel 201.

All characterization sample analyses and data validation have been completed in accordance with the approved QAPP (CRA, July 2006).

2.3 EVALUATION OF APPLICABLE REGULATIONS

This section provides a review of applicable regulations, which must be considered in implementing the IM for Parcels 201, and 204.

2.3.1 CLEANUP CRITERIA

The residential land-use cleanup criteria approved by U.S. EPA in the Administrative Order on Consent (AOC) for floodplain soil along Pleasant Run, Bailey's Branch and designated tributaries are 1.8 mg/kg total PCBs for soil and 1.0 mg/kg PCBs for sediment, based on the Indiana Department of Environmental Management (IDEM) default residential cleanup criteria for unrestricted use (IDEM, February 2001). These criteria are conservative in their application in this IM given the Site conditions and present use, and will be utilized as the final cleanup criteria for delineated areas >1.8 mg/kg PCBs within Parcel 204.

Based on the approved East Plant Area IM Alternatives Review Report (CRA, April 2005) and the 40 CFR 461.61 part (c) Request for Amendment (CRA, December 2007), delineated ≥50 mg/kg PCBs soil within the East Plant Area will be prescriptively excavated and placed in the Toxic Substances Control Act (TSCA) compliant vault in the East Plant Area (Vault). The excavated ≥50 mg/kg PCBs soils from Parcel 201 will be placed in the on-site TSCA vault. Remaining < 50 mg/kg PCB impacted materials on Parcel 201 will be covered with grading fill from the Removal Action (RA) and capped with an extension of the impermeable cover for the East Plant Area Cover System (CRA, April 2008). The Perimeter Trench will be extended along the eastern side of Parcel 201.

3.0 INTERIM MEASURE SCOPE OF WORK

This section presents the sequence of tasks for the IM. CRA will direct and oversee activities on behalf of GM during the implementation of the IM including the collection and management of related data, and the development and preparation of the Final Construction Certification Report.

U.S. EPA and IDEM will be notified of the name and qualifications of the proposed contractor and significant subcontractors who will conduct activities in Parcels 201 and 204 at least 5 business days prior to each contractor beginning activities, or as otherwise agreed to by U.S. EPA.

3.1 INTERIM MEASURE APPROACH IN GENERAL

3.1.1 PRESCRIBED SOIL SOURCE REMOVAL

The ≥50 mg/kg PCB soil as delineated will be prescriptively excavated to the depths and areas indicated on Figure 3.1, and transported directly to the East Plant Area for placement in the Vault. The PCB soil from Parcel 204 greater than 1.8 mg/kg and less than 50 mg/kg, will be excavated and placed under the Cover System for the East Plant Area.

An estimated 950 cubic yards (cy) and 23 cy of ≥50 mg/kg PCB soil will be removed from 0-2 ft bgs and 10-12 ft bgs intervals, respectively. A survey of the excavation will be completed upon the completion of each interval to verify the prescribed limits have been achieved. Soils <50 mg/kg removed from the slopes of the 10-12 ft bgs interval will be temporarily staged adjacent to the excavation and placed back in the excavation after the excavation extents are verified.

3.1.2 EXCAVATION OF RESIDENTIAL PARCELS

The <50 mg/kg PCB soil that exceeds the 1.8 mg/kg residential cleanup criterion on Parcel 204 will be excavated to the extent of proposed excavation limits defined on Figure 3.1. Verification sampling will be completed for these excavations to ensure the cleanup criterion has been met. Preliminary verification area grids are presented on Figure 3.1 and additional grids will be added if necessary. Verification sampling will be completed in accordance with the QAPP (CRA, July 2006) and SAP (CRA, May 2005) (Appendix B), and as outlined in section 3.8.4 of this Work Plan. In the event that the verification results require an extension of the excavation beyond 204 or GM owned property, GM will work with the property owner to complete the work in accordance with this Work Plan. This soil will be placed under the Cover System in the East Plant Area.

3.1.3 USE OF <50 MG/KG PCB SOIL FROM THE REMOVAL ACTION AS GRADING FILL

Material will be required to be placed to backfill excavations of ≥50 mg/kg PCB soil, and as grading fill on Parcel 201 prior to Cover System construction. Suitable material for use as backfill under the low permeability cover is available from the Removal Action (RA) in the Pleasant Run Creek excavation. The RA soils to be utilized are those containing <50 mg/kg PCBs. During placement, the backfill material will be compacted to control differential settlement of the Cover System, once constructed, excavated areas outside the limits of the Cover System (i.e., Parcel 204) will be backfilled with clean soil. The East Plant Area Perimeter Trench will extend along the eastern boundary of Parcel 201 following construction of the Cover System and approval of the Trench design.

Potentially impacted PCB soil will be managed to mitigate runoff. Potentially contaminated runoff will be collected, and dust/air emissions will be controlled. These controls will include silt fences and hay bales enclosing the stockpiles as well as placement along drainage pathways. Stockpiles not in use will be covered. Water that comes in contact with the <50 mg/kg PCB soil will be contained and directed to collection sumps. Water will be collected from these sumps and treated prior to discharge. The quantity of water requiring treatment will be minimized by the placement of tarps during inactive grading fill placement periods to minimize contact of precipitation with the grading fill.

3.1.4 COVER SYSTEM EXTENSION

The East Plant Area Cover System will be extended to Parcel 201 and installed above the <50 mg/kg PCB fill area and areas potentially still impacted with <50 mg/kg PCB material as shown in Figure 3.2. The cross-section of the extended cover system will be consistent with the East Plant Area Cover System design, as described in the East Plant Area Cover System Design Report (CRA, April 2008) and amendments. The Cover System will direct clean surface water toward the perimeter ditches surrounding the fill area, which will route the surface water to Bailey's Branch creek.

The Cover System is a modified version of the RCRA Subtitle C cover designed to use synthetic materials instead of soil materials to minimize truck traffic caused by the transportation of soil. The cover system will be constructed to the specifications presented in the East Plant Area Cover System Design Report (CRA, April 2008). The proposed Cover System cross-section is as follows (bottom to top):

- grading layer (depth varies as necessary);
- soil barrier layer – clay (12 inches);
- 60 ml Linear Low Density Polyethylene Liner (LLDPE);
- Geonet drainage layer;
- common fill (12 inches); and
- vegetative cover (6 inches).

A biotic barrier and/or gas venting layer was not included in the design as material is primarily soil with low organic content. This material is not expected to create gas at a rate that would create a problem.

3.1.5 CREEK DIVERSION

The creek will be diverted for the duration of construction. To the extent practical, run off will be diverted around the construction area. Water that comes into contact with potentially contaminated soil material will be collected and treated at one of the approved water treatment facilities being utilized in the Removal Action.

A permanent extension of the storm sewer culvert coming from under GM Drive will be installed to divert surface water from upgrade of the Site past the Parcel 201 area. Fill will be placed over the current creek alignment and storm sewer extension. The creek channel will be established at the storm sewer outlet with a flexible membrane liner (FML) separating the channel from remaining potentially impacted soil.

3.1.6 INTERIM MEASURE – SUMMARY OF ACTIVITIES

Following review of the Work Plan by U.S. EPA, and procurement of the necessary permits, approvals, waivers, access agreements and contractors, the IM field activities will be initiated. These activities include:

- coordinating Parcel access;
- locating utilities;
- mobilizing construction facilities, material, equipment, and personnel necessary to perform the work – this includes the relocation of the existing construction support field trailers from the present location on Parcel 201 to a new location across GM Drive;
- providing and maintaining construction facilities and temporary controls;
- preparing the Site, including:
  - emergency first aid facility,
  - fire suppression equipment,
  - decontamination facilities,
  - temporary utilities,
  - access roads,
  - land preparation (as required),
  - work zone identification, and
  - temporary staging facilities at the GM Facility;
- implementing environmental and sediment erosion controls;
- tree clearing as necessary;
- implementing a Site-specific HASP;
- implementing storm water controls;
- excavating, handling, and backfilling of soil, including:
  - preparation through survey of prescriptive excavation limits for PCB concentrations ≥50 mg/kg PCBs on Parcel 201,
  - preparation through survey of initial excavation limits for areas of PCB concentrations ≥1.8 mg/kg on Parcel 204,
  - prescriptive excavation of soil ≥50 mg/kg PCBs in the identified fill area on Parcel 201,
  - loading for direct transportation to the East Plant Area Vault for ≥50 mg/kg PCBs soil,
  - excavation of soil exceeding 1.8 mg/kg on Parcel 204, and placement of the excavated material onto Parcel 201 beneath the final cover system,
  - additional excavation/verification sampling as necessary to meet the cleanup goal on Parcel 204, and

   - backfilling/grading, and restoration of excavated areas as required;
- removal of miscellaneous debris (e.g., tree stumps, rocks) that cannot be integrated into the grading layer in the East Plant Area, and staging and/or disposal at appropriate off-Site facilities (as required);
- extension of the East Plant Area Cover System over the fill areas (CRA, August 2006);
- Contractor monitoring of real-time fugitive air emissions consistent with the Contractor's HASP;
- water management;
- finalizing IM closeout activities, including:
   - cleanup/restoration of support areas,
   - restoration of excavation areas by backfilling grading and seeding and erosion control,
   - final decontamination of construction equipment and temporary facilities, and
   - management of decontamination waste waters;
- demobilization of temporary facilities and equipment from the Site; and
- monitoring establishment of vegetation in restored areas.

3.2 PROPERTY ACCESS

GM owns Parcels 201 and 204, therefore, access agreements are not required for these Parcels.

3.3 SITE SECURITY

A temporary fence will be placed around unsecured active work areas and used as a security fence during the IM construction period. The contractor will be responsible for maintaining security at all times during the IM construction activities. The contractor will inspect, maintain, and repair the fencing, as necessary, to ensure protection of the public and security of the Parcel. The temporary fence will be removed at the conclusion of the IM. A final permanent fence will be placed around the Parcel 201 boundary following completion of the Perimeter Trench.

During active soil handling, or until soil materials are removed from Parcels 201 and 204, security will be provided including:

i) Limit vehicular access to the work areas to authorized vehicles and personnel only.

ii) Provide initial screening of all Site personnel and visitors. A list of authorized personnel and the name of their employer and documentation of appropriate health and safety training will be available at the construction support trailers.

iii) Maintain a security log in which documentation is provided of all work area personnel, visitors and deliveries, and any security incidents. This log will include the date, name, address, company, time in and time out for each employee and visitor. If unauthorized personnel are observed in the work areas of Parcels 201 and 204 and refuse to vacate the premises, appropriate law enforcement officials will be contacted.

iv) Maintain a visitor log at the access locations. Visitors will not be allowed to enter secured areas without the knowledge and approval of CRA. All visitors will be required to complete health and safety training in accordance with the HASP prior to gaining access to the secured areas.

v) Check that all installations are secure and intact on a daily basis. If warning signs are removed, the situation will be brought to the attention of the GM Project Manager and will be rectified at the earliest possible opportunity.

3.4 CONSTRUCTION SUPPORT FACILITIES

The following sections outline the required construction support facilities for the Parcels.

3.4.1 SITE OFFICE

Field office facilities are currently in place to the west of the GM Drive to support the RA. These facilities have been moved in order to access and complete the Parcels 201 and 204 IM. These relocated facilities will be utilized to support this IM.

3.4.2 EMERGENCY FIRST-AID FACILITY

The contractor will be required to supply and maintain a first-aid facility, which complies with the requirements of 29 CFR 1910.141, during the IM.

3.4.3 FIRE SUPPRESSION EQUIPMENT

The contractor will be required to provide necessary fire suppression equipment to ensure the safety of Site personnel and protection of the owner's property. Details of the fire suppression equipment are provided in the HASP (Appendix A). The contractor will coordinate with the local Fire and Police Departments to respond to emergencies.

3.4.4 DECONTAMINATION FACILITIES

Prior to commencing work in the Exclusion Zone (EZ) of the parcel, the contractor will be required to supply and operate a personnel hygiene/decontamination facility. At the support areas, personnel decontamination stations will be established for the removal of personal protective equipment. The contractor will also maintain an equipment decontamination pad at the active work area.

3.4.4.1 PERSONNEL HYGIENE/DECONTAMINATION FACILITY

The contractor will be required to supply and operate a personnel hygiene/decontamination facility that complies with the requirements of 29 CFR 1910.141.

Wastewater from the personnel hygiene/decontamination facility will be collected and disposed of as discussed in Section 3.10.

3.4.4.2 EQUIPMENT DECONTAMINATION FACILITY

The contractor will be required to supply and operate an equipment decontamination facility. The contractor will collect all wastewater from the decontamination pad for treatment at the GM facility or have sufficient pumping equipment and piping to pump all wastewater from the decontamination pad to contractor-supplied wastewater storage tank(s) for treatment at the GM facility or disposal off-Site.

All equipment leaving the EZ established for work zone access locations will be decontaminated on the decontamination pad using high-pressure, low-volume hot water and non-phosphate detergent (or equivalent), if necessary, and will be inspected by CRA prior to entering the Support Zone.

Sediments accumulated on the decontamination pad will be collected and placed with materials consolidated on Parcel 201 for the Cover System construction. Water from the decontamination facility will be collected and disposed of as discussed in Section 3.10.

3.4.5 PORTABLE SANITARY FACILITIES

Portable toilet facilities will be provided and maintained by the contractor in an area outside the EZ. Sanitary wastes will be removed and disposed of off-Site on a periodic basis in accordance with applicable laws and regulations.

3.4.6 UTILITIES

The contractor will be required to locate and verify the capacity of all aboveground and underground utilities prior to commencing field activities.

Temporary utilities necessary for the completion of the IM will be provided by the contractor either by temporary tie-in to existing utilities, or by provision of temporary facilities (e.g., generators, water tanks, etc.).

3.4.7 ACCESS ROADS/PARKING

Access roads will be constructed, as necessary from GM Drive, to allow for access and loading of material onto transportation vehicles and provide a route for transportation vehicles to pass through the decontamination area prior to leaving the excavation area.

The contractor's excavation operation will be organized to minimize the contamination of imported granular material used for the construction of access roads. Imported granular materials used for the construction of access roads outside the limits of the cover system, if any, which contacts contaminated soil will be excavated and properly disposed.

Sufficient space for parking for Site personnel and visitors will be established by the contractor.

3.5 CLEARING AND GRUBBING

The areas required for construction facilities, access, and the excavation areas will be cleared to the extent required to implement the IM. Additional clearing beyond that anticipated may be conducted, as necessary to complete the IM for the Parcels. Cleared above-grade vegetation will be removed or chipped on-Site and used to support Site restoration activities or other uses. Above grade vegetation is defined as vegetation located 1-foot or more above grade. Tree stumps and below-grade vegetation removed will be disposed of at an off-Site landfill as <50 mg/kg PCBs waste.

3.6 ENVIRONMENTAL CONTROLS

3.6.1 FUGITIVE PARTICULATE CONTROL

The contractor will implement fugitive particulate control measures in accordance with the provisions of the Indiana Administrative Code Title 326 Article Rule 4 (Fugitive Dust Emissions). The particulate control measures will be designed to limit the emissions of total suspended particulates (TSPs) that are likely to remain airborne and be carried out of the work areas (Parcels 201 and 204 and any soil Staging Areas).

During the performance of the IM, the contractor will be responsible for the control of fugitive particulates generated by excavation, transportation, and backfilling of soil. This may involve the following:

- minimizing open work areas;
- maintaining fugitive air emissions control measures such as a water misting system to prevent the generation of fugitive air emissions;
- using potable water for fugitive air emissions controls;
- reducing levels or types of activity at the Site until the weather becomes more suitable;
- disallowing the use of any chemical means for dust and particulate control without prior review by U.S. EPA;
- using appropriate covers on trucks hauling impacted or non-impacted material;
- pausing work and implementing corrective measures prior to resuming work in the event that the contractor's dust control is not sufficient to control dust from the Site;

- spraying ≥50 mg/kg PCB excavations with paper mulch at the end of each working day; and
- spraying areas with paper mulch, foam, and/or water for odors and/or dust control during working hours.

High-volume TSP sampling will be conducted daily for the duration of the construction work. In addition, high-volume PCB samples (using polyurethane foam (PUF) filter media) will be conducted daily during the ≥50 mg/kg PCB soil excavation and for the first two weeks of soil placement construction work. All samples will be collected in accordance with the approved Ambient Air Quality Monitoring Program (AAQMP) and approved addenda. The AAQMP for the East Plant Area was last modified in the letter, Revised Request for East Plant Area AAQMP Modifications (Appendix E). Figure 3.3 presents proposed air monitoring station locations. Monitoring frequencies in accordance with the latest AAQMP revisions (Appendix E) are presented in Table 3.1. Pending favorable air monitoring sample results, a reduction in the number of monitoring stations may be requested.

3.6.2 EROSION CONTROL

The contractor will plan and execute construction methods to minimize the amount of soil that requires excavation to be exposed at one time, to the extent practical. In areas where slopes exceed 5 percent grade, the contractor will ensure soil erosion control through the use of siltation fences, straw bales, riprap, sod, berms, tarping, or erosion mats, as directed by CRA to prevent erosion and migration of silt, mud, sediment, and other debris out of the work areas.

3.6.3 STORM WATER CONTROL

Although it is anticipated that this IM will be conducted during a dry weather period, appropriate storm water controls will be utilized in the event a storm event occurs.

Storm water controls, including check dams, diversion dikes and drainage swales to control run-on from upland areas, will be constructed prior to initiating significant excavation. Any PCB-impacted seeps or springs with the potential to re-contaminate the Parcel are being addressed in accordance with the Site Source Control Work Plan (CRA, 2003) as amended, submitted as part of the RA.

Construction of storm water controls prior to initiating excavation will control the potential for off-Site releases and minimize the amount of storm water that contacts contaminated material.

The contractor will be required to control storm water runoff in order to meet the following requirements:

i) prevent surface water runoff from flowing from contaminated areas to clean areas through the use of tarping and/or other measures;

ii) minimize storm water entering a work zone from adjacent areas and ponding on-Site in excavated areas through use of temporary berms/swales, proper grading, and by expediting backfilling of excavations; and

iii) ensure that IM activities do not impact storm water runoff quality to Bailey's Branch Creek.

Storm water flowing toward the work zones will be redirected, to the extent practical, through the use of dikes/swales/dams/berms/tarping to minimize potential for storm water to come in contact with potentially contaminated materials, surface water, and/or storm water runoff. Storm water that comes in contact with potentially contaminated material will be considered contaminated water that the contractor shall handle in accordance with Section 3.10.

The contractor will be required to contain and collect storm water from the decontamination pad by providing curbing and positive drainage to a collection sump. This storm water will be transferred from the sump to the contractor's temporary storage tank and/or truck. All wastewater will be managed according to the wastewater management requirements provided in Section 3.10.

3.7 SITE-SPECIFIC HEALTH AND SAFETY AND CONTINGENCY AND EMERGENCY RESPONSE PLAN

A Site-specific HASP, meeting the requirements of the Performance-Based Agreement, is required to ensure that all IM construction activities are performed safely and in accordance with applicable regulatory requirements. The HASP will also ensure that all persons on-Site, the general public, and the environment are protected from exposure to Site-related material during implementation of the IM construction activities at the Site. Each contractor involved in IM construction activities at the Site will be required to develop, implement, and maintain their own Site-specific HASP for activities they will perform at the Site. A HASP covering the activities of CRA and CRA Services is provided in Appendix A.

The basis for the HASP is the Occupational Safety and Health Administration (OSHA) Standards and Regulations contained in Title 29, Code of Federal Regulations, Parts 1910 and 1926 (29 CFR 1910 and 1926). The HASP also reflects U.S. EPA's guidance regarding procedures required to ensure safe operations at sites containing hazardous or toxic materials.

The HASP addresses the following:

i) worker medical surveillance;
ii) worker training and site orientation;
iii) Site Safety Officer designation and responsibilities;
iv) work areas designations;
v) the planned movement of labor, equipment, and materials from and between work areas as work progresses;
vi) personnel and equipment decontamination facilities including planned disposal of decontamination waters and wastes;
vii) air monitoring program(s) for the various work areas;
viii) personal protective equipment to be used;
ix) personal hygiene and decontamination procedures;
x) respirator protection program and procedures;
xi) emergency and first-aid equipment;
xii) dust and particulate emission controls;
xiii) monitoring and mitigation of worker heat and cold stress;
xiv) safety meetings;
xv) site communications and posted notices; and
xvi) site security.

A confined space entry program will be developed if confined space entry is required during the performance of this IM (this is not anticipated for this scope of work).

The HASP will be maintained at the Site at all times during the performance of the IM and will be made available to all Site personnel and visitors permitted to enter the EZ.

In addition, the HASP includes emergency response activities and contingency planning, as necessary, to ensure that there are specific sets of standard operating procedures (SOPs) to be followed for different types of emergencies. The emergency response activities have been designed to safeguard on-Site personnel, the public, and the environment in the event of an emergency.

The on-Site contingency and emergency response plan includes SOPs for the following potential emergencies:

i) injury to on-Site personnel;
ii) gases or vapors detected at stop work levels as defined in the HASP in an excavation area;
iii) fire on the Site;
iv) toxic gas leaks from unknown sources such as rupturing of compressed gas cylinders or gas lines during excavation;
v) severe weather events and/or flooding; and
vi) utility breakage (e.g., high pressure gas line).

3.8 SOIL EXCAVATION, HANDLING AND BACKFILLING

3.8.1 TEMPORARY STAGING FACILITY CONSTRUCTION

Excavated soil materials from the <50 mg/kg PCBs soil excavations on Parcel 204 will be placed directly as backfill for the ≥50 mg/kg PCB soil excavation or staged on Parcel 201 to be used as grading fill under the Cover System. Soil delineated as ≥50 mg/kg PCBs to be prescriptively removed will be transported directly to the East Plant Area Vault. Any water run-off from the staged materials will be collected and disposed of as outlined in Section 3.10.

3.8.2 SOIL EXCAVATION

The limits of ≥50 mg/kg PCB soil excavation from Parcel 201 and the >1.8 mg/kg soil excavation on Parcel 204 have been established based on the delineation of the extent of PCBs above the clean-up criteria.

The expected volume of soil to be excavated is approximately 975 cy of ≥50 mg/kg PCB soil from Parcel 201 and 20 cy of <50 mg/kg PCBs from Parcel 204. The layout of the excavation limits will be established by survey prior to initiating excavation activities on Parcel 201.

The contractor will be required to perform Site excavation activities according to the following requirements:

i) perform tasks in an orderly and safe manner such that the movement and double handling of materials is minimized;

ii) excavate, to the extent possible, from high ground to lower areas to prevent storm water runoff being directed from an impacted area to a remediated area;

iii) grade excavation areas to direct storm water runoff away from excavations; and

iv) carry out measures necessary for dust emission control from excavation, soil handling, and transportation activities.

Soils ≥50 mg/kg PCB will be excavated on Parcel 201 to the limits defined by the attached design drawings (Appendix F). For the ≥50 mg/kg PCB excavation intervals, surveys will be completed to verify that the prescribed excavation limits have been achieved.

Following the excavation of soil >1.8 mg/kg on Parcel 204 to the initial limits identified, verification sampling will be completed in the grids unless bedrock is encountered. The strategy and sequencing for excavation and verification sampling of the soil on Parcel 204 (estimated 20 cy of >1.8 mg/kg PCB soil from Parcel 204) is as follows:

1) remove and clear all miscellaneous surface debris in and around the areas to be excavated;

2) excavate all soil from the discrete depth intervals to the limits of excavation established based on the delineation activities;

3) place the <50 mg/kg PCB excavated material from Parcel 204 on Parcel 201 either as backfill for the ≥50 mg/kg PCB excavation or as grading fill beneath the proposed cover system;

4) collect verification soil samples based on the limits of the initial excavation in accordance with the SAP (Appendix B) from the Parcel 204 excavation sidewalls and base to determine if remaining soil meets or exceeds the specified cleanup criteria. If bedrock is encountered prior to achievement of the final cleanup goal, verification that no significant visible soil remains will be completed on a visual basis. The specific protocols for determining the number and location of the verification samples is provided in Section 3.8.4. The verification samples may

be split with U.S. EPA or IDEM representatives, at the discretion of U.S. EPA/IDEM;

5) extend the horizontal and vertical limits of the excavation, if necessary, in the areas where verification soil samples indicate that remaining soils are above specified cleanup criteria on a statistical basis (see Section 3.8.4). The horizontal and vertical extent of additional excavation will be determined by CRA's representative, in consultation with U.S. EPA, based upon an evaluation of the soil conditions, locations of samples which exceed the specified cleanup criteria, and their respective concentrations;

6) collect any groundwater encountered during excavation and any surface water that enters the excavation. Collected water will be sent for treatment or disposal at an appropriate facility as discussed in Section 3.11; and

7) repeat steps 3), 4), and 5) until verification soil sampling on Parcel 204 demonstrates that remaining soils are statistically at or below specified cleanup criteria.

The scheduling of excavation activities will be coordinated so that activities may be completed promptly following construction of storm water controls and based on weather/seasonal conditions.

The contractor will only be allowed to backfill the excavation on Parcel 204 when it has been determined that the area meets the verification and cleanup criteria, as described in Section 3.8.4 and all quality assurance requirements of the project QAPP.

3.8.3 SOIL HANDLING

Soil handling will be kept to a minimum to minimize potential fugitive emissions. Soil handling will be limited to necessary screening/segregation of debris that may not be directly placed into transportation units. Whenever possible, the contractor will place excavated soil directly into transportation units to minimize fugitive emissions and multiple handling. Due to limited access, it may be necessary to utilize smaller equipment to remove PCB-impacted soil to temporary staging area locations, where the soil can be loaded into standard size transport units. Care will be taken when transporting soil from the active work zones to prevent soil tracking.

3.8.4 SOIL CLEANUP GOALS/VERIFICATION SAMPLING FOR PARCEL 204

Throughout the soil excavation phase on Parcel 204, verification sampling will be conducted to evaluate the limits of the excavation and to confirm that cleanup goals are met. Soil samples collected from Parcel 204 will be analyzed for PCBs to determine if the applicable cleanup criterion for PCBs of 1.8 mg/kg has been achieved. A rapid turnaround time for PCB analysis will be utilized for all verification sample analysis to minimize the time that the excavation is required to remain open. Verification sampling will be completed on approximately 50-foot by 50-foot grids from which 3, 5-point composite samples will be collected from the excavation base (unless bedrock is encountered in the excavation), and sidewall samples will be collected as discussed below. All samples collected will be analyzed for PCBs in accordance with the QAPP and the SAP (Appendix B). The grid will be deemed to meet the cleanup goals if all sample results are below the cleanup goal. The statistical analysis of the verification sample results utilized as part of the RA is appropriate for use on Parcel 204, however, it is not practical due to the small size of the excavation area.

The proposed procedure for verification sampling involves the following steps:

1) Three excavation floor samples (5-point composites) will be collected on a random basis from the excavation floor.
2) Grids excavated entirely to bedrock, and visually free of soil, will be considered to have zero residual PCBs.
3) Where the depth of the outermost sidewall of the excavation is greater than 6 inches, soil samples will also be collected from the side walls. For every 25 linear foot section of sidewall, a 5-point composite sample will be analyzed with sample aliquots collected approximately every 5 linear feet of sidewall.
4) If a sidewall sample cannot be collected, a 5-point composite sample will be collected from the surface next to the excavation for each 25 linear foot section of the excavation perimeter. The samples will be used to verify that the limits of the excavation meet the cleanup criterion in the absence of sidewall samples.
5) If one or more composite samples exceed 1.8 mg/kg PCBs for soils within a 50-foot by 50-foot grid, additional excavation will be completed and the area re-sampled.
6) Based on the verification sampling described above, if the limits of excavation expand and approach ½ acre in size, then eight 50-foot by 50-foot grids will be developed, and the statistical analysis of the verification sample results utilized

as part of the RA will be employed to evaluate compliance with the cleanup criteria.

3.8.5 BACKFILLING/FINAL GRADING

The ≥50 mg/kg PCB soil excavations on Parcel 201 will be backfilled with <50 mg/kg PCB material from the RA. Additional <50 mg/kg PCB material from the RA will be placed as grading fill on Parcel 201 to bring the contours up to proposed final grade prior to placement of the cover system.

SSC Collection systems will be buried in place under the Cover System. The 2" diameter HDPE pipe will withstand being buried under the cover. Eventually the use of the low-permeability cover and trench should render the current systems obsolete as groundwater levels are lowered due to reduced infiltration and flow to the trench. However, water collected in the Parcel 201 SSC Systems will continue to be collected in Wet Well #1.

Monitoring wells less than approximately 10 ft below the final Cover System grade will have risers extended. These locations will have risers extended through the Cover System:

- CH-2A,
- CH-42,
- CH-42A,
- CH-43,
- CH-44,
- MW-X209Y053,
- MW-X224Y049,
- MW-X224Y054,
- MW-X237Y058, and
- MW-X242Y060S.

The following wells have been abandoned prior to installation of the Cover System and will be redrilled after construction if determined to be necessary for future monitoring:

- MW-X214Y041,
- MW-X228Y032, and
- MW-X234Y042.

The excavations on Parcel 204 will be backfilled with clean imported fill and topsoil. Once a Parcel 204 excavation has been determined to meet the cleanup goal, the excavation will be backfilled as soon as is practical Following backfilling, restoration activities will be completed as soon as practical. However, some restoration activities, such as re-seeding may need to be completed in the appropriate season (to promote/allow growth).

3.9 TRANSPORTATION OF ≥50 MG/KG PCB SOIL TO THE VAULT

This section describes the procedures to be employed during the IM to ensure compliance with appropriate federal, state, and local regulations for any material that is removed and transported to the on-site TSCA vault. In general, procedures outlined in the Site WMP (Appendix C) will be followed for the transportation, staging, and disposal of materials leaving the Parcels.

A material tracking form will be used to track the movement of each load of ≥50 mg/kg PCB soil after it leaves Parcel 201 on its way to the vault. Transport vehicles appropriately licensed to transport designated materials will be utilized to transport material over public roads. Records will be kept at both the Parcel 201 excavation and vault to ensure all loads arrive at the correct destination.

During the transportation activities over public roads, the contractor will ensure that the transportation is conducted in compliance with federal, state, and local regulation concerning shipping materials, by doing the following:

- displaying the number for each transport vehicle/container so that it is clearly visible;
- inspecting the box of the transport vehicle/container to ensure that it is clean of loose debris or foreign material prior to loading; and
- securing the loaded materials with an approved tarpaulin in a manner to prevent loss of materials or fugitive dust emissions.

Flag persons shall be employed as necessary to ensure safe entrance to and exit from public roadways.

Prior to leaving the Parcel 201 ≥50 mg/kg PCB soil excavation area, each transport vehicle that has entered the EZ will be decontaminated. The decontamination will be conducted to remove all material on the tires and axles and material on the vehicle resulting from loading operations. Transportation vehicles will also be decontaminated as necessary following off-loading at the vault.

The contractor will prepare daily reports summarizing all materials transported from the Parcel to the vault, including total volume of material transported, and descriptions of the materials transported with material tracking forms. Notification of receipt of material will be conducted through signed material tracking forms.

Any material transported off-Site for disposal will be manifested, as appropriate, and the signed manifests tracked.

3.10 WATER MANAGEMENT DURING CONSTRUCTION

The contractor will provide an on-Site surface water runoff collection and on-Site storage system for the following:

i) surface water and/or storm water contacting disturbed work areas;
ii) water collected from construction dewatering;
iii) groundwater entering excavation areas;
iv) surface water collected from the temporary soil stockpile facility; and
v) wastewater from the personnel and equipment decontamination facilities.

Once a sufficient volume of water has been collected, the water will be transported for disposal in one of the approved wastewater treatment facilities on-Site.

Dense non-aqueous phase liquid (DNAPL) and light non-aqueous phase liquid (LNAPL) are not anticipated to be present in water collected from the above mentioned sources. If DNAPL or LNAPL is encountered, U.S. EPA and IDEM will be notified and collected NAPL will be placed into a tank and/or drum for temporary storage. All transport, storage, and disposal methods outlined in the WMP (Appendix C) will be followed for collected DNAPL and LNAPL, in the unlikely event any is collected.

Solids that collect in the tanks will be removed as necessary, characterized, and properly disposed of in accordance with the WMP (Appendix C).

4.0 APPROVALS

Work on Parcels 201 and 204 will be subject to Rule 5 erosion control permit requirements. A Rule 5 Permit was issued for the East Plant Area but Parcels 201 and 204 are not included as part of the work area. An application for an amendment to the East Plant Area Permit will be submitted before work commences.

Although there are no required approvals for road use for the City of Bedford, CRA will document road conditions, and will periodically monitor GM Drive or other roads needed to get the low level RA creek soil to Parcel 201. Transport vehicle weights will be monitored and limited to levels that would not be anticipated to cause damage. Should any damage to the road system, related to the remediation, occur, it will be promptly repaired, in accordance with applicable City of Bedford or County requirements.

5.0 REPORTING

Weekly construction meetings will be conducted at the Site during active Site operations. Anticipated participants include the CRA oversight engineer, contractor, project manager, superintendent, and the Site Health and Safety Officer. Meetings may also include the GM Project Manager, U.S. EPA, and IDEM representatives. Minutes of the weekly meetings will be prepared by CRA and distributed to U.S. EPA, IDEM, and GM.

5.1 PROGRESS REPORTS

Progress reports on the IM will be submitted as part of the monthly progress report required under the Performance-Based Agreement. The progress reports will contain the following information regarding the IM:

- a description of all significant developments during the reporting period;
- a description of work performed and any problems encountered;
- a summary, including daily and cumulative totals, of all material excavated, staged, and disposed of during the reporting period;
- final validated analytical data received during the reporting period; and
- anticipated developments during the next reporting period, including a schedule of work to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

5.2 FINAL CONSTRUCTION CERTIFICATION REPORT

A Final Construction Certification Report for the IM (Certification Report) will be submitted to U.S. EPA for review after the completion of all IM activities on Parcels 201 and 204, and receipt of all manifests and final validated analytical data. The Certification Report will contain the following:

- a description of the nature and extent of the contamination at the Parcel;
- a summary of actions taken to complete the IM;
- a listing of quantities and types of materials removed;
- a summary of any field observations made during sampling activities;

- a summary of the analytical results of all sampling and analyses performed including verification sampling;
- a listing of the ultimate destinations of the materials removed;
- copies of all material tracking forms and manifests (if required for material disposed of off-Site) for the materials removed; and
- appendices containing relevant documentation generated during the IM.

The Certification Report will include the start and completion dates of significant activities.

The Certification Report will include the following certification signed by the Project Engineer who supervised or directed the preparation of the report:

> ***"Under penalty of law, I certify that, to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of this report, the information submitted is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."***

6.0 PROJECT TEAM

A generalized Project Team organization chart is presented on Figure 6.1. The Project Oversight Engineer will coordinate all activities with U.S. EPA, IDEM, CRA, GM, and the contractor. CRA has been retained by GM to provide oversight and third party certification that the construction activities conducted at the Site are in accordance with the Work Plan. CRA will coordinate with contractors and project laboratories to provide additional technical support to the Project Team during the implementation of the Work Plan.

7.0 PROJECT SCHEDULE

A project schedule is presented on Figure 7.1. The schedule presents project tasks in a sequence that will expeditiously implement the Parcels 201 and 204 IM activities once initiated. The schedule does not take weather delays into consideration and may be extended if bad weather creates a problem for the work.

8.0 REFERENCES

Conestoga-Rovers & Associates, Inc., Design Report Over 50 mg/kg PCB Soil Removal - East Plant Area, May 26, 2006, 13968(162).

Conestoga-Rovers & Associates, Inc., Downstream Parcels Removal Action Work Plan, May 25, 2004, 13968(46).

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Conestoga-Rovers & Associates, Inc., Memorandum: Proposed Modifications to East Plant Area Air Monitoring Program, February 1, 2007, 13968(449).

Conestoga-Rovers & Associates, Inc., Quality Assurance Project Plan (QAPP), July 25, 2006, 13968(9).

Conestoga-Rovers & Associates, Inc., Site Source Control (SSC) Work Plan, November 6, 2003, 13968(53).

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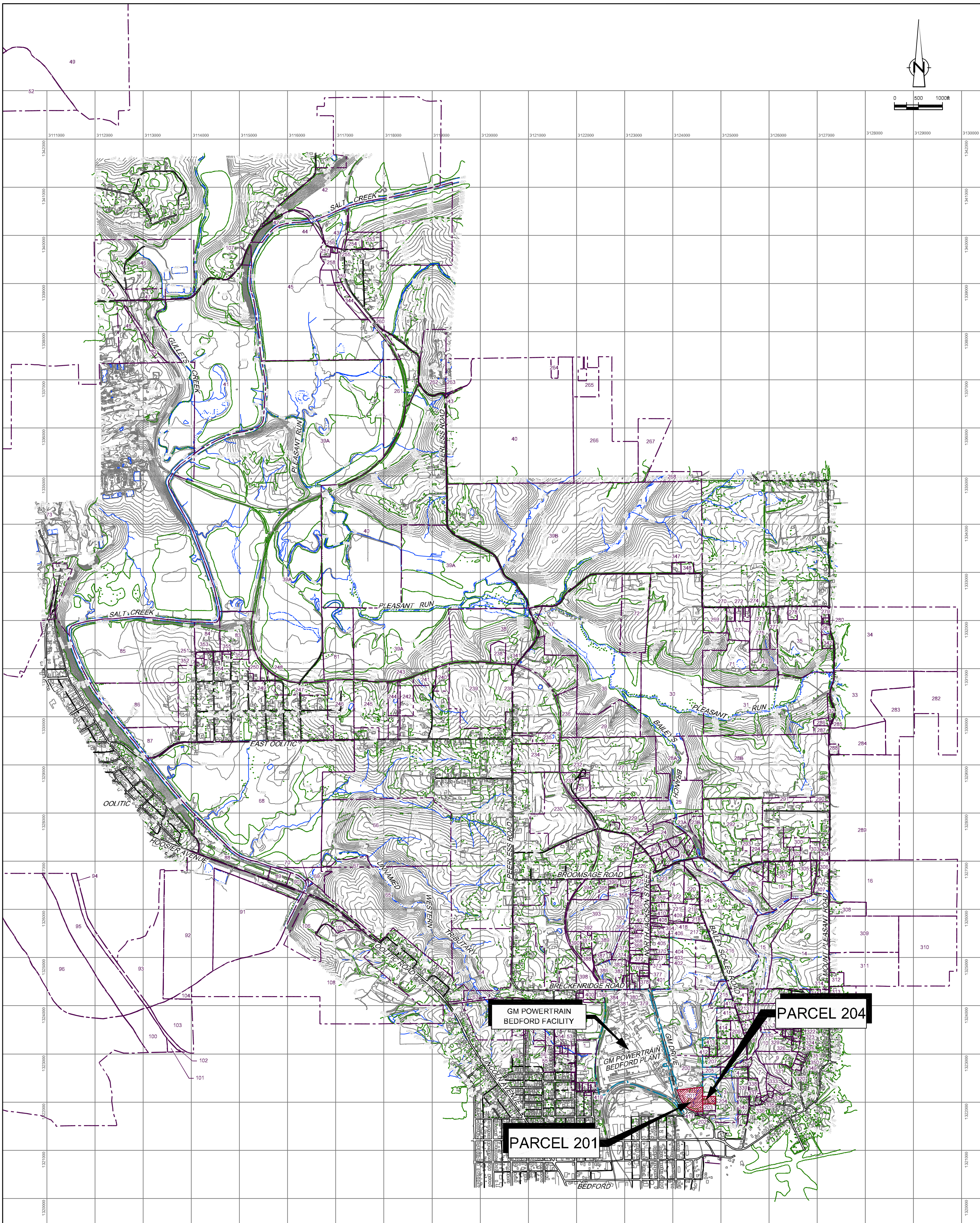
Conestoga-Rovers & Associates, Inc., RCRA Corrective Action Program: Interim Measures Alternatives Review Report – East Plant Area, April 13, 2007, 13968(151).

U.S. Environmental Protection Agency (U.S. EPA). 2001. Region 9. "Preliminary Remediation Goals".

U.S. Environmental Protection Agency (U.S. EPA). 2002. Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites. OSWER 9285.6-10. December.



LEGEND

EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)

EXISTING VEGETATION

EXISTING BUILDINGS

FENCE LINE

RAILROAD TRACKS

DIRT ROADS

ROADS / PAVED AREAS

APPROXIMATE SURFACE WATER LOCATION

APPROXIMATE PARCEL BOUNDARY

APPROXIMATE GM PROPERTY BOUNDARY

APPROXIMATE STUDY AREA

NOTE: GM PROPERTY BOUNDARY SURVEY BY B LEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED F ROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE BOUNDARIES

Nº	Revision	Date	Initial

SCALE VERIFICATION

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

Approved

GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

PARCELS 201 AND 204 INTERIM MEASURE WORK PLAN

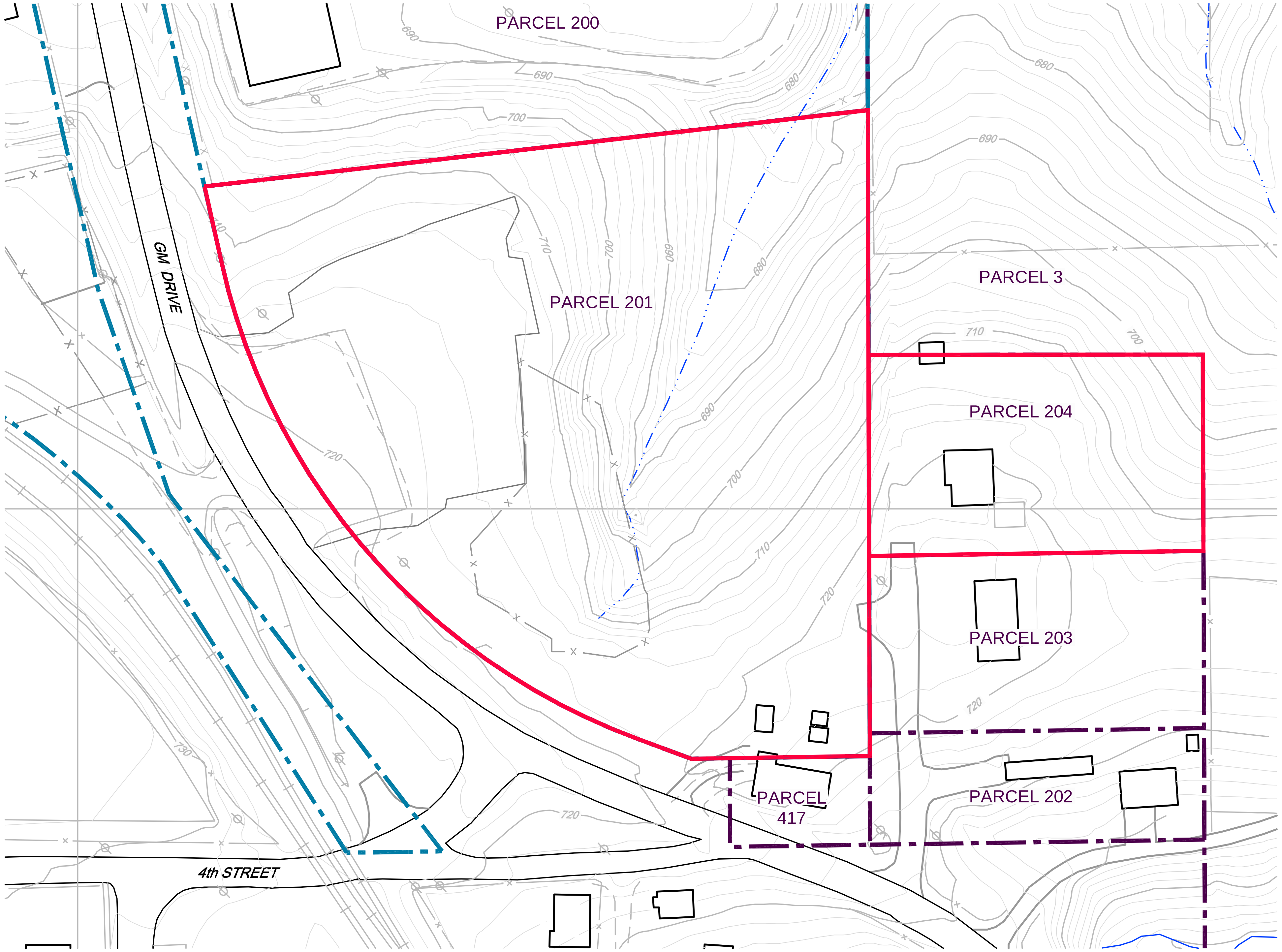
SITE LOCATION

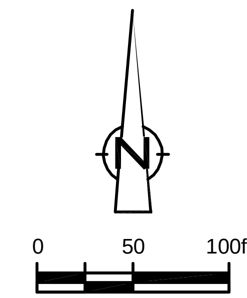
CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001

Project Manager:	Reviewed By:	Date:	
J.D.	P.G.	JANUARY 2006	
Scale: AS SHOWN	Project Nº: 13968-00	Report Nº: 248	Drawing Nº: figure 1.1

13968-00(248)GN-WA004 MAY 14/2008





LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- UTILITY POLE
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE PARCEL BOUNDARY
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE SURFACE WATER LOCATION
- SURVEYED PARKING BOUNDARY
- INTERIM MEASURE PARCEL BOUNDARY

SOURCE:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001
AND CRA SURVEYS 2002 TO 2005

NOTE: GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

figure 1.2

SITE PLAN
PARCELS 201 AND 204 (GM FACILITY PROPERTY) IM WORK PLAN
GM POWERTRAIN BEDFORD FACILITY
Bedford, Indiana

CRA

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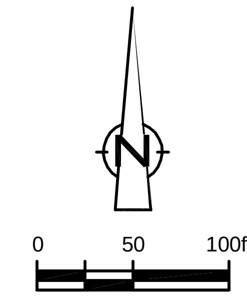

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- UTILITY POLE
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE PARCEL BOUNDARY
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE SURFACE WATER LOCATION
- SURVEYED PARKING BOUNDARY
- INTERIM MEASURE PARCEL BOUNDARY

SOURCE:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001
AND CRA SURVEYS 2002 TO 2005

NOTE: GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

figure 1.3

AERIAL PHOTOGRAPH
PARCELS 201 AND 204 (GM FACILITY PROPERTY) IM WORK PLAN
GM POWERTRAIN BEDFORD FACILITY
Bedford, Indiana

CRA

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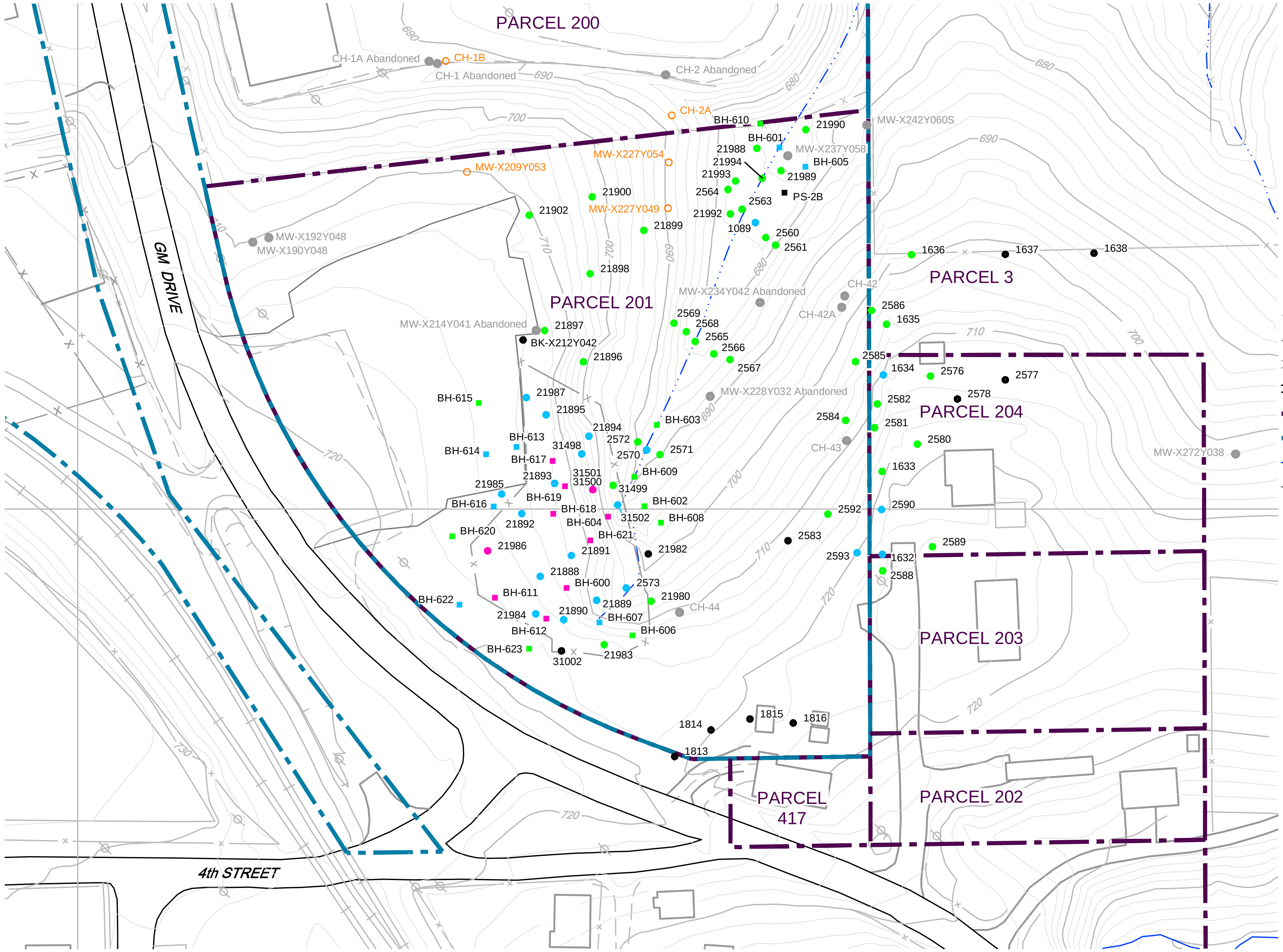
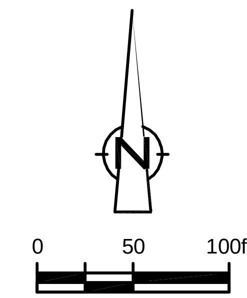




LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- UTILITY POLE
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE PARCEL BOUNDARY
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE SURFACE WATER LOCATION
- SURVEYED PARKING BOUNDARY
- MONITORING WELL LOCATION
- NON-DETECT RESULT AT MONITORING / BOREHOLE LOCATION (1)
- ≤ 1.8 mg/kg PCBs AND > ND AT MONITORING / BOREHOLE LOCATION (1)
- > 1.8 and < 50 mg/kg PCBs AT MONITORING / BOREHOLE LOCATION (1)
- ≥ 50 mg/kg PCBs AT MONITORING / BOREHOLE LOCATION (1)
- NAPL FOUND AT LOCATION

(1) SAMPLE DEPTH INFORMATION IS LOCATED IN THE APPENDIX E DATABOX FIGURE OR IN TABLE 2.1 OF THIS REPORT. SAMPLE RESULTS SHOWN ARE THE MAXIMUM SAMPLE RESULT FOR THE GIVEN LOCATION AT ANY DEPTH

SOURCE:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001 AND CRA SURVEYS 2002 TO 2005

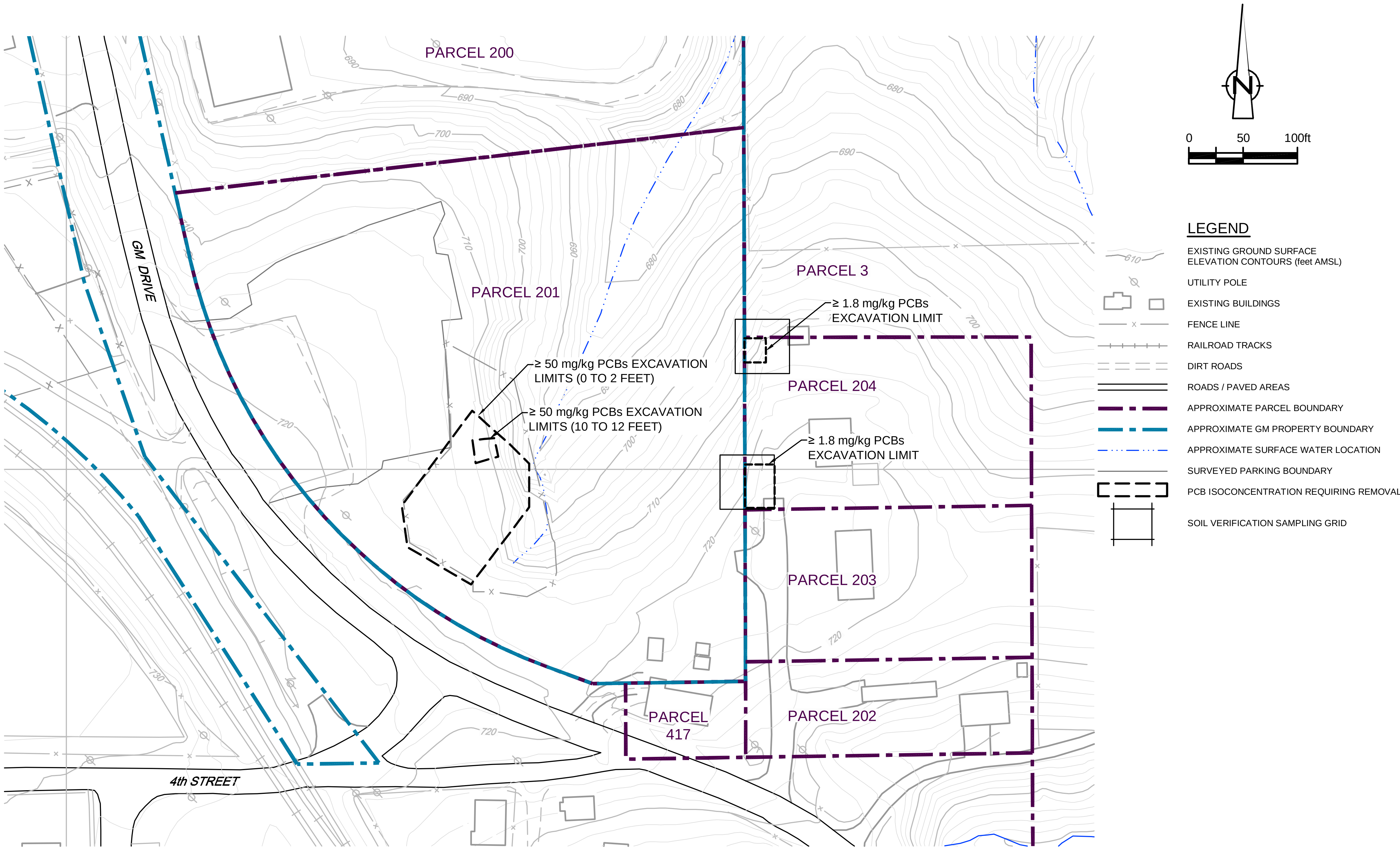
NOTE: GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

figure 2.1

SAMPLING LOCATIONS
PARCELS 201 AND 204 (GM FACILITY PROPERTY) IM WORK PLAN
GM POWERTRAIN BEDFORD FACILITY
Bedford, Indiana

CRA

13968-00(248)GN-WA029 MAY 14/2008



SOURCE:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001
AND CRA SURVEYS 2002 TO 2005

NOTE: GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

figure 3.1

PROPOSED EXCAVATION LIMITS AND PRELIMINARY VERIFICATION GRIDS
PARCELS 201 AND 204 (GM FACILITY PROPERTY) IM WORK PLAN
GM POWERTRAIN BEDFORD FACILITY
Bedford, Indiana

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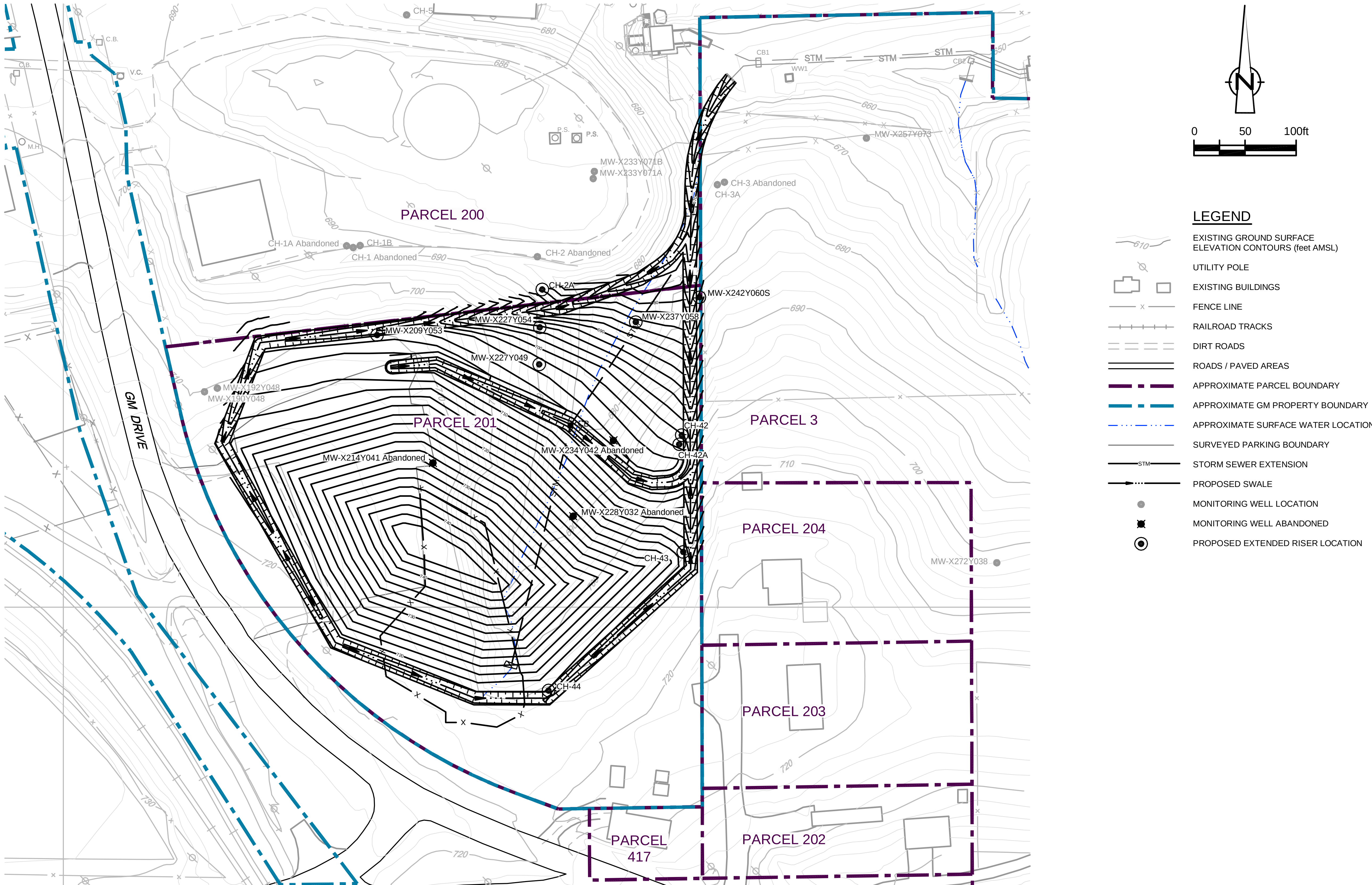

SOURCE:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001
AND CRA SURVEYS 2002 TO 2007

NOTE: GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

figure 3.2

PROPOSED LIMITS OF COVER SYSTEM
PARCELS 201 AND 204 (GM FACILITY PROPERTY) IM WORK PLAN
GM POWERTRAIN BEDFORD FACILITY
Bedford, Indiana

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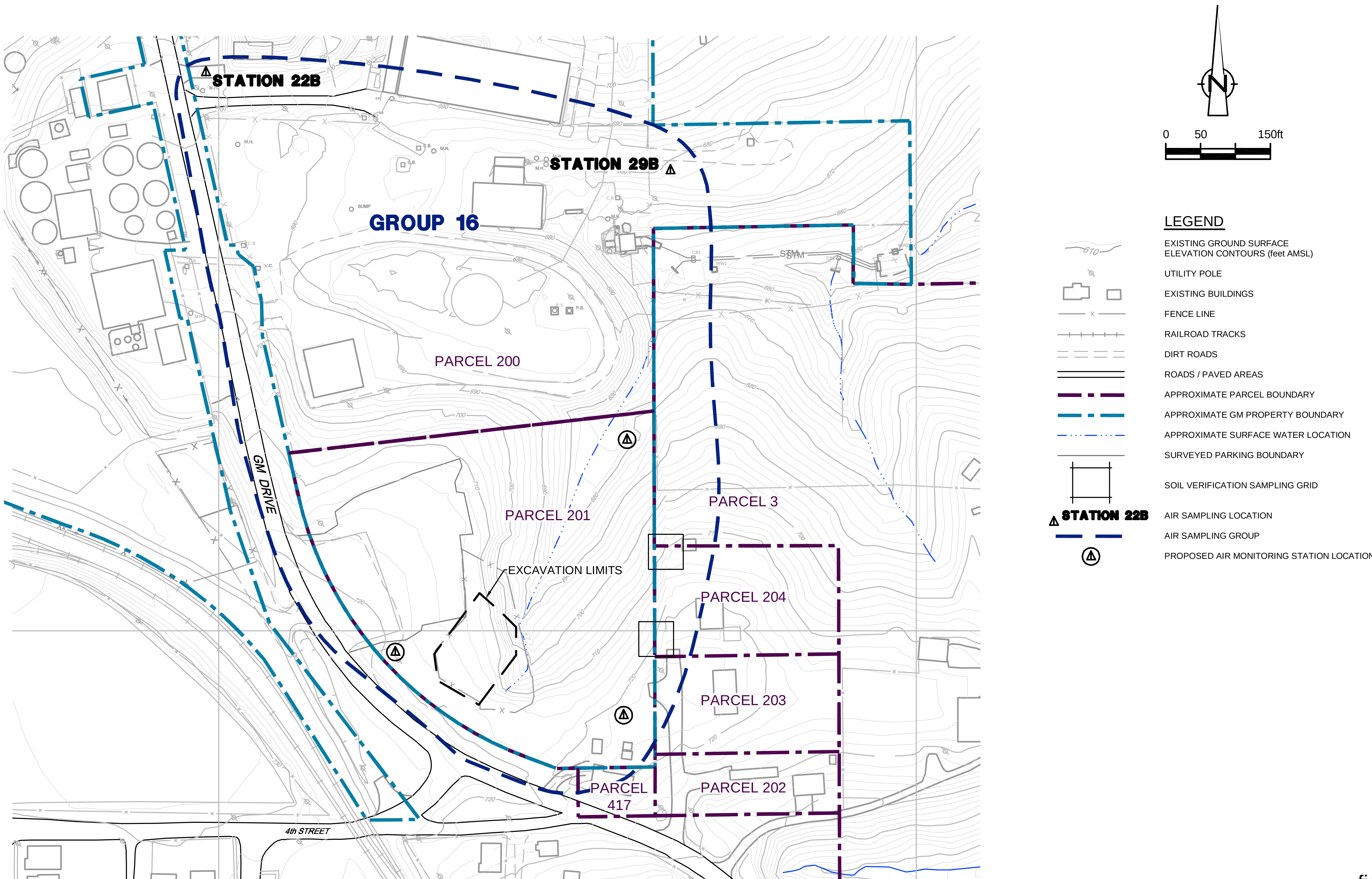


SOURCE:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001
AND CRA SURVEYS 2002 TO 2007

NOTE: GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

figure 3.3

PROPOSED AIR MONITORING STATION LOCATIONS
PARCELS 201 AND 204 (GM FACILITY PROPERTY) IM WORK PLAN
GM POWERTRAIN BEDFORD FACILITY
Bedford, Indiana

13968-00(248)GN-WA027 MAY 15/2008

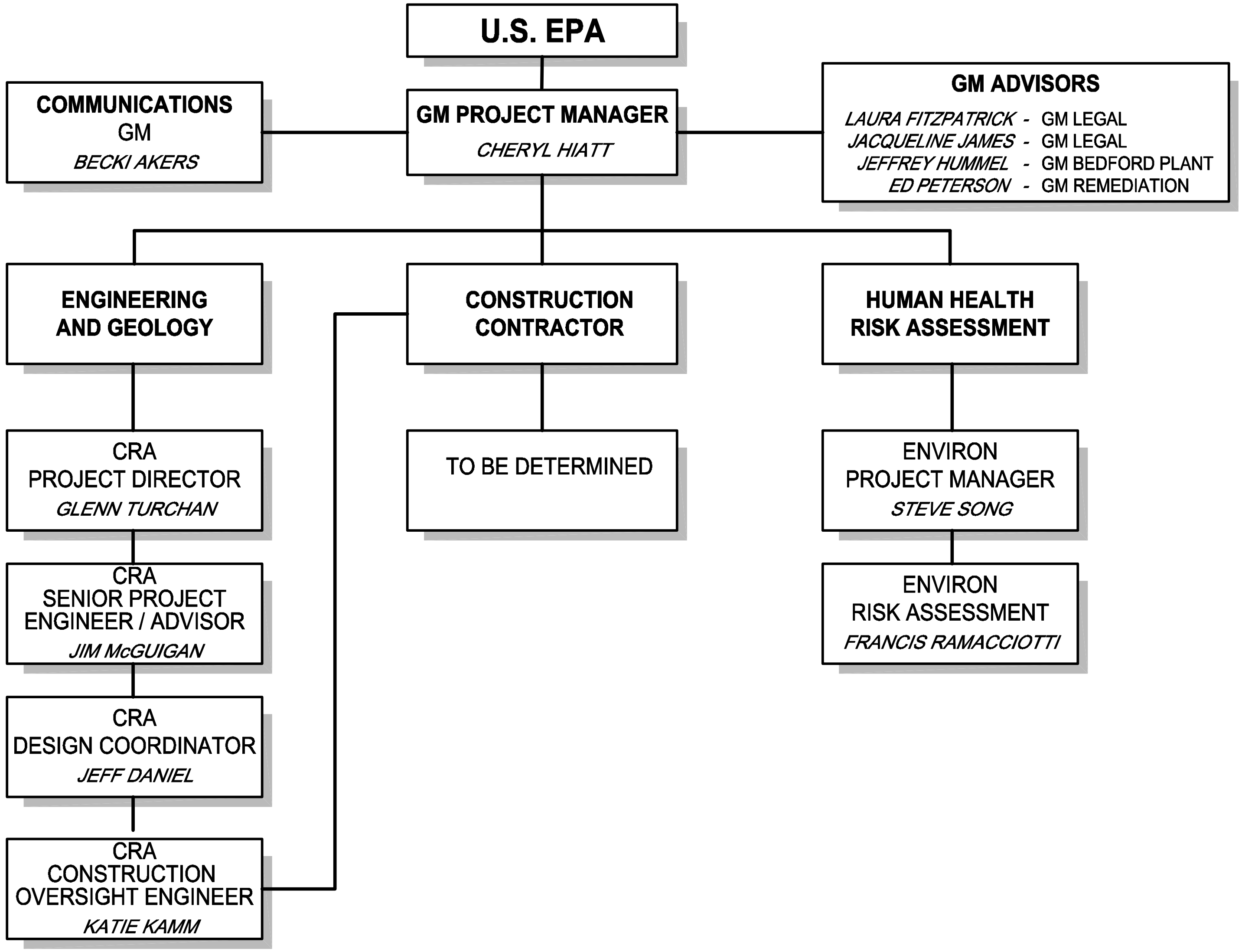
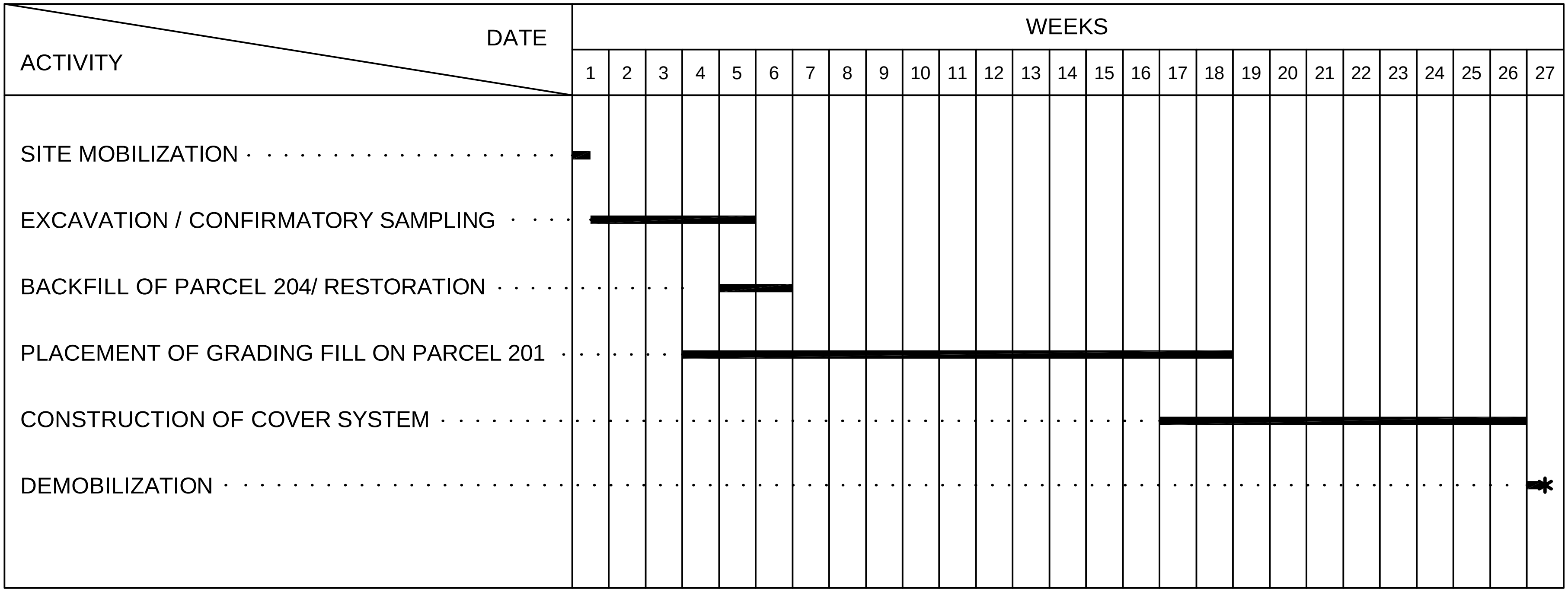


figure 6.1

PROJECT TEAM ORGANIZATION
PARCELS 201 AND 204 (GM FACILITY PROPERTY) IM WORK PLAN
GM POWERTRAIN BEDFORD FACILITY
Bedford, Indiana



NOTES

SCHEDULE FOR IMPLEMENTATION AND COMPLETION IS DEPENDENT UPON THE FOLLOWING FACTORS:

a) INCLEMENT WEATHER CONDITIONS DURING EXCAVATION WORK (e.g. RAIN, SEVERE WEATHER).

b) PLANTING ACTIVITIES MAY CONTINUE BEYOND THE REFERENCED SCHEDULE, AS REQUIRED.

c) IF PCB IMPACTED SPRING IS ENCOUNTERED, ADDITIONAL TIME WILL BE REQUIRED FOR CONTROL AND MONITORING.

d) DOES NOT INCLUDE POST-CONSTRUCTION MONITORING, IF REQUIRED.

e) PLACEMENT OF GRADING FILL AND COVER SYSTEM ON PARCEL 201 WILL EXTEND BEYOND SCHEDULE IDENTIFIED ON THIS FIGURE

LEGEND

CONTINUOUS ACTIVITY

* MAJOR MILESTONE

figure 7.1

PROJECT SCHEDULE
PARCELS 201 AND 204 (GM FACILITY PROPERTY) IM WORK PLAN
GM POWERTRAIN BEDFORD FACILITY
Bedford, Indiana

13968-00(248)GN-WA009 MAY 14/2008

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*003/202/203/204-1635*	*003/202/203/204-1635*	*003/202/203/204-1636*	*003/202/203/204-1637*	*003/202/203/204-1638*	*201(GM)-1089*
Sample Identification		*S-00-040802-GS-1635*	*S-00-040802-GS-1635A*	*S-00-040802-GS-1636*	*S-00-040802-GS-1637*	*S-00-040802-GS-1638*	*S-00-022502-JW-1089*
Sample Date		*4/8/2002*	*4/8/2002*	*4/8/2002*	*4/8/2002*	*4/8/2002*	*2/25/2002*
Sample Depth		*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*
Sample Type			*Duplicate*				
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.087 U	0.21 U	0.045 U	0.048 U	0.047 U	0.11 U
Aroclor-1221 (PCB-1221)	mg/kg	0.087 U	0.21 U	0.045 U	0.048 U	0.047 U	0.11 U
Aroclor-1232 (PCB-1232)	mg/kg	0.087 U	0.21 U	0.045 U	0.048 U	0.047 U	0.11 U
Aroclor-1242 (PCB-1242)	mg/kg	0.087 U	0.21 U	0.045 U	0.048 U	0.047 U	0.11 U
Aroclor-1248 (PCB-1248)	mg/kg	0.087 U	0.21 U	0.045 U	0.048 U	0.047 U	1.6
Aroclor-1254 (PCB-1254)	mg/kg	0.9	0.91	0.12	0.048 U	0.047 U	0.11 U
Aroclor-1260 (PCB-1260)	mg/kg	0.087 U	0.21 U	0.045 U	0.048 U	0.047 U	0.32
Total PCBs	mg/kg	0.9	0.91	0.12	0	0	1.92

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*1089*	*201-21888*	*201-21889*	*201-21890*	*201-21891*	*201-21892*
Sample Identification		*S-201-030405-JK-2559*	*S-201-032307-BN-21888*	*S-201-032307-BN-21889*	*S-201-032307-BN-21890*	*S-201-032307-BN-21891*	*S-201-032607-CH-21892*
Sample Date		*3/4/2005*	*3/23/2007*	*3/23/2007*	*3/23/2007*	*3/23/2007*	*3/26/2007*
Sample Depth		*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*
Sample Type							
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.074 U	2.5 U	0.47 U	0.91 U	2.6 U	0.84 U
Aroclor-1221 (PCB-1221)	mg/kg	0.074 U	2.5 U	0.47 U	0.91 U	2.6 U	0.84 U
Aroclor-1232 (PCB-1232)	mg/kg	0.074 U	2.5 U	0.47 U	0.91 U	2.6 U	0.84 U
Aroclor-1242 (PCB-1242)	mg/kg	0.074 U	2.5 U	0.47 U	0.91 U	2.6 U	0.84 U
Aroclor-1248 (PCB-1248)	mg/kg	0.37	22	4.9	15	25	15
Aroclor-1254 (PCB-1254)	mg/kg	0.074 U	2.5 U	0.47 U	0.91 U	2.6 U	0.84 U
Aroclor-1260 (PCB-1260)	mg/kg	0.074 U	1.5 J	0.45 J	0.85 J	1.6 J	1.1
Total PCBs	mg/kg	0.37	23.5 J	5.35 J	15.85 J	26.6 J	16.1

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*201-21893*	*201-21894*	*201-21895*	*201-21896*	*201-21897*	*201-21898*
Sample Identification		*S-201-032607-CH-21893*	*S-201-032607-CH-21894*	*S-201-032607-CH-21895*	*S-201-032607-CH-21896*	*S-201-032607-CH-21897*	*S-201-032607-CH-21898*
Sample Date		*3/26/2007*	*3/26/2007*	*3/26/2007*	*3/26/2007*	*3/26/2007*	*3/26/2007*
Sample Depth		*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*
Sample Type							
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.92 U	0.88 U	0.86 U	0.044 U	0.042 U	0.044 U
Aroclor-1221 (PCB-1221)	mg/kg	0.92 U	0.88 U	0.86 U	0.044 U	0.042 U	0.044 U
Aroclor-1232 (PCB-1232)	mg/kg	0.92 U	0.88 U	0.86 U	0.044 U	0.042 U	0.044 U
Aroclor-1242 (PCB-1242)	mg/kg	0.92 U	0.88 U	0.86 U	0.044 U	0.042 U	0.044 U
Aroclor-1248 (PCB-1248)	mg/kg	17	13	17	0.4	0.27	1.1
Aroclor-1254 (PCB-1254)	mg/kg	0.92 U	0.88 U	0.86 U	0.044 U	0.042 U	0.044 U
Aroclor-1260 (PCB-1260)	mg/kg	1.5	0.83 J	0.98	0.057	0.038 J	0.17
Total PCBs	mg/kg	18.5	13.83 J	17.98	0.457	0.308 J	1.27

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*201-21899*	*201-21900*	*201-21900*	*201-21902*	*201-21980*	*201-21980*
Sample Identification		*S-201-032607-CH-21899*	*S-201-032607-CH-21900*	*S-201-032607-CH-21901*	*S-201-032607-CH-21902*	*S-201-040307-CH-21980*	*S-201-040307-CH-21981*
Sample Date		*3/26/2007*	*3/26/2007*	*3/26/2007*	*3/26/2007*	*4/3/2007*	*4/3/2007*
Sample Depth		*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*
Sample Type				*Duplicate*			*Duplicate*
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.048 U	0.051 U	0.053 U	0.042 U	0.043 U	0.047 U
Aroclor-1221 (PCB-1221)	mg/kg	0.048 U	0.051 U	0.053 U	0.042 U	0.043 U	0.047 U
Aroclor-1232 (PCB-1232)	mg/kg	0.048 U	0.051 U	0.053 U	0.042 U	0.043 U	0.047 U
Aroclor-1242 (PCB-1242)	mg/kg	0.048 U	0.051 U	0.053 U	0.042 U	0.043 U	0.047 U
Aroclor-1248 (PCB-1248)	mg/kg	0.13	0.087	0.011 J	0.14	0.055	0.083
Aroclor-1254 (PCB-1254)	mg/kg	0.048 U	0.051 U	0.053 U	0.042 U	0.043 U	0.047 U
Aroclor-1260 (PCB-1260)	mg/kg	0.042 J	0.051 U	0.053 U	0.065	0.03 J	0.026 J
Total PCBs	mg/kg	0.172 J	0.087	0.011 J	0.205	0.085 J	0.109 J

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*201-21982*	*201-21983*	*201-21984*	*201-21985*	*201-21986*	*201-21987*
Sample Identification		*S-201-040307-CH-21982*	*S-201-040307-CH-21983*	*S-201-040307-CH-21984*	*S-201-040307-CH-21985*	*S-201-040307-CH-21986*	*S-201-040307-CH-21987*
Sample Date		*4/3/2007*	*4/3/2007*	*4/3/2007*	*4/3/2007*	*4/3/2007*	*4/3/2007*
Sample Depth		*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*
Sample Type							
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.043 U	0.043 U	2.1 U	0.21 U	4.1 U	2.2 U
Aroclor-1221 (PCB-1221)	mg/kg	0.043 U	0.043 U	2.1 U	0.21 U	4.1 U	2.2 U
Aroclor-1232 (PCB-1232)	mg/kg	0.043 U	0.043 U	2.1 U	0.21 U	4.1 U	2.2 U
Aroclor-1242 (PCB-1242)	mg/kg	0.043 U	0.043 U	2.1 U	0.21 U	4.1 U	2.2 U
Aroclor-1248 (PCB-1248)	mg/kg	0.043 U	0.01 J	35	3.9	110	32
Aroclor-1254 (PCB-1254)	mg/kg	0.043 U	0.043 U	2.1 U	0.21 U	4.1 U	2.2 U
Aroclor-1260 (PCB-1260)	mg/kg	0.043 U	0.043 U	1.3 J	0.34	5.1	1.6 J
Total PCBs	mg/kg	0	0.01 J	36.3 J	4.24	115.1	33.6 J

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*201-21988*	*201-21989*	*201-21990*	*201-21990*	*201-21992*	*201-21993*
Sample Identification		*S-201-040307-CH-21988*	*S-201-040307-CH-21989*	*S-201-040307-CH-21990*	*S-201-040307-CH-21991*	*S-201-040407-CH-21992*	*S-201-040407-CH-21993*
Sample Date		*4/3/2007*	*4/3/2007*	*4/3/2007*	*4/3/2007*	*4/4/2007*	*4/4/2007*
Sample Depth		*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*
Sample Type					*Duplicate*		
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.057 U	0.052 U	0.061 U	0.07 U	0.059 U	0.059 U
Aroclor-1221 (PCB-1221)	mg/kg	0.057 U	0.052 U	0.061 U	0.07 U	0.059 U	0.059 U
Aroclor-1232 (PCB-1232)	mg/kg	0.057 U	0.052 U	0.061 U	0.07 U	0.059 U	0.059 U
Aroclor-1242 (PCB-1242)	mg/kg	0.057 U	0.052 U	0.061 U	0.07 U	0.059 U	0.059 U
Aroclor-1248 (PCB-1248)	mg/kg	0.73	1.2	0.13 J	0.39 J	0.05 J	0.59
Aroclor-1254 (PCB-1254)	mg/kg	0.057 U	0.052 U	0.061 U	0.07 U	0.059 U	0.059 U
Aroclor-1260 (PCB-1260)	mg/kg	0.07	0.11	0.026 J	0.035 J	0.059 U	0.036 J
Total PCBs	mg/kg	0.8	1.31	0.156 J	0.425 J	0.05 J	0.626 J

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*201-21994*	*201-2560*	*201-2561*	*201-2561*	*201-2563*	*201-2564*
Sample Identification		*S-201-040407-CH-21994*	*S-201-030405-JK-2560*	*S-201-030405-JK-2561*	*S-201-030405-JK-2562*	*S-201-030405-JK-2563*	*S-201-030405-JK-2564*
Sample Date		*4/4/2007*	*3/4/2005*	*3/4/2005*	*3/4/2005*	*3/4/2005*	*3/4/2005*
Sample Depth		*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*
Sample Type					*Duplicate*		
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.056 U	0.05 U	0.049 U	0.047 U	0.056 U	0.054 U
Aroclor-1221 (PCB-1221)	mg/kg	0.056 U	0.05 U	0.049 U	0.047 U	0.056 U	0.054 U
Aroclor-1232 (PCB-1232)	mg/kg	0.056 U	0.05 U	0.049 U	0.047 U	0.056 U	0.054 U
Aroclor-1242 (PCB-1242)	mg/kg	0.056 U	0.05 U	0.049 U	0.047 U	0.056 U	0.054 U
Aroclor-1248 (PCB-1248)	mg/kg	0.35	0.05 U	0.049 U	0.047 U	0.056 U	0.094
Aroclor-1254 (PCB-1254)	mg/kg	0.056 U	0.024 J	0.013 J	0.011 J	0.012 J	0.054 U
Aroclor-1260 (PCB-1260)	mg/kg	0.028 J	0.05 U	0.049 U	0.047 U	0.056 U	0.025 J
Total PCBs	mg/kg	0.378 J	0.024 J	0.013 J	0.011 J	0.012 J	0.119 J

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*201-2565*	*201-2566*	*201-2567*	*201-2568*	*201-2569*	*201-2570*
Sample Identification		*S-201-030405-JK-2565*	*S-201-030405-JK-2566*	*S-201-030405-JK-2567*	*S-201-030405-JK-2568*	*S-201-030405-JK-2569*	*S-201-030405-JK-2570*
Sample Date		*3/4/2005*	*3/4/2005*	*3/4/2005*	*3/4/2005*	*3/4/2005*	*3/4/2005*
Sample Depth		*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*
Sample Type							
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.26 U	0.052 U	0.05 U	0.05 U	0.047 U	2.4 U
Aroclor-1221 (PCB-1221)	mg/kg	0.26 U	0.052 U	0.05 U	0.05 U	0.047 U	2.4 U
Aroclor-1232 (PCB-1232)	mg/kg	0.26 U	0.052 U	0.05 U	0.05 U	0.047 U	2.4 U
Aroclor-1242 (PCB-1242)	mg/kg	0.26 U	0.052 U	0.05 U	0.05 U	0.047 U	2.4 U
Aroclor-1248 (PCB-1248)	mg/kg	0.92	0.03 J	0.027 J	0.21	0.047 U	9.8
Aroclor-1254 (PCB-1254)	mg/kg	0.26 U	0.052 U	0.05 U	0.05 U	0.14	2.4 U
Aroclor-1260 (PCB-1260)	mg/kg	0.094 J	0.016 J	0.05 U	0.22	0.047 U	2.4 U
Total PCBs	mg/kg	1.014 J	0.046 J	0.027 J	0.43	0.14	9.8

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*201-2571*	*201-2572*	*201-2573*	*201-2581*	*201-2582*	*201-2583*
Sample Identification		*S-201-030405-JK-2571*	*S-201-030405-JK-2572*	*S-201-030405-JK-2573*	*S-201-030405-JK-2581*	*S-201-030405-JK-2582*	*S-201-030405-JK-2583*
Sample Date		*3/4/2005*	*3/4/2005*	*3/4/2005*	*3/4/2005*	*3/4/2005*	*3/4/2005*
Sample Depth		*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*
Sample Type							
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.047 U	0.049 U	0.23 U	0.044 U	0.047 U	0.045 U
Aroclor-1221 (PCB-1221)	mg/kg	0.047 U	0.049 U	0.23 U	0.044 U	0.047 U	0.045 U
Aroclor-1232 (PCB-1232)	mg/kg	0.047 U	0.049 U	0.23 U	0.044 U	0.047 U	0.045 U
Aroclor-1242 (PCB-1242)	mg/kg	0.047 U	0.049 U	0.23 U	0.044 U	0.047 U	0.045 U
Aroclor-1248 (PCB-1248)	mg/kg	0.047 U	0.049 U	1.9	0.044 U	0.047 U	0.045 U
Aroclor-1254 (PCB-1254)	mg/kg	0.03 J	0.039 J	0.23 U	0.045	0.043 J	0.045 U
Aroclor-1260 (PCB-1260)	mg/kg	0.047 U	0.049 U	0.23 U	0.044 U	0.047 U	0.045 U
Total PCBs	mg/kg	0.03 J	0.039 J	1.9	0.045	0.043 J	0

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*201-2584*	*201-2585*	*201-2586*	*201-2590*	*201-2590*	*201-2592*
Sample Identification		*S-201-030405-JK-2584*	*S-201-030405-JK-2585*	*S-201-030405-JK-2586*	*S-201-030405-JK-2590*	*S-201-030405-JK-2591*	*S-201-030405-JK-2592*
Sample Date		*3/4/2005*	*3/4/2005*	*3/4/2005*	*3/4/2005*	*3/4/2005*	*3/4/2005*
Sample Depth		*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*
Sample Type						*Duplicate*	
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.047 U	0.046 U	0.046 U	0.86 U	0.87 U	0.047 U
Aroclor-1221 (PCB-1221)	mg/kg	0.047 U	0.046 U	0.046 U	0.86 U	0.87 U	0.047 U
Aroclor-1232 (PCB-1232)	mg/kg	0.047 U	0.046 U	0.046 U	0.86 U	0.87 U	0.047 U
Aroclor-1242 (PCB-1242)	mg/kg	0.047 U	0.046 U	0.046 U	0.86 U	0.87 U	0.047 U
Aroclor-1248 (PCB-1248)	mg/kg	0.047 U	0.046 U	0.046 U	0.86 U	0.87 U	0.047 U
Aroclor-1254 (PCB-1254)	mg/kg	0.017 J	0.024 J	0.079	4.4	4.4	0.021 J
Aroclor-1260 (PCB-1260)	mg/kg	0.047 U	0.046 U	0.046 U	0.86 U	0.87 U	0.047 U
Total PCBs	mg/kg	0.017 J	0.024 J	0.079	4.4	4.4	0.021 J

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		***201-2593***	***201-31002***	***201-31498***	***201-31499***	***201-31500***	***201-31500***
Sample Identification		***S-201-030405-JK-2593***	***S-201-040507-FM-31002***	***S-201-121307-CH-31498***	***S-201-121307-CH-31499***	***S-201-121307-CH-31500***	***S-201-121307-CH-31501***
Sample Date		***3/4/2005***	***4/5/2007***	***12/13/2007***	***12/13/2007***	***12/13/2007***	***12/13/2007***
Sample Depth		***(0-0.33) ft***	***(0-0.33) ft***	***(0-0.33) ft***	***(0-0.33) ft***	***(0-0.33) ft***	***(0-0.33) ft***
Sample Type							***Duplicate***
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	2.5 U	0.049 U	0.84 U	0.052 U	42 U	43 U
Aroclor-1221 (PCB-1221)	mg/kg	2.5 U	0.049 U	0.84 U	0.052 U	42 U	43 U
Aroclor-1232 (PCB-1232)	mg/kg	2.5 U	0.049 U	0.84 U	0.052 U	42 U	43 U
Aroclor-1242 (PCB-1242)	mg/kg	2.5 U	0.049 U	0.84 U	0.052 U	42 U	43 U
Aroclor-1248 (PCB-1248)	mg/kg	2.5 U	0.049 U	9.2	0.2	210	160
Aroclor-1254 (PCB-1254)	mg/kg	20	0.049 U	0.84 U	0.052 U	42 U	43 U
Aroclor-1260 (PCB-1260)	mg/kg	2.5 U	0.049 U	0.95	0.047 J	42 U	43 U
Total PCBs	mg/kg	20	0	10.15	0.247 J	210	160

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*201-31502*	*202/203/204-1632*	*202/203/204-1632*	*1632*	*202/203/204-1633*	*202/203/204-1634*
Sample Identification		*S-201-121307-CH-31502*	*S-00-040802-GS-1632*	*S-00-040802-GS-1632A*	*S-204-030405-JK-2587*	*S-00-040802-GS-1633*	*S-00-040802-GS-1634*
Sample Date		*12/13/2007*	*4/8/2002*	*4/8/2002*	*3/4/2005*	*4/8/2002*	*4/8/2002*
Sample Depth		*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*
Sample Type				*Duplicate*			
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.44 U	0.48 U	0.43 U	0.22 U	0.041 U	0.58 U
Aroclor-1221 (PCB-1221)	mg/kg	0.44 U	0.48 U	0.43 U	0.22 U	0.041 U	0.58 U
Aroclor-1232 (PCB-1232)	mg/kg	0.44 U	0.48 U	0.43 U	0.22 U	0.041 U	0.58 U
Aroclor-1242 (PCB-1242)	mg/kg	0.44 U	0.48 U	0.43 U	0.22 U	0.041 U	0.58 U
Aroclor-1248 (PCB-1248)	mg/kg	4.1	0.48 U	0.43 U	0.22 U	0.041 U	0.58 U
Aroclor-1254 (PCB-1254)	mg/kg	0.44 U	3.4	2.9	0.79 J	0.041	4.2
Aroclor-1260 (PCB-1260)	mg/kg	0.49	0.48 U	0.43 U	0.22 U	0.041 U	0.58 U
Total PCBs	mg/kg	4.59	3.4	2.9	0.79 J	0.041	4.2

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*1634*	*203-2588*	*204-2576*	*204-2577*	*204-2578*	*204-2578*
Sample Identification		*S-204-030405-JK-2574*	*S-203-030405-JK-2588*	*S-204-030405-JK-2576*	*S-204-030405-JK-2577*	*S-204-030405-JK-2578*	*S-204-030405-JK-2579*
Sample Date		*3/4/2005*	*3/4/2005*	*3/4/2005*	*3/4/2005*	*3/4/2005*	*3/4/2005*
Sample Depth		*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*
Sample Type							*Duplicate*
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.053 U	0.046 U	0.049 U	0.049 U	0.05 U	0.05 U
Aroclor-1221 (PCB-1221)	mg/kg	0.053 U	0.046 U	0.049 U	0.049 U	0.05 U	0.05 U
Aroclor-1232 (PCB-1232)	mg/kg	0.053 U	0.046 U	0.049 U	0.049 U	0.05 U	0.05 U
Aroclor-1242 (PCB-1242)	mg/kg	0.053 U	0.046 U	0.049 U	0.049 U	0.05 U	0.05 U
Aroclor-1248 (PCB-1248)	mg/kg	0.053 U	0.046 U	0.049 U	0.049 U	0.05 U	0.05 U
Aroclor-1254 (PCB-1254)	mg/kg	0.058 J	0.025 J	0.0093 J	0.049 U	0.05 U	0.05 U
Aroclor-1260 (PCB-1260)	mg/kg	0.053 U	0.046 U	0.049 U	0.049 U	0.05 U	0.05 U
Total PCBs	mg/kg	0.058 J	0.025 J	0.0093 J	0	0	0

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*204-2580*	*204-2589*	*417-1813*	*417-1814*	*417-1815*	*417-1816*
Sample Identification		*S-204-030405-JK-2580*	*S-204-030405-JK-2589*	*S-00-050702-GS-1813*	*S-00-050702-JW-1814*	*S-00-050702-GS-1815*	*S-00-050702-JW-1816*
Sample Date		*3/4/2005*	*3/4/2005*	*5/7/2002*	*5/7/2002*	*5/7/2002*	*5/7/2002*
Sample Depth		*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(0-0.33) ft*
Sample Type							
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.045 U	0.044 U	0.045 U	0.048 U	0.052 U	0.041 U
Aroclor-1221 (PCB-1221)	mg/kg	0.045 U	0.044 U	0.045 U	0.048 U	0.052 U	0.041 U
Aroclor-1232 (PCB-1232)	mg/kg	0.045 U	0.044 U	0.045 U	0.048 U	0.052 U	0.041 U
Aroclor-1242 (PCB-1242)	mg/kg	0.045 U	0.044 U	0.045 U	0.048 U	0.052 U	0.041 U
Aroclor-1248 (PCB-1248)	mg/kg	0.045 U	0.044 U	0.045 U	0.048 U	0.052 U	0.041 U
Aroclor-1254 (PCB-1254)	mg/kg	0.037 J	0.014 J	0.045 U	0.048 U	0.052 U	0.041 U
Aroclor-1260 (PCB-1260)	mg/kg	0.045 U	0.044 UJ	0.045 U	0.048 U	0.052 U	0.041 U
Total PCBs	mg/kg	0.037 J	0.014 J	0	0	0	0

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-600*	*BH-600*	*BH-600*	*BH-600*	*BH-600*	*BH-601*
Sample Identification		*S-201-032107-CH-21865*	*S-201-032107-CH-21866*	*S-201-032107-CH-21870*	*S-201-032107-CH-21871*	*S-201-032107-CH-21876*	*S-201-032807-FM-21957*
Sample Date		*3/21/2007*	*3/21/2007*	*3/21/2007*	*3/21/2007*	*3/21/2007*	*3/28/2007*
Sample Depth		*(0-0.17) ft*	*(1-1.17) ft*	*(5-5.17) ft*	*(5-5.17) ft*	*(10-10.17) ft*	*(0-0.17) ft*
Sample Type					*Duplicate*		
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	8.3 U	0.8 U	0.42 U	0.79 U	0.85 U	0.073 U
Aroclor-1221 (PCB-1221)	mg/kg	8.3 U	0.8 U	0.42 U	0.79 U	0.85 U	0.073 U
Aroclor-1232 (PCB-1232)	mg/kg	8.3 U	0.8 U	0.42 U	0.79 U	0.85 U	0.073 U
Aroclor-1242 (PCB-1242)	mg/kg	8.3 U	0.8 U	0.42 U	0.79 U	0.85 U	0.073 U
Aroclor-1248 (PCB-1248)	mg/kg	160	13	3.8	8.1	23	0.23
Aroclor-1254 (PCB-1254)	mg/kg	8.3 U	0.8 U	0.42 U	0.79 U	0.85 U	0.073 U
Aroclor-1260 (PCB-1260)	mg/kg	6.8 J	0.68 J	0.83	1.6	3.8	0.073 U
Total PCBs	mg/kg	166.8 J	13.68 J	4.63	9.7	26.8	0.23

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-601*	*BH-601*	*BH-602*	*BH-602*	*BH-602*	*BH-603*
Sample Identification		*S-201-032807-FM-21958*	*S-201-032807-FM-21962*	*S-201-032107-CH-21883*	*S-201-032107-CH-21884*	*S-201-032107-CH-21887*	*S-201-032707-CH-21942*
Sample Date		*3/28/2007*	*3/28/2007*	*3/21/2007*	*3/21/2007*	*3/21/2007*	*3/27/2007*
Sample Depth		*(1-1.17) ft*	*(4-4.17) ft*	*(0-0.17) ft*	*(1-1.17) ft*	*(4-4.17) ft*	*(0-0.17) ft*
Sample Type							
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.23 U	0.042 U	0.053 U	0.041 U	0.044 U	0.042 U
Aroclor-1221 (PCB-1221)	mg/kg	0.23 U	0.042 U	0.053 U	0.041 U	0.044 U	0.042 U
Aroclor-1232 (PCB-1232)	mg/kg	0.23 U	0.042 U	0.053 U	0.041 U	0.044 U	0.042 U
Aroclor-1242 (PCB-1242)	mg/kg	0.23 U	0.042 U	0.053 U	0.041 U	0.044 U	0.042 U
Aroclor-1248 (PCB-1248)	mg/kg	2.6	0.016 J	0.67	0.041 U	0.044 U	1.3
Aroclor-1254 (PCB-1254)	mg/kg	0.23 U	0.042 U	0.053 U	0.041 U	0.044 U	0.042 U
Aroclor-1260 (PCB-1260)	mg/kg	0.29	0.042 U	0.06	0.041 U	0.044 U	0.092
Total PCBs	mg/kg	2.89	0.016 J	0.73	0	0	1.392

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-603*	*BH-603*	*BH-603*	*BH-604*	*BH-604*	*BH-604*
Sample Identification		*S-201-032707-CH-21943*	*S-201-032707-CH-21944*	*S-201-032707-CH-21948*	*S-201-032707-CH-21925*	*S-201-032707-CH-21926*	*S-201-032707-CH-21930*
Sample Date		*3/27/2007*	*3/27/2007*	*3/27/2007*	*3/27/2007*	*3/27/2007*	*3/27/2007*
Sample Depth		*(0-0.17) ft*	*(1-1.17) ft*	*(5-5.17) ft*	*(0-0.17) ft*	*(1-1.17) ft*	*(5-5.17) ft*
Sample Type		*Duplicate*					
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.045 U	0.042 U	0.042 U	4.3 U	4 U	4.1 U
Aroclor-1221 (PCB-1221)	mg/kg	0.045 U	0.042 U	0.042 U	4.3 U	4 U	4.1 U
Aroclor-1232 (PCB-1232)	mg/kg	0.045 U	0.042 U	0.042 U	4.3 U	4 U	4.1 U
Aroclor-1242 (PCB-1242)	mg/kg	0.045 U	0.042 U	0.042 U	4.3 U	4 U	4.1 U
Aroclor-1248 (PCB-1248)	mg/kg	0.92	0.029 J	0.016 J	83	42	40
Aroclor-1254 (PCB-1254)	mg/kg	0.045 U	0.042 U	0.042 U	4.3 U	4 U	4.1 U
Aroclor-1260 (PCB-1260)	mg/kg	0.065	0.042 U	0.042 U	4 J	2.2 J	2.4 J
Total PCBs	mg/kg	0.985	0.029 J	0.016 J	87 J	44.2 J	42.4 J

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-604*	*BH-604*	*BH-605*	*BH-605*	*BH-605*	*BH-605*
Sample Identification		*S-201-032707-CH-21931*	*S-201-032707-CH-21934*	*S-201-032807-FM-21949*	*S-201-032807-FM-21950*	*S-201-032807-FM-21953*	*S-201-032807-FM-21956*
Sample Date		*3/27/2007*	*3/27/2007*	*3/28/2007*	*3/28/2007*	*3/28/2007*	*3/28/2007*
Sample Depth		*(5-5.17) ft*	*(8-8.17) ft*	*(0-0.17) ft*	*(1-1.17) ft*	*(3-3.17) ft*	*(6-6.17) ft*
Sample Type		*Duplicate*					
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	2 U	0.044 U	0.056 U	0.045 U	0.044 U	0.042 U
Aroclor-1221 (PCB-1221)	mg/kg	2 U	0.044 U	0.056 U	0.045 U	0.044 U	0.042 U
Aroclor-1232 (PCB-1232)	mg/kg	2 U	0.044 U	0.056 U	0.045 U	0.044 U	0.042 U
Aroclor-1242 (PCB-1242)	mg/kg	2 U	0.044 U	0.056 U	0.045 U	0.044 U	0.042 U
Aroclor-1248 (PCB-1248)	mg/kg	19	0.21	2	0.057	0.015 J	0.042 U
Aroclor-1254 (PCB-1254)	mg/kg	2 U	0.044 U	0.056 U	0.045 U	0.044 U	0.042 U
Aroclor-1260 (PCB-1260)	mg/kg	1.6 J	0.025 J	0.21	0.045 U	0.044 U	0.042 U
Total PCBs	mg/kg	20.6 J	0.235 J	2.21	0.057	0.015 J	0

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-606*	*BH-606*	*BH-606*	*BH-606*	*BH-606*	*BH-607*
Sample Identification		*S-201-032607-CH-21913*	*S-201-032607-CH-21914*	*S-201-032607-CH-21918*	*S-201-032607-CH-21923*	*S-201-032607-CH-21924*	*S-201-032607-CH-21903*
Sample Date		*3/26/2007*	*3/26/2007*	*3/26/2007*	*3/26/2007*	*3/26/2007*	*3/26/2007*
Sample Depth		*(0-0.17) ft*	*(1-1.17) ft*	*(5-5.17) ft*	*(9-9.17) ft*	*(10-10.17) ft*	*(0-0.17) ft*
Sample Type							
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.044 U	0.044 U	0.04 U	0.046 U	0.043 U	0.45 U
Aroclor-1221 (PCB-1221)	mg/kg	0.044 U	0.044 U	0.04 U	0.046 U	0.043 U	0.45 U
Aroclor-1232 (PCB-1232)	mg/kg	0.044 U	0.044 U	0.04 U	0.046 U	0.043 U	0.45 U
Aroclor-1242 (PCB-1242)	mg/kg	0.044 U	0.044 U	0.04 U	0.046 U	0.043 U	0.45 U
Aroclor-1248 (PCB-1248)	mg/kg	0.035 J	0.044 U	0.04 U	0.011 J	0.043 U	6.2
Aroclor-1254 (PCB-1254)	mg/kg	0.044 U	0.044 U	0.04 U	0.046 U	0.043 U	0.45 U
Aroclor-1260 (PCB-1260)	mg/kg	0.044 U	0.044 U	0.04 U	0.046 U	0.043 U	0.34 J
Total PCBs	mg/kg	0.035 J	0	0	0.011 J	0	6.54 J

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-607*	*BH-607*	*BH-607*	*BH-608*	*BH-608*	*BH-608*
Sample Identification		*S-201-032607-CH-21904*	*S-201-032607-CH-21907*	*S-201-032607-CH-21912*	*S-201-032107-CH-21877*	*S-201-032107-CH-21878*	*S-201-032107-CH-21882*
Sample Date		*3/26/2007*	*3/26/2007*	*3/26/2007*	*3/21/2007*	*3/21/2007*	*3/21/2007*
Sample Depth		*(1-1.17) ft*	*(4-4.17) ft*	*(8-8.17) ft*	*(0-0.17) ft*	*(1-1.17) ft*	*(4-4.17) ft*
Sample Type							
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	2.2 U	0.036 U	0.043 U	0.046 U	0.043 U	0.042 U
Aroclor-1221 (PCB-1221)	mg/kg	2.2 U	0.036 U	0.043 U	0.046 U	0.043 U	0.042 U
Aroclor-1232 (PCB-1232)	mg/kg	2.2 U	0.036 U	0.043 U	0.046 U	0.043 U	0.042 U
Aroclor-1242 (PCB-1242)	mg/kg	2.2 U	0.036 U	0.043 U	0.046 U	0.043 U	0.042 U
Aroclor-1248 (PCB-1248)	mg/kg	21	1	0.027 J	0.063	0.016 J	0.042 U
Aroclor-1254 (PCB-1254)	mg/kg	2.2 U	0.036 U	0.043 U	0.046 U	0.043 U	0.042 U
Aroclor-1260 (PCB-1260)	mg/kg	0.99 J	0.067	0.043 U	0.046 U	0.043 U	0.042 U
Total PCBs	mg/kg	21.99 J	1.067	0.027 J	0.063	0.016 J	0

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-609*	*BH-609*	*BH-609*	*BH-609*	*BH-610*	*BH-610*
Sample Identification		*S-201-032707-CH-21935*	*S-201-032707-CH-21936*	*S-201-032707-CH-21939*	*S-201-032707-CH-21941*	*S-201-032807-FM-21963*	*S-201-032807-FM-21964*
Sample Date		*3/27/2007*	*3/27/2007*	*3/27/2007*	*3/27/2007*	*3/28/2007*	*3/28/2007*
Sample Depth		*(0-0.17) ft*	*(1-1.17) ft*	*(4-4.17) ft*	*(6-6.17) ft*	*(0-0.17) ft*	*(1-1.17) ft*
Sample Type							
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.048 U	0.044 U	0.043 U	0.048 U	0.061 U	0.045 U
Aroclor-1221 (PCB-1221)	mg/kg	0.048 U	0.044 U	0.043 U	0.048 U	0.061 U	0.045 U
Aroclor-1232 (PCB-1232)	mg/kg	0.048 U	0.044 U	0.043 U	0.048 U	0.061 U	0.045 U
Aroclor-1242 (PCB-1242)	mg/kg	0.048 U	0.044 U	0.043 U	0.048 U	0.061 U	0.045 U
Aroclor-1248 (PCB-1248)	mg/kg	0.41	0.44	0.56	1.6	0.31	0.92
Aroclor-1254 (PCB-1254)	mg/kg	0.048 U	0.044 U	0.043 U	0.048 U	0.061 U	0.045 U
Aroclor-1260 (PCB-1260)	mg/kg	0.062	0.039 J	0.036 J	0.071	0.073	0.062
Total PCBs	mg/kg	0.472	0.479 J	0.596 J	1.671	0.383	0.982

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-610*	*BH-611*	*BH-611*	*BH-611*	*BH-611*	*BH-611*
Sample Identification		*S-201-032807-FM-21967*	*S-201-040507-FM-31000*	*S-201-040507-FM-31001*	*S-201-041307-JL-2017*	*S-201-041307-JL-2018*	*S-201-041307-JL-2019*
Sample Date		*3/28/2007*	*4/5/2007*	*4/5/2007*	*4/13/2007*	*4/13/2007*	*4/13/2007*
Sample Depth		*(4-4.17) ft*	*(0-0.33) ft*	*(0-0.33) ft*	*(1-2) ft*	*(10-11) ft*	*(20-22) ft*
Sample Type				*Duplicate*			
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.043 U	0.9 U	0.83 U	4.1 U	0.039 U	0.042 U
Aroclor-1221 (PCB-1221)	mg/kg	0.043 U	0.9 U	0.83 U	4.1 U	0.039 U	0.042 U
Aroclor-1232 (PCB-1232)	mg/kg	0.043 U	0.9 U	0.83 U	4.1 U	0.039 U	0.042 U
Aroclor-1242 (PCB-1242)	mg/kg	0.043 U	0.9 U	0.83 U	4.1 U	0.039 U	0.042 U
Aroclor-1248 (PCB-1248)	mg/kg	0.43	14	19	50	0.02 J	0.042 U
Aroclor-1254 (PCB-1254)	mg/kg	0.043 U	0.9 U	0.83 U	4.1 U	0.039 U	0.042 U
Aroclor-1260 (PCB-1260)	mg/kg	0.016 J	0.77 J	0.76 J	1.3 J	0.039 U	0.042 U
Total PCBs	mg/kg	0.446 J	14.77 J	19.76 J	51.3 J	0.02 J	0

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-612*	*BH-612*	*BH-612*	*BH-612*	*BH-613*	*BH-613*
Sample Identification		*S-201-041307-JL-2013*	*S-201-041307-JL-2014*	*S-201-041307-JL-2015*	*S-201-041307-JL-2016*	*S-201-040507-FM-31003*	*S-201-041307-JL-2010*
Sample Date		*4/13/2007*	*4/13/2007*	*4/13/2007*	*4/13/2007*	*4/5/2007*	*4/13/2007*
Sample Depth		*(0-0.6) ft*	*(1-2) ft*	*(12-13) ft*	*(21-22) ft*	*(0-0.33) ft*	*(1-2) ft*
Sample Type							
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	4 U	4.1 U	0.04 U	0.041 U	0.039 U	0.41 U
Aroclor-1221 (PCB-1221)	mg/kg	4 U	4.1 U	0.04 U	0.041 U	0.039 U	0.41 U
Aroclor-1232 (PCB-1232)	mg/kg	4 U	4.1 U	0.04 U	0.041 U	0.039 U	0.41 U
Aroclor-1242 (PCB-1242)	mg/kg	4 U	4.1 U	0.04 U	0.041 U	0.039 U	0.41 U
Aroclor-1248 (PCB-1248)	mg/kg	35	83	0.068	0.041 U	0.16	5.1
Aroclor-1254 (PCB-1254)	mg/kg	4 U	4.1 U	0.04 U	0.041 U	0.039 U	0.41 U
Aroclor-1260 (PCB-1260)	mg/kg	1.1 J	2.9 J	0.035 J	0.041 U	0.016 J	0.15 J
Total PCBs	mg/kg	36.1 J	85.9 J	0.103 J	0	0.176 J	5.25 J

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-613*	*BH-613*	*BH-614*	*BH-614*	*BH-614*	*BH-614*
Sample Identification		*S-201-041307-JL-2011*	*S-201-041307-JL-2012*	*S-201-111907-CH-31418*	*S-201-111907-CH-31419*	*S-201-111907-CH-31420*	*S-201-111907-CH-31421*
Sample Date		*4/13/2007*	*4/13/2007*	*11/19/2007*	*11/19/2007*	*11/19/2007*	*11/19/2007*
Sample Depth		*(11-12) ft*	*(21-22) ft*	*(0-2) ft*	*(3-4) ft*	*(6-8) ft*	*(6-8) ft*
Sample Type							*Duplicate*
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.043 U	0.041 U	0.4 U	0.04 U	0.041 U	0.042 U
Aroclor-1221 (PCB-1221)	mg/kg	0.043 U	0.041 U	0.4 U	0.04 U	0.041 U	0.042 U
Aroclor-1232 (PCB-1232)	mg/kg	0.043 U	0.041 U	0.4 U	0.04 U	0.041 U	0.042 U
Aroclor-1242 (PCB-1242)	mg/kg	0.043 U	0.041 U	0.4 U	0.04 U	0.041 U	0.042 U
Aroclor-1248 (PCB-1248)	mg/kg	0.081	0.041 U	4.6	0.04 U	0.041 U	0.042 U
Aroclor-1254 (PCB-1254)	mg/kg	0.043 U	0.041 U	0.4 U	0.04 U	0.041 U	0.042 U
Aroclor-1260 (PCB-1260)	mg/kg	0.043 U	0.041 U	0.21 J	0.04 U	0.041 U	0.042 U
Total PCBs	mg/kg	0.081	0	4.81 J	0	0	0

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-614*	*BH-615*	*BH-615*	*BH-615*	*BH-616*	*BH-616*
Sample Identification		*S-201-111907-CH-31422*	*S-201-111907-CH-31423*	*S-201-111907-CH-31424*	*S-201-111907-CH-31425*	*S-201-111907-CH-31426*	*S-201-111907-CH-31427*
Sample Date		*11/19/2007*	*11/19/2007*	*11/19/2007*	*11/19/2007*	*11/19/2007*	*11/19/2007*
Sample Depth		*(16-16.5) ft*	*(0-2) ft*	*(6-8) ft*	*(18.5-19) ft*	*(0-2) ft*	*(6-8) ft*
Sample Type							
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.041 U	0.041 U	0.04 U	0.046 U	0.19 U	0.039 U
Aroclor-1221 (PCB-1221)	mg/kg	0.041 U	0.041 U	0.04 U	0.046 U	0.19 U	0.039 U
Aroclor-1232 (PCB-1232)	mg/kg	0.041 U	0.041 U	0.04 U	0.046 U	0.19 U	0.039 U
Aroclor-1242 (PCB-1242)	mg/kg	0.041 U	0.041 U	0.04 U	0.046 U	0.19 U	0.039 U
Aroclor-1248 (PCB-1248)	mg/kg	0.041 U	1.3	0.04 U	0.046 U	2.7	0.076
Aroclor-1254 (PCB-1254)	mg/kg	0.041 U	0.041 U	0.04 U	0.046 U	0.19 U	0.039 U
Aroclor-1260 (PCB-1260)	mg/kg	0.041 U	0.12	0.04 U	0.046 U	0.27	0.039 U
Total PCBs	mg/kg	0	1.42	0	0	2.97	0.076

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-616*	*BH-616*	*BH-617*	*BH-617*	*BH-617*	*BH-617*
Sample Identification		*S-201-111907-CH-31428*	*S-201-111907-CH-31429*	*S-201-111907-CH-31430*	*S-201-111907-CH-31431*	*S-201-111907-CH-31432*	*S-201-111907-CH-31433*
Sample Date		*11/19/2007*	*11/19/2007*	*11/19/2007*	*11/19/2007*	*11/19/2007*	*11/19/2007*
Sample Depth		*(14-14.5) ft*	*(18.75-19) ft*	*(0-2) ft*	*(0-2) ft*	*(6-8) ft*	*(10-11) ft*
Sample Type					*Duplicate*		
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.04 U	0.042 U	67 U	71 U	0.2 U	0.42 U
Aroclor-1221 (PCB-1221)	mg/kg	0.04 U	0.042 U	67 U	71 U	0.2 U	0.42 U
Aroclor-1232 (PCB-1232)	mg/kg	0.04 U	0.042 U	67 U	71 U	0.2 U	0.42 U
Aroclor-1242 (PCB-1242)	mg/kg	0.04 U	0.042 U	67 U	71 U	0.2 U	0.42 U
Aroclor-1248 (PCB-1248)	mg/kg	0.04 U	0.018 J	660	1200	2.1	8.4
Aroclor-1254 (PCB-1254)	mg/kg	0.04 U	0.042 U	67 U	71 U	0.2 U	0.42 U
Aroclor-1260 (PCB-1260)	mg/kg	0.04 U	0.042 U	32 J	47 J	0.15 J	0.78
Total PCBs	mg/kg	0	0.018 J	692 J	1247 J	2.25 J	9.18

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-617*	*BH-617*	*BH-618*	*BH-618*	*BH-618*	*BH-618*
Sample Identification		*S-201-111907-CH-31434*	*S-201-111907-CH-31435*	*S-201-111907-CH-31436*	*S-201-111907-CH-31437*	*S-201-111907-CH-31438*	*S-201-111907-CH-31439*
Sample Date		*11/19/2007*	*11/19/2007*	*11/19/2007*	*11/19/2007*	*11/19/2007*	*11/19/2007*
Sample Depth		*(14.5-14.6) ft*	*(20-21.5) ft*	*(0-2) ft*	*(6-8) ft*	*(12-12.5) ft*	*(20-20.5) ft*
Sample Type							
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.042 U	0.042 U	7.8 U	0.039 U	0.45 U	0.043 U
Aroclor-1221 (PCB-1221)	mg/kg	0.042 U	0.042 U	7.8 U	0.039 U	0.45 U	0.043 U
Aroclor-1232 (PCB-1232)	mg/kg	0.042 U	0.042 U	7.8 U	0.039 U	0.45 U	0.043 U
Aroclor-1242 (PCB-1242)	mg/kg	0.042 U	0.042 U	7.8 U	0.039 U	0.45 U	0.043 U
Aroclor-1248 (PCB-1248)	mg/kg	0.031 J	0.0094 J	110	0.55	9.7	0.043 U
Aroclor-1254 (PCB-1254)	mg/kg	0.042 U	0.042 U	7.8 U	0.039 U	0.45 U	0.043 U
Aroclor-1260 (PCB-1260)	mg/kg	0.042 U	0.042 U	6.1 J	0.064	1.2	0.043 U
Total PCBs	mg/kg	0.031 J	0.0094 J	116.1 J	0.614	10.9	0

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-619*	*BH-619*	*BH-619*	*BH-619*	*BH-619*	*BH-619*
Sample Identification		*S-201-112007-CH-31440*	*S-201-112007-CH-31441*	*S-201-112007-CH-31442*	*S-201-112007-CH-31443*	*S-201-112007-CH-31444*	*S-201-112007-CH-31445*
Sample Date		*11/20/2007*	*11/20/2007*	*11/20/2007*	*11/20/2007*	*11/20/2007*	*11/20/2007*
Sample Depth		*(0-2) ft*	*(0-2) ft*	*(6-8) ft*	*(10-12) ft*	*(12-14) ft*	*(18-19) ft*
Sample Type			*Duplicate*				
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	4.1 U	4.1 U	1.9 U	2 U	0.04 U	0.042 U
Aroclor-1221 (PCB-1221)	mg/kg	4.1 U	4.1 U	1.9 U	2 U	0.04 U	0.042 U
Aroclor-1232 (PCB-1232)	mg/kg	4.1 U	4.1 U	1.9 U	2 U	0.04 U	0.042 U
Aroclor-1242 (PCB-1242)	mg/kg	4.1 U	4.1 U	1.9 U	74	0.04 U	0.042 U
Aroclor-1248 (PCB-1248)	mg/kg	62	61	14	2 U	1.1	0.042 U
Aroclor-1254 (PCB-1254)	mg/kg	4.1 U	4.1 U	1.9 U	2 U	0.04 U	0.042 U
Aroclor-1260 (PCB-1260)	mg/kg	4.1	4 J	1.8 J	1.5 J	0.11	0.042 U
Total PCBs	mg/kg	66.1	65 J	15.8 J	75.5 J	1.21	0

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-620*	*BH-620*	*BH-620*	*BH-620*	*BH-621*	*BH-621*
Sample Identification		*S-201-112007-CH-31446*	*S-201-112007-CH-31447*	*S-201-112007-CH-31448*	*S-201-112007-CH-31449*	*S-201-112007-CH-31450*	*S-201-112007-CH-31451*
Sample Date		*11/20/2007*	*11/20/2007*	*11/20/2007*	*11/20/2007*	*11/20/2007*	*11/20/2007*
Sample Depth		*(0-2) ft*	*(6-8) ft*	*(8-12) ft*	*(18-19) ft*	*(0-2) ft*	*(0-2) ft*
Sample Type							*Duplicate*
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.04 U	0.041 U	0.04 U	0.045 U	7.8 U	8 U
Aroclor-1221 (PCB-1221)	mg/kg	0.04 U	0.041 U	0.04 U	0.045 U	7.8 U	8 U
Aroclor-1232 (PCB-1232)	mg/kg	0.04 U	0.041 U	0.04 U	0.045 U	7.8 U	8 U
Aroclor-1242 (PCB-1242)	mg/kg	0.04 U	0.041 U	0.04 U	0.045 U	7.8 U	8 U
Aroclor-1248 (PCB-1248)	mg/kg	0.59	0.0088 J	0.061	0.045 U	240	160
Aroclor-1254 (PCB-1254)	mg/kg	0.04 U	0.041 U	0.04 U	0.045 U	7.8 U	8 U
Aroclor-1260 (PCB-1260)	mg/kg	0.13	0.041 U	0.013 J	0.045 U	11	10
Total PCBs	mg/kg	0.72	0.0088 J	0.074 J	0	251	170

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-621*	*BH-621*	*BH-621*	*BH-621*	*BH-622*	*BH-622*
Sample Identification		*S-201-112007-CH-31452*	*S-201-112007-CH-31453*	*S-201-112007-CH-31454*	*S-201-112007-CH-31455*	*S-201-112007-CH-31456*	*S-201-112007-CH-31457*
Sample Date		*11/20/2007*	*11/20/2007*	*11/20/2007*	*11/20/2007*	*11/20/2007*	*11/20/2007*
Sample Depth		*(6-8) ft*	*(14-16) ft*	*(16-18) ft*	*(20-21) ft*	*(0-2) ft*	*(4-8) ft*
Sample Type							
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.37 U	0.25 U	0.044 U	0.037 U	0.38 U	0.037 U
Aroclor-1221 (PCB-1221)	mg/kg	0.37 U	0.25 U	0.044 U	0.037 U	0.38 U	0.037 U
Aroclor-1232 (PCB-1232)	mg/kg	0.37 U	0.25 U	0.044 U	0.037 U	0.38 U	0.037 U
Aroclor-1242 (PCB-1242)	mg/kg	0.37 U	2.3	0.73	0.052	0.38 U	0.037 U
Aroclor-1248 (PCB-1248)	mg/kg	2.9	0.25 U	0.044 U	0.037 U	4.2	0.014 J
Aroclor-1254 (PCB-1254)	mg/kg	0.37 U	0.25 U	0.044 U	0.037 U	0.38 U	0.037 U
Aroclor-1260 (PCB-1260)	mg/kg	0.48	0.16 J	0.066	0.013 J	0.43	0.037 U
Total PCBs	mg/kg	3.38	2.46 J	0.796	0.065 J	4.63	0.014 J

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		*BH-622*	*BH-622*	*BH-623*	*BH-623*	*BH-623*	*BH-623*
Sample Identification		*S-201-112007-CH-31458*	*S-201-112007-CH-31459*	*S-201-112007-CH-31460*	*S-201-112007-CH-31461*	*S-201-112007-CH-31462*	*S-201-112007-CH-31463*
Sample Date		*11/20/2007*	*11/20/2007*	*11/20/2007*	*11/20/2007*	*11/20/2007*	*11/20/2007*
Sample Depth		*(16-18) ft*	*(21-22.5) ft*	*(0-2) ft*	*(0-2) ft*	*(6-8) ft*	*(8-10.5) ft*
Sample Type					*Duplicate*		
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	0.042 U	0.042 U	0.038 U	0.039 U	0.035 U	0.042 U
Aroclor-1221 (PCB-1221)	mg/kg	0.042 U	0.042 U	0.038 U	0.039 U	0.035 U	0.042 U
Aroclor-1232 (PCB-1232)	mg/kg	0.042 U	0.042 U	0.038 U	0.039 U	0.035 U	0.042 U
Aroclor-1242 (PCB-1242)	mg/kg	0.042 U	0.042 U	0.038 U	0.039 U	0.035 U	0.042 U
Aroclor-1248 (PCB-1248)	mg/kg	0.014 J	0.02 J	0.033 J	0.038 J	0.073	0.084 J
Aroclor-1254 (PCB-1254)	mg/kg	0.042 U	0.042 U	0.038 U	0.039 U	0.035 U	0.042 U
Aroclor-1260 (PCB-1260)	mg/kg	0.042 U	0.042 U	0.038 U	0.039 U	0.064	0.02 J
Total PCBs	mg/kg	0.014 J	0.02 J	0.033 J	0.038 J	0.137	0.104 J

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

TABLE 2.1

PARCEL 201 AND 204 PCB ANALYTICAL RESULTS SUMMARY
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Sample Location		***BH-623***	***BK-X212Y042***	***PS-2B***
Sample Identification		***S-201-112007-CH-31464***	***S-010223-MO-002***	***S-032205-JC-1027***
Sample Date		***11/20/2007***	***1/23/2002***	***3/22/2005***
Sample Depth		***(21.75-22.5) ft***	***(0-2) ft***	***(0-2) ft***
Sample Type				
	Units			
PCBs				
Aroclor-1016 (PCB-1016)	mg/kg	0.043 U	0.042 U	0.046 U
Aroclor-1221 (PCB-1221)	mg/kg	0.043 U	0.042 U	0.046 U
Aroclor-1232 (PCB-1232)	mg/kg	0.043 U	0.042 U	0.046 U
Aroclor-1242 (PCB-1242)	mg/kg	0.043 U	0.042 U	0.046 U
Aroclor-1248 (PCB-1248)	mg/kg	0.043 U	0.042 U	0.046 U
Aroclor-1254 (PCB-1254)	mg/kg	0.043 U	0.042 U	0.046 U
Aroclor-1260 (PCB-1260)	mg/kg	0.043 U	0.042 U	0.046 U
Total PCBs	mg/kg	0	0	0

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

TABLE 3.1

AIR MONITORING SUMMARY - 24-HOUR (LONG TERM)
PARCEL 201 AND 204 INTERIM MEASURES WORK PLAN
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Excavation Areas	*Parameters*	*Duration of Monitoring*	*Air Monitoring Locations*	*Air Monitoring Frequency*
Soil Removal Area	Compound Specific PCBs	Duration of the over 50 mg/kg PCB soil removal portion of the IM	Five locations around perimeter of the Parcel 201 Construction Zone	Daily
Soil Removal Area	Compound Specific TSPs	Duration of the over 50 mg/kg PCB soil removal portion of the IM	Five locations around perimeter of the Parcel 201 Construction Zone	Daily

Notes:
1) PCB sampling will be conducted daily during the ≥50 mg/kg PCB soil excavation and for the first two weeks of soil placement construction work
2) TSP samples will be collected with high volume samplers or real-time monitoring units as specified in the March 9, 2006 proposed modification to the AAQMP letter to U.S. EPA.
PCBs - Polychlorinated Biphenyls
TSPs - Total Suspended Particulates

APPENDIX A

CRA HEALTH AND SAFETY PLAN

CONSOLIDATED GM BEDFORD HEALTH AND SAFETY PLAN (HASP)

GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

APRIL 2007
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LIST OF ACRONYMS

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
AOC	area of concern
AOI	area of interest
APR	air purifying respirator
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
Contractor	General Contractors (Sevenson Environmental Services, Inc. and ENTACT & Associates, LLC)
CPR	cardiopulmonary resuscitation
CRA	Conestoga-Rovers & Associates, Inc.
Creek Areas	Bailey's Branch Creek, Pleasant Run and its tributaries
CRZ	Contaminant Reduction Zone
dBA	decibles (acoustic)
DEET	diethyltoluamide
ENTACT	ENTACT & Associates, LLC
EZ	Exclusion Zone
FM	Factory Mutual Engineering Corporation
GFCI	ground fault circuit interrupters
GM	General Motors Corporation
GMPT	General Motors Powertrain
HASP	Site Health and Safety Plan
HSO	Health and Safety Officer
IDLH	Immediately Dangerous to Life and Health
LEL	lower explosive limit
MSD	musculoskeletal disorders
MSDS	Material Safety Data Sheets
MSHA	Mine Safety & Health Administration
NEC	National Electrical Code
NESC	National Electrical Safety Code
NIOSH	National Institute for Occupational Safety and Health
NOAA	National Oceanic & Atmospheric Administration

LIST OF ACRONYMS

NRC	National Response Center
NRR	Noise Reduction Rating
OSHA	Occupational Safety and Health Administration
PCBs	polychlorinated biphenyls
PE	Professional Engineer
PEL	Permissible Exposure Limit
PID	photoionization detector
PPE	Personal Protective Equipment
ppm	parts per million
RA	removal action
REL	Recommended Exposure Limit
RMSF	Rocky Mountain Spotted Fever
SCBA	self-contained breathing apparatus
SERC	State Emergency Response Commission
SES	Sevenson Environmental Services
Site	GMPT Bedford Facility and general vicinity (including Upstream Parcels, Parcel 22, and Downstream Parcels)
SOP	Standard Operating Procedures
SOW	Scope of Work
SZ	Support Zone
THA	Task Hazard Analysis
TLV	Threshold Limit Value
U.S. EPA	United States Environmental Protection Agency
UL	Underwriters Laboratory
USCG	United States Coast Guard
VOC	volatile organic compound

1.0 INTRODUCTION

Conestoga-Rovers & Associates, Inc. (CRA) has prepared this comprehensive Health and Safety Plan (HASP) on behalf of General Motors Corporation (GM). This HASP presented herein describes the health and safety procedures and emergency response guidelines to be implemented during activities within the general vicinity of the GM Powertrain (GMPT) Bedford Facility (Site) located in Bedford, Indiana. This HASP will address the safety and health requirements associated with the various environmental Work Plans prepared by CRA for the Site. Figures depicting the Site Location and the Site Plan are included in this HASP as Figures 1.1 and 1.2, respectively.

A Removal Action (RA) will be implemented on portions of the creek and floodplains associated with Bailey's Branch, Pleasant Run and its tributaries (Creek Areas), in accordance with an Administrative Order by Consent (AOC) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) between the U.S. Environmental Protection Agency (U.S. EPA) and GM. Additionally, CRA personnel and its subcontractors will implement an investigation and sampling program at the Site.

The scope of work (SOW) to be completed during Site activities includes the following work activities:

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

ii) oversight of construction activities which includes: staging area construction; placement of designated materials within the staging area and subsequent off-Site transportation and disposal of impacted materials; contractor mobilization, demobilization, decontamination, and Site set-up; Site clearing (removal of trees); temporary fencing installation; survey layout of excavation areas; construction of stormwater controls (berms, swales, and culverts); excavation and handling of contaminated materials and backfilling activities; stream monitoring and water management activities; air monitoring/sampling; and Site restoration activities;

iii) sampling and monitoring activities involving the sampling of soil, water, debris, and sediment. Sampling tasks may involve drilling (investigative) activities;

iv) perimeter air monitoring at the Site;

v) test pit excavations, which include subsequent sampling activities;

vi) Site restoration; and

vii) decontamination activities.

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

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

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

iii) compliance with applicable governmental and non-governmental (American Conference of Governmental Industrial Hygienists [ACGIH]) regulations and guidelines. In particular, the amended rules of the Occupational Safety and Health Administration (OSHA) for Part 1926 (Title 29 Code of Federal Regulations [CFR] Part 1926.65) will be implemented for all Site work; and

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

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

All work activities at the Site will be conducted in accordance with provisions of an approved Site-specific HASP. The applicability of this HASP extends to personnel who will be on Site, including, CRA employees, CRA subcontractors and visitors to the Site. Certain activities at this Site where personnel will not have the potential for contact with contamination and no potential for exposure exists will be exempt from all provisions of the standard (29CFR1926.65 or 29CFR1910.120), including the medical and training requirements.

Contractors and subcontractors who will be working at the Site will be required to develop a HASP based on their specific SOW. The contractor's HASP must meet the applicable requirements of this HASP, which has been prepared by CRA. A contractor or subcontractor may adopt the provisions contained in this HASP as part of its own

HASP, but must still provide a Site-specific HASP and SOW that details their activities and health and safety procedures that will be implemented as part of their activities.

A copy of this HASP and employer specific Standard Operating Procedures (SOP)/Safety Programs will be maintained on Site whenever activities are in progress. Contractor Programs for similar activities must meet or exceed any referenced CRA Programs. A copy of any CRA Health and Safety Programs referenced in this HASP will be available at the Site.

1.1 PROJECT ORGANIZATION

The project will be organized as follows (See Figure 1.3 entitled, Project Team Organization, for additional information):

Remedial Contractor(s)

There is the potential for various contractor(s) to be working on-Site concurrently. The selected contractor(s) will be responsible for providing both a Site Superintendent (competent person) and a Health and Safety Officer (HSO) to direct their activities. These individuals will be responsible for ensuring that all contract specifications are met, including those related to Site health and safety. The names of these individuals will be presented in the HASPs of each contractor. All contractor personnel working at the Site will report to the CRA Project Coordinator through the CRA On-Site Construction Coordinator and, in keeping with OSHA requirements, are required to comply with all procedures referenced in this HASP, the contractor HASP, OSHA regulations, and the GMPT Bedford Facility Safety Operating Procedures.

Sevenson Environmental Services and Entact Environmental Services

Sevenson Environmental Services (SES) and Entact Environmental Services (ENTACT) is contracted directly to GM and as such is the General Contractor (Contractor) for the RA portion of the project responsible for performing remedial construction activities which includes the supervision, inspection, and direction of remedial activities. SES and ENTACT may employ various subcontractors as necessary to assist with the completion of project activities.

SES and ENTACT will employ and keep on-Site at all times a competent resident supervisor (Site Superintendent) and necessary assistants (i.e., foremen, engineers, etc.)

to ensure that all project specifications are met including those related to safety and health. Additionally, SES and ENTACT will designate a qualified and experienced safety representative (Site Health and Safety Officer) at the Site whose duties and responsibilities will be the prevention of accidents, implementation and enforcement of the Site-specific HASP, and maintaining and supervising Site safety precautions and programs.

Project Coordinator (*Conestoga-Rovers and Associates)*

CRA will act as the overall Project Coordinator for the Site. The CRA Project Coordinator will direct and generally oversee activities on behalf of GM during the implementation of Site activities. Additionally, CRA will provide Engineering Oversight services for project activities. However, CRA may employ various environmental subcontractors (drilling contractors, specialty consultants, etc.) to assist with Site activities as necessary.

CRA will provide an On-Site Construction Coordinator who will direct the day-to-day activities of CRA personnel and provide engineering oversight for remedial contractor activities. Additional support will be provided by a CRA HSO who will be responsible for ensuring compliance with the Site-specific HASP.

2.0 SITE CHARACTERIZATION AND POTENTIALLY HAZARDOUS COMPOUNDS

Creek Areas

The Creek Areas are located in Bedford and Lawrence County, Indiana. The properties which make up the Creek Areas include residential, agricultural, vacant land, and industrial uses. The GMPT Bedford Facility is located at 105 GM Drive, in Bedford, Indiana as depicted on Figures 1.1 and 1.2. The GMPT Bedford Facility is located in a commercial and industrial setting.

The GMPT Bedford Facility is an active facility and has been operating as an aluminum foundry since 1942. Current products include transmission cases, engine blocks, and pistons.

Based on previous sampling, the constituent of concern at the Creek Areas is polychlorinated biphenyls (PCBs). PCBs are a series of technical mixtures, consisting of many isomers and compounds that vary from mobile oily liquids to white crystalline solids to hard non-crystalline resins. The variability is based upon the degree of chlorination (and location of chlorine atoms) on the diphenyl rings that act as the skeleton for PCBs. The name Aroclor® 1221, 1233, 1242, 1248, 1254, 1260 etc. corresponds to the percentage that the diphenyl rings have been substituted, i.e., 21%, 33%, 42%, etc.

The most commonly encountered PCBs are chlorodiphenyl (42% chlorine) [Aroclor® 1242] and chloridiphenyl (54% chlorine) [Aroclor® 1254]. These compounds are light, straw-colored liquids with typical chlorinated aromatic odors; 42% chlorodiphenyl is a mobile liquid and 54% chlorodiphenyl is a viscous liquid. Chlorodiphenyl (42% chlorine) boils between 617°F and 691°F and freezes at -2°F. Chlorodiphenyl (54% chlorine) boils between 689°F and 734°F and freezes at 50°F. The synonyms for PCBs are chlorodiphenyls, Aroclors, and Kanechlors. Names further defining PCBs, based upon chlorine substitution are Aroclor® 1221, 1232, 1242, 1248, 1254, 1260, 1262, 1268, 2565, 4465, 5442, 5460 and Kanechlor 300, 400, 500. PCBs are incompatible with strong oxidizers. PCBs are used alone and in combination with chlorinated naphthalenes. They are stable, thermoplastic, and nonflammable, and find chief use in insulation for electric cables and wires, in the production of electric condensers, as additives for extreme pressure lubricants, and as a coating in foundry use. PCBs are one member of a class of chlorinated aromatic organic compounds which are of increasing concern because of their apparent ubiquitous dispersal, persistence in the environment, and tendency to accumulate in food chains, with possible adverse effects on animals at the top of food webs, including man. The OSHA Permissible Exposure Limit (PEL) and ACGIH Threshold Limit Value (TLV) are 1 mg/m^3 for chlorodiphenyl 42% Cl and 0.5 mg/m^3 for 54% Cl. The National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit (REL) for both 42% and 54% are 0.001 mg/m^3. The Immediately Dangerous to Life and Health (IDLH) level is 5 mg/m^3.

Long term exposure to PCBs at high levels of 1 to 10 mg/m^3 may produce a burning feeling in the eyes, nose, and face; dry throat; lung and throat irritation; nausea; dizziness; and chloracne and the aggravation of existing acne. Liver damage and digestive disturbance have been reported in some individuals. OSHA has identified PCBs as a dermal carcinogen. PCBs may impair the function of the immune system. PCBs at high levels have been shown to produce cancer and birth defects in laboratory animals. Whether PCBs produce these effects in humans is not known.

Routes of entry are via inhalation of fume or vapor and percutaneous absorption of liquid, ingestion, eye and skin contact. Harmful effects from short term exposure are as follows:

Inhalation - May produce irritation to nose, throat, and lungs. Levels above 10 mg/m^3 are reported to be unbearable. Inhalation may contribute significantly to all symptoms of long term exposure.

Skin - Absorption is moderate. Contributes significantly to all symptoms of long term exposure. Sensitized individuals may develop a rash after 2 days exposure by contact or inhalation.

Eyes - May produce irritation. Levels of 10 mg/m^3 are severely irritating.

Ingestion - Absorption in the digestive system contributes significantly to all symptoms of long term exposure. There are no reported deaths of humans due to a single ingestion. However, experiments in animals suggest that ingestion of 6 to 10 fluid ounces would cause death to a healthy 150 pound adult.

Test Pitting Activities

On-Site test pit areas include the former north disposal area (Area of Interest (AOI) 4), the former east sand disposal area [plateau and ravine] (AOI 5), the former sludge disposal and fire training area (AOI 6), the former north lagoon and Outfall 001 (AOI 7), and the former equipment storage area (AOI 15).

Off-Site test pit areas include Areas 1, 2, and 3 located adjacent to the GMPT Bedford Facility, just north of Breckenridge Road. Area 4 is situated approximately 2 miles to the northwest of the first three areas.

Risks associated with these activities will be minimized by implementing engineering controls, safe work practices, and the proper use of PPE.

Potential constituents of concern and exposure routes and exposure limits associated with test pit operations are included in the following table:

Potential Site Contaminants (Currently Known)	*Ionization Potential (eV)*	*Physical Description and Symptoms of Exposure*	*Routes of Entry*	*OSHA – PEL (1) ACGIH – TLV (2) IDLH (3)*
Benzene	9.24	Colorless to light-yellow liquid with an aromatic odor. Note: A solid below 42 degrees F. Symptoms: Eye, nose, and skin irritant; heachache; nausea; giddiness; fatigue; anorexia; exhaustion; and depression.	Skin Absorption, Ingestion, Inhalation, and Contact	1 ppm (1) 0.5 ppm (2) 500 ppm (3)
Ammonia	10.18	Colorless gas with a pungent suffocating odor. Symptoms: Eye, nose, and throat irritant; breathing difficulty; wheezing; chest pain; pulmonary edema; pink frothy saliva; skin burns; vesiculation; and frostbite.	Inhalation, Ingestion, and Contact	50 ppm (1) 25 ppm (2) 300 ppm (3)

Potential Site Contaminants (Currently Known)	*Ionization Potential (eV)*	*Physical Description and Symptoms of Exposure*	*Routes of Entry*	*OSHA – PEL (1) ACGIH – TLV (2) IDLH (3)*
Ethyl-benzene	8.76	Colorless liquid with an aromatic odor. Symptoms: Eye, skin, and mucous membrane irritant; headache; dermatitis; narcosis; and coma.	Inhalation, Ingestion, and Contact	100 ppm (1)(2) 800 ppm (3)
Fuel Oil	Not Listed	Mostly found as a clear liquid with a distinct odor. Symptoms: Eye, nose, and throat irritant; burning sensation in chest; headache; nausea; weakness; restlessness; incoordination; confusion; drowsiness; vomiting; diarrhea; dermatitis; and chemical pneumonia.	Inhalation, Ingestion, and Contact	10 ppm
Sodium Hydroxide	Not Applicable	Colorless to white odorless solid (flakes, beads, granular form). Symptoms: Eye, skin, and mucous membrane irritant; pneumonitis; eye and skin burns; and temporary loss of hair.	Inhalation, Ingestion, and Contact	2 mg/m^3 (1) 2 mg/m^3 (2) - Ceiling Limit 10 mg/m^3 (3)
Xylenes	8.44 – 8.56	Colorless liquid with an aromatic odor. Symptoms: Eye, skin, throat, and nose irritant; dizziness; excitement; drowsiness; incoordination; staggering; anorexia; nausea; vomit; abdominal pain; and dermatitis.	Skin Absorption, Inhalation, Ingestion, and Contact	100 ppm (1)(2) 900 ppm (3)

Potential Site Contaminants (Currently Known)	*Ionization Potential (eV)*	*Physical Description and Symptoms of Exposure*	*Routes of Entry*	*OSHA – PEL (1) ACGIH – TLV (2) IDLH (3)*
Poly-chlorinated Biphenols	Not Listed	See the chemical description provided in Section 2.0 for signs and symptoms of exposure.	Skin Absorption, Inhalation, Ingestion, and Contact	0.5 mg/m^3 (1)(2) 5 mg/m^3 (3)
Toluene	8.82	Colorless liquid with a sweet, pungent, benzene-like odor. Symptoms: Eye and nose irritant; fatigue; confusion; euphoria; dizziness; headache; dilated pupils; tearing; nervousness; muscle fatigue; insomnia; parasthesia; and dermatitis.	Skin Absorption, Inhalation, Ingestion, and Contact	200 ppm (1) 50 ppm (2) 500 ppm (3)

As the Site covers an extensive amount of territory, the maximum detected concentrations for PCBs and other chemicals of concern will be determined prior to initiating operations in each specific work area. This will ensure that the most accurate data pertaining to that particular work area is utilized.

3.0 BASIS FOR DESIGN

This comprehensive HASP was developed to provide a clear and concise document that combines safety and health information from the various Site HASPs which were developed for each individual Work Plan, HASP Addendums, and safety information provided by the GMPT Bedford Facility.

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

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

4.0 RESPONSIBILITIES AND ADMINISTRATION

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

The on-Site HSO responsibilities include:

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

ii) responsible for ensuring that proper utility clearances are observed and that "One Call" utility services and GMPT Bedford Facility Site Contact are properly notified prior to excavating, drilling, etc.;

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

iv) supervision and inspection of equipment cleaning;

v) periodically conduct a training needs assessment for CRA Site personnel based on potential tasks/activities and conduct training as necessary to ensure compliance;

vi) implementation of the CRA Excavation and Trenching Program to meet the requirements set forth in 29 CFR 1926 – Subpart P;

vii) supervision of decontamination;

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

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

x) review and modify the HASP in the form of an Addenda as more information becomes available or conditions warrant;

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

xii) coordination of emergency procedures;

xiii) ensure that air monitoring for CRA personnel and subcontractors is being performed;

xiv) responsible for overseeing the remedial contractor's air monitoring/sampling program to ensure that the program is being conducted as per the contractor's Site-specific HASP;

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

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

xvii) conduct brief daily safety meetings;

xviii) administer the overall Site accident prevention program;

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

xx) ensure that task hazard analysis (THA) tables are completed/updated by work crews and field supervisor(s) prior to beginning work activities.

5.0 WORKER TRAINING AND EDUCATION

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

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

Contractors working at the GMPT Bedford Plant are required to undergo additional safety training. The Safe Job Operating Procedure entitled, Safety and Fire Specifications for Outside Contractors – Procedure # 532-1, is to be reviewed with Site personnel as part of the Site Safety Indoctrination Session. A copy of this document has been attached to the HASP as Appendix C. Supervisory personnel completing this training are to complete and sign the Contractor Safety and Environmental Agreement Form which is included in Appendix C.

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

6.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

6.1 PROTECTION LEVELS

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

Protection levels are selected based upon the following:

i) measured concentrations of the Site chemicals and expected concentrations in the ambient atmosphere compared to allowable exposure levels;

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

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

The specific protection levels to be employed at the Site for each work task are listed in Table 6.1. All project activities conducted at the Site will require the use of one of the following levels of PPE.

<u>Level B:</u>

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

ii) polycoated tyvek® or saranex® coveralls;

iii) safety-toed work boots and disposable boot covers or rubber boots;

iv) disposable nitrile inner gloves;

v) outer nitrile work gloves;

vi) high visibility safety vest;

vii) hearing protection as necessary; and

viii) hard hat.

<u>Level C:</u>

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

ii) safety-toed work boots and disposable boot covers or rubber boots;

iii) disposable nitrile inner gloves;

iv) high visibility safety vest;

v) outer nitrile inner gloves;

vi) full-face air purifying respirator (APR), equipped with combination cartridges for organic vapors and particulates (P-100);

vii) safety glasses (if necessary);

viii) goggles or face shield (if necessary);

ix) hearing protection as necessary; and

x) hard hat.

<u>Modified Level D:</u>

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

ii) safety-toed work boots and disposable boot covers or rubber boots;

iii) disposable nitrile inner gloves;

iv) outer nitrile work gloves;

v) high visibility safety vest;

vi) safety glasses;

vii) splash shields as necessary;

viii) hearing protection as necessary; and

ix) hard hat.

Level D:

i) standard work uniform or coveralls;

ii) safety-toed work boots;

iii) gloves as necessary;

iv) safety glasses;

v) splash shield as needed;

vi) hearing protection as necessary; and

vii) hard hat.

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

6.2 REASSESSMENT OF PROTECTION LEVELS

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

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

i) commencement of a new work phase;

ii) change in job tasks during a work phase;

iii) change of season/weather;

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

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

vi) change in ambient levels of chemicals; and

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

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

6.3 DURATION OF WORK TASKS

The duration of project activities involving the usage of PPE will follow ACGIH guidelines and will be established by the HSO or his designee based upon ambient temperature and weather conditions, the capacity of personnel to work in the designated level of PPE (see Section 7.3 – Heat Stress, Section 7.4 – Cold Stress, and Section 12.4 - Temperature), and limitations of the protective equipment (i.e., ensemble permeation rates, life expectancy of air-purifying respirator cartridges, etc.). As a minimum, rest breaks will be observed at the following intervals:

i) 15 minutes midway between shift startup and lunch;

ii) 0.5 hour for lunch; and

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

All rest breaks will be taken in a clean area (e.g., support zone) after full decontamination and PPE removal. Additional rest breaks will be observed based upon the heat and cold stress monitoring guidelines presented in Sections 7.3 and 7.4, and the CRA Health and Safety Programs.

6.4 LIMITATIONS OF PROTECTIVE CLOTHING

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

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

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

ii) inspect all clothing, gloves, and boots both prior to and during use for:
   - a) imperfect seams,
   - b) non-uniform coatings,
   - c) tears,
   - d) poorly functioning closures; and

iii) inspect reusable garments, boots, and gloves both prior to and during use for:
   - a) visible signs of chemical permeation,
   - b) swelling,
   - c) discoloration,
   - d) stiffness,
   - e) brittleness,
   - f) cracks,
   - g) any sign of puncture, and
   - h) any sign of abrasion.

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

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

i) familiarize themselves with this HASP;

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

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

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

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

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

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

6.5 RESPIRATORY PROTECTION PROGRAM

All on-Site personnel will be required to comply with their employer specific written respiratory protection program developed in accordance with OSHA 29 CFR 1910.134. CRA personnel will comply with the CRA Respiratory Protection Program.

Respiratory protection may be required during some of the project activities. This is to ensure worker protection from potentially contaminated particulates and volatile organic compounds (VOCs). During intrusive activities, a photoionization detector (PID) will be used to determine the levels of organic vapors present and a particulate monitor will be used to monitor particulate levels in the breathing zone. Background readings will be established prior to commencing work activities at each active work area.

Sustained (greater than five minutes) air monitoring action levels and appropriate respiratory protection when dealing with unknown atmospheres and/or areas that have not been previously characterized for the presence of chemicals of concern (i.e., test pit excavation activities, drilling in new area(s), etc.) are as follows:

Sustained Organic Vapor Reading Above Background Within Worker Breathing Zone in Parts Per Million (ppm)	*Action Taken*
0 or Background	• Full-face air purifying respirator available
>0 – <5	• Upgrade to Level C - Wear full-face air purifying respirator equipped with OV/Acid Gas/P-100 filter cartridge. • Attempt to identify chemical(s) in air via colorimetric evaluation and/or air sampling. **NOTE:** If GM or CRA are unable to identify and quantify the contaminants, level B will be required when the PID reading is greater than background (and designated site contaminants are ruled out or air sampling does not provide pertinent data). The contaminant will be unknown and NIOSH, OSHA, and manufacturer's use requirements for air purifying respirators will not be met thus requiring an upgrade to level B. If readings subside then workers can downgrade to level D respiratory protection.
>5	• Must wear supplied air respirator - Implement additional engineering controls
> 50	• Shut down activities

Dust control measures will be implemented to limit the excessive emission of dust. Therefore, the action level for total dust is as follows:

Sustained Particulate Reading Above Background Within Worker Breathing Zone in Parts Per Million	*Action Taken*
0 – 0.5 mg/m^3	• Full-face air purifying respirator available
0.5 mg/m^3 - 2.5 mg/m^3	• Upgrade to Level C - Wear full-face air purifying respirator equipped with OV/Acid Gas/P-100 filter cartridge
> 2.5 mg/m^3	• Shut down Site activities and implement additional engineering controls

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

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

6.6 SITE CONTROL

A temporary fence and/or caution tape with appropriate warning signs will be installed to prevent unauthorized access to the Site work areas. Visitors may gain access to the other side of the fence only if they are escorted. The intention is to keep them out of the EZ. Designated work areas will be set up as appropriate during the Site field activities, as required. The purpose of these procedures is to limit access to areas with potentially elevated chemical presence, and prevent the migration of potentially hazardous materials into adjacent clean areas. These areas are described in the following:

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

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

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

ii) The Contaminant Reduction Zone (CRZ) will provide a location for removal of PPE which has contacted material with elevated chemical presence and final removal and decontamination of personnel and equipment. Supplemental safety equipment, such as fire extinguishers, portable eyewash, and extra quantities of

PPE may be stored in this area. The general order in which safety equipment is to be donned is as follows:

a) Tyvek® suit;

b) rubber boots;

c) gloves;

d) safety vest and glasses;

d) respirator (if required); and

e) hard hat.

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

7.0 ACTIVITY HAZARD/RISK ANALYSIS

This section identifies the general hazards associated with specific project activities and presents the documented or potential health and safety hazards that exist at the Site. Every effort will be made to reduce or eliminate these hazards. Those which cannot be eliminated must be guarded against by use of engineering controls and/or PPE. Table 7.1 presents the anticipated hazards/risks and hazard controls.

In addition to the chemical hazards presented in Section 2.0 of this HASP, physical hazards at the Site include: uneven terrain; ladders; excavations and test pits; biological hazards; manual material handling; steep slopes; slippery surfaces; potential confined spaces; the use of heavy equipment; working from/on elevated surfaces; the use of decontamination equipment; and potential heat and cold stress. It will be the responsibility of each on-Site contractor and their personnel to identify the physical hazards posed by the various Site project activities and implement preventative and corrective action.

7.1 CHEMICAL EXPOSURE

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

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

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

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

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

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

Although ingestion should be the least significant route of exposure at the Site, it is important to be aware of how this type of exposure can occur. Deliberate ingestion of chemicals is unlikely; however, personal habits such as chewing gum or tobacco, drinking, eating, smoking cigarettes, and applying cosmetics at the Site may provide a route of entry for chemicals.

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

7.2 GENERAL PRACTICES

Additional general safety practices to be implemented are as follows:

i) at least one copy of this HASP and the contractor HASP must be at the project Site, in a location readily available to all personnel, and reviewed by all project personnel prior to starting work;

ii) all Site personnel must use the buddy system (working in pairs or teams) when performing work within an EZ;

iii) food, beverages, or tobacco products must not be present or consumed in the EZ and CRZ. Cosmetics must not be applied within these zones;

iv) emergency equipment such as eyewash, fire extinguishers, etc., must be removed from storage areas and staged in readily accessible locations;

v) contaminated waste, debris, and clothing must be properly contained and legible and understandable precautionary labels must be affixed to the containers;

vi) removing contaminated soil from protective clothing or equipment with compressed air, shaking, or any other means that disperses contaminants into the air is prohibited;

vii) containers must be moved only with the proper equipment, and must be secured to prevent dropping or loss of control during transport; and

viii) visitors to the Site must be instructed to stay outside the EZ and CRZ and remain within the SZ during the extent of their stay. Visitors must be cautioned to avoid skin contact with surfaces that are contaminated or suspected to be contaminated.

7.2.1 BUDDY SYSTEM

All on-Site personnel must use the buddy system while performing work within the EZ. Visual contact must be maintained between crew members at all times, and crew members must observe each other for signs of chemical exposure, heat, or cold stress. Indications of adverse effects include, but are not limited to:

i) changes in complexion and skin coloration;
ii) changes in coordination;
iii) excessive salivation and pupillary response; and
iv) changes in speech pattern.

Team members must also be aware of potential exposure to possible safety hazards, unsafe acts, or noncompliance with safety procedures. Employees must inform their partners or fellow team members of non-visible effects of exposure to toxic materials. The symptoms of such exposure may include:

i) headaches;
ii) dizziness;
iii) nausea;
iv) blurred vision;
v) cramps; and
vi) irritation of eyes, skin, or respiratory tract.

If protective equipment or noise levels impair communications, prearranged hand signals must be used for communication. Personnel must stay within line of sight of another team member.

7.3 HEAT STRESS

Heat stress is caused by a number of interacting factors including environmental conditions, clothing, workload, etc., as well as the physical and conditioning characteristics of the individual. Heat stress is one of the most common illnesses associated with heavy outdoor work conducted with direct solar load and, in particular, wearing PPE can increase the risk of developing heat stress therefore the CRA Heat Stress Program will be routinely covered with Site personnel. Personnel must be aware of the types and causes of heat-related illnesses and be able to recognize the signs and symptoms of these illnesses in both themselves and their co-workers.

Heat Rashes: One of the most common problems in hot work environments. Commonly known as prickly heat, a heat rash is manifested as red papules and usually appears in areas where the clothing is restrictive. As sweating increases, these papules give rise to a prickling sensation. Prickly heat occurs in skin that is persistently wetted by unevaporated sweat, and heat rash papules may become infected if they are not treated. In most cases, heat rashes will disappear when the affected individual returns to a cool environment.

Heat Cramps: Usually caused by performing hard physical labor in a hot environment. These cramps have been attributed to an electrolyte imbalance caused by sweating. It is important to understand that cramps can be caused both by too much and too little salt.

Cramps appear to be caused by the lack of water replenishment. Because sweat is a hypotonic solution (plus or minus 0.3 percent NaCl), excess salt can build up in the body if the water lost through sweating is not replaced. Thirst cannot be relied on as a guide to the need for water; instead, water must be taken every 15 to 20 minutes in hot environments.

Under extreme conditions, such as working for 6 to 8 hours in heavy protective gear, a loss of sodium may occur. Drinking commercially available carbohydrate-electrolyte replacement liquids is effective in minimizing physiological disturbances during recovery.

Heat Exhaustion: Occurs from increased stress on various body organs due to inadequate blood circulation, cardiovascular insufficiency, or dehydration. Signs and symptoms include pale, cool, moist skin; heavy sweating; dizziness; nausea; headache; vertigo; weakness; thirst; and giddiness. Fortunately, this condition responds readily to prompt treatment.

Heat exhaustion should not be dismissed lightly, however, for several reasons. Fainting associated with heat exhaustion can be dangerous because the victim may be operating machinery or controlling an operation that should not be left unattended; moreover, the victim may be injured when he or she faints. Also, the signs and symptoms seen in heat exhaustion are similar to those of heat stroke, which is a medical emergency.

Workers suffering from heat exhaustion should be removed from the hot environment, be given fluid replacement, and be encouraged to get adequate rest.

Heat Stroke: This the most serious form of heat stress. Heat stroke occurs when the body's system of temperature regulation fails and the body's temperature rises to critical levels. This condition is caused by a combination of highly variable factors, and its occurrence is difficult to predict.

Heat stroke is a medical emergency. The primary signs and symptoms of heat stroke are confusion; irrational behavior; loss of consciousness; convulsions; a lack of sweating (usually); hot, dry skin; and an abnormally high body temperature, e.g., a rectal temperature of105.8°F (41°C). If body temperature is too high, it causes death. The elevated metabolic temperatures caused by a combination of work load and environmental heat load, both of which contribute to heat stroke, are also highly variable and difficult to predict.

If a worker shows signs of possible heat stroke, professional medical treatment should be obtained immediately. The worker should be placed in a shady area and the outer clothing should be removed. The worker's skin should be wetted and air movement around the worker should be increased to improve evaporative cooling until professional methods of cooling are initiated and the seriousness of the condition can be assessed. Fluids should be replaced as soon as possible. The medical outcome of an episode of heat stroke depends on the victim's physical fitness and the timing and effectiveness of first aid treatment.

Regardless of the worker's protestations, no employee suspected of being ill from heat stroke should be sent home or left unattended unless a physician has specifically approved such an order.

Proper training and preventive measures will help avert serious illness and loss of work productivity. Preventing heat stress is particularly important because once someone suffers from heat stroke or exhaustion, that person may be predisposed to additional heat injuries.

Heat Stress Safety Precautions: Heat stress monitoring and work rest cycle implementation should commence when the ambient adjusted temperature exceeds 72°F (22.2°C). A minimum work rest regimen and procedures for calculating ambient adjusted temperature are described below.

Adjusted Temperature[1]	*Work-Rest Regimen Normal Work Ensemble*[2]	*Work-Rest Regimen Impermeable Ensemble*
90°F (32.0°C) or above	After each 45 minutes of work	After each 15 minutes of work
87.5° to 90°F (30.8°C to 32.2°C)	After each 60 minutes of work	After each 30 minutes of work
82.5° to 87.5°F (28.1° to 30.8°C)	After each 90 minutes of work	After each 60 minutes of work
77.5° to 82.5°F (25.3° to 28.1°C)	After each 120 minutes of work	After each 90 minutes of work
72.5° to 77.5°F (22.5° to 25.3°C)	After each 150 minutes of work	After each 120 minutes of work

Notes:

(1) Calculate the adjusted air temperature (ta adj) by using this equation: ta adj °F=ta °F + (13 x percent sunshine). Measure air temperature (ta) with a standard thermometer, with the bulk shielded from radiant heat. Estimate percent sunshine by judging what percent time the sun is not covered by clouds that are thick enough to produce a shadow (100 percent sunshine = no cloud cover and a sharp, distinct shadow; 0 percent sunshine = no shadows).

(2) A normal work ensemble consists of cotton coveralls or other cotton clothing with long sleeves and pants.

In order to determine if the work rest cycles are adequate for the personnel and specific Site conditions, additional monitoring of individuals heart rates will be conducted during the rest cycle. To check the heart rate, count the radial pulse for 30 seconds at the beginning of the rest period. If the heart rate exceeds 110 beats per minute, shorten the next work period by one-third and maintain the same rest period.

Additional one or more of the following control measures can be used to help control heat stress and are mandatory if any Site worker has a heart rate (measure immediately prior to rest period) exceeding 115 beats per minute:

i) Site workers will be encouraged to drink plenty of water and electrolyte replacement fluids throughout the day;
ii) on-Site drinking water will be kept cool (50 to 60°F) (10 to 15.6°C);
iii) a work regimen that will provide adequate rest periods for cooling down will be established, as required;

iv) all personnel will be advised of the dangers and symptoms of heat stroke, heat exhaustion, and heat cramps;

v) cooling devices such as vortex tubes or cooling vests should be used when personnel must wear impermeable clothing in conditions of extreme heat;

vi) employees should be instructed to monitor themselves and co-workers for signs of heat stress and to take additional breaks as necessary;

vii) a shaded rest area must be provided. All breaks should take place in the shaded rest area;

viii) employees must not be assigned to other tasks during breaks;

ix) employees must remove impermeable garments during rest periods. This includes Tyvek® garments; and

x) all employees must be informed of the importance of adequate rest, acclimation, and proper diet in the prevention of heat stress disorders.

Note: Additional information can be referenced in the CRA Health and Safety Program for Heat Stress.

7.4 COLD STRESS

Cold stress is similar to heat stress in that it is caused by a number of interacting factors including environmental conditions, clothing, workload, etc., as well as the physical and conditioning characteristics of the individual. Fatal exposures to cold have been reported in employees failing to escape from low environmental air temperatures or from immersion in low temperature water. Hypothermia, a condition in which the body's deep core temperature falls significantly below 98.6°F (37°C), can be life threatening. A drop in core temperature to 95°F (35°C) or lower must be prevented.

Air temperature is not sufficient to determine the cold hazard of the work environment. The wind-chill must be considered as it contributes to the effective temperature and insulating capabilities of clothing. The equivalent chill temperature should be used when estimating the combined cooling effect of wind and low air temperatures on exposed skin or when determining clothing insulation requirements to maintain the body's core temperature.

The body's physiologic defense against cold includes constriction of the blood vessels, inhibition of the sweat glands to prevent loss of heat via evaporation, glucose production, and involuntary shivering to produce heat by rapid muscle contraction.

The frequency of accidents increases with cold temperature exposures as the body's nerve impulses slow down, individuals react sluggishly and numb extremities make for increased clumsiness. Additional safety hazards include ice, snow blindness, reflections from snow, and possible skin burns from contact with cold metal.

Pain in the extremities may be the first early warning of danger to cold stress. During exposure to cold, maximum severe shivering develops when the body temperature has fallen to 95°F (35°C). This must be taken as a sign of danger to the employees on site, and cold exposures should be immediately terminated for any employee when severe shivering becomes evident. Useful physical or mental work is limited when severe shivering occurs.

7.4.1 PREDISPOSING FACTORS FOR COLD STRESS

There are certain predisposing factors that make an individual more susceptible to cold stress. It is the responsibility of the project team members to inform the HSO to monitor an individual, if necessary, or use other means of preventing/reducing the individual's likelihood of experiencing a cold related illness or disorder.

Predisposing factors that will increase an individual's susceptibility to cold stress are listed below:

- Dehydration: The use of diuretics and/or alcohol, or diarrhea can cause dehydration. Dehydration reduces blood circulation to the extremities.
- Fatigue During Physical Activity: Exhaustion reduces the body's ability to constrict blood vessels. This results in the blood circulation occurring closer to the surface of the skin and the rapid loss of body heat.
- Age: Some older and very young individuals may have an impaired ability to sense cold.
- Alcohol Consumption: Alcohol dilates the blood vessels near the skin surface resulting in excessive body heat loss.
- Sedative Drugs: Sedatives may interfere with the transmission of impulses to the brain, thereby interfering with the body's physiological defense against cold. Some prescription drugs may react the same way.
- Poor Circulation: Vasoconstriction of peripheral vessels reduces blood flow to the skin surface.

- Heavy Work Load: Heavy work loads generate metabolic heat and make an individual perspire even in extremely cold environments. If perspiration is absorbed by the individual's clothing and is in contact with the skin, cooling of the body will occur.
- The Use of PPE: PPE usage that traps sweat inside the PPE may increase an individual's susceptibility to cold stress.
- Lack of Acclimatization: Acclimatization, the gradual introduction of workers into a cold environment, allows the body to physiologically adjust to cold working conditions.
- History of Cold Injury: Previous injury from cold exposures may result in increased cold sensitivity.

7.4.2 PREVENTION OF COLD STRESS

There are a variety of measures that can be implemented to prevent or reduce the likelihood of employees developing cold related ailments and disorders. These include acclimatization, fluid and electrolyte replenishment, eating a well balanced diet, wearing warm clothing, the provision of shelter from the cold, thermal insulation of metal surfaces, adjusting work schedules, and employee education.

- Acclimatization: Acclimatization is the gradual introduction of workers into the cold environment to allow their bodies to physiologically adjust to cold working conditions. However, the physiological changes are usually minor and require repeated uncomfortably cold exposures to induce them.
- Fluid and Electrolyte Replenishment: Cold, dry air can cause employees to lose significant amounts of water through the skin and lungs. Dehydration affects the flow of blood to the extremities and increases the risk of cold injury. Warm, sweet, caffeine-free, non-alcoholic drinks and soup are good sources to replenish body fluids.
- Eating a Well Balanced Diet: Restricted diets including low salt diets can deprive the body of elements needed to withstand cold stress. Eat high energy foods throughout the day.
- Warm Clothing: It is beneficial to maintain air space between the body and outer layers of clothing in order to retain body heat. However, the insulating effect provided by such air spaces is lost when the skin or clothing is wet.

The parts of the body most important to keep warm are the feet, hands, head, and face. As much as 40 percent of body heat can be lost when the head is exposed.

Recommended clothing includes:

- Inner layers (t-shirts, shorts, socks) should be of a thin, thermal insulating material.
- Wool or thermal trousers. Denim is not a good protective fabric.
- Felt-lined, rubber-bottomed, leather-upper boots with a removable felt insole is preferred. Change socks when wet.
- Wool shirts/sweaters should be worn over inner layer.
- A wool cap is good head protection. Use a liner under a hard hat.
- Mittens are better insulators than gloves.
- Face masks or scarves are good protection against wind.
- Tyvek/poly-coated Tyvek provides good wind protection.
- Wear loose fitting clothing, especially footwear.
- Carry extra clothing in your vehicle.
- Shelters with heaters should be provided for the employees' rest periods if possible. Sitting in a heated vehicle is a viable option. Care should be taken that the exhaust is not blocked and that windows are partially open to provide ventilation.
- At temperatures of 30°F (-1°C) or lower, cover metal tool handles with thermal insulating material if possible.
- Schedule work during the warmest part of the day if possible, rotate personnel and adjust the work/rest schedule to enable employees to recover from the effects of cold stress.

It may not be practically feasible to implement all the above prevention measures. Follow the guidelines given below when the ambient air temperature is below 0°F (-18°C):

- dress warmly;
- replenish fluids and electrolytes at regular intervals;
- provide shelter from the cold; and
- adjust work/rest schedules.

7.4.3 FIRST AID GUIDELINES FOR COLD STRESS

The following describes symptoms of different stages in cold stress and the related first aid treatment guidelines.

FROSTBITE

Stages

Incipient (frost nip)	May be painless. Tips of ears, nose, cheeks, fingers, toes, chin affected. Skin blanched white.
Superficial	Affects skin/tissue just beneath skin; turns purple as it thaws. Skin is firm, waxy; tissue beneath is soft, numb.
Deep	Tissue beneath skin is solid, waxy, white with purplish tinge. Entire tissue depth is affected.

First Aid

Incipient	Warm by applying firm pressure - blow warm breath on spot or submerge in warm water (102°F to 110°F) (39°C to 43°C). Do not rub the area.
Superficial	Provide dry coverage, steady warmth; submerge in warm water.
Deep	Hospital care is needed. Do not thaw frostbitten part if needed to walk on. Do not thaw if there is danger of refreezing. Apply dry clothing over frostbite. Submerge in water; do not rub.

GENERAL HYPOTHERMIA

Stages

- Shivering.
- Indifference.
- Decreased consciousness.
- Unconsciousness.
- Death.

Symptoms

- Muscle tension.
- Uncontrollable shivering.
- Glassy stare.
- Decreased muscle function.
- Speech distortion.
- Blue, puffy skin.
- Slow pulse.
- Shallow breathing.
- Coordination loss.
- Stumbling.
- Forgetfulness.
- Freezing extremities.
- Dilated pupils.
- Fatigue.

Emergency Response

- Keep person dry; replace wet clothing.
- Apply external heat to both sides of patient using available heat sources, including other bodies.
- Give warm liquids - not coffee or alcohol - after shivering stops and if conscious.
- Handle gently.
- Transport to medical facility as soon as possible.
- If more than 30 minutes from a medical facility, warm person with other bodies.

Note: Additional information on cold stress can be found within the CRA Health and Safety Program for Cold Stress.

7.5 EXCAVATION AND TRENCHING

Site activities will involve excavation and trenching of materials. It is the responsibility of the CRA Site HSO and the contractor's Site Supervisor (competent person) to implement the following components of the CRA Excavation and Trenching Program as they relate to project activities:

i) that all excavations are completed in accordance with an approved contractor's Program;
ii) that the proper protective materials and equipment are available to complete the excavation and/or trenching procedures;
iii) complete and document all inspections of the excavation as required before personnel attempt to enter the excavation; and
iv) submit any contractor's Excavation and Trenching Program to CRA's Safety and Health Group for review prior to initiating excavation activities.

Excavation and trenching operations require pre-planning to determine whether sloping or shoring systems are required, and to develop appropriate designs for such systems. Also, the estimated location of all underground installations must be determined before digging/drilling begins.

If there are any nearby buildings, walls, sidewalks, tress, or roads that may be threatened or undermined by the excavation, where the stability of any of these items may be endangered by the excavation, they must be removed or supported by adequate shoring, bracing, or underpinning.

Excavations may <u>not</u> go below the base of footings, foundations, or retaining walls, unless they are adequately supported or a person who is registered as a Professional Engineer (PE) has determined that they will not be affected by the soil removal. OSHA recommends using civil engineers or those with licenses in a related discipline and experience in the design and use of slopping and shoring systems. PE qualifications must be documented in writing.

Personnel required to enter or work in the excavation at any time must be protected from the hazards of cave-ins. This requires the use of sloping and/or shoring systems that comply with State and Federal OSHA standards.

An approved contractor's Excavation and Trenching Program will be followed during all excavation activities and provides detailed information regarding such activities.

7.6 SAMPLING AND INSPECTION ACTIVITIES

Activities associated with the sample collection and inspection tasks may include collection of soil, groundwater, surface water, and sediment samples in/at various work areas (excavations, test pits, drilling operations, etc.). Physical hazards associated with sampling/inspection activities may include: severe weather; working from an elevated surface; slips, trips and falls; sharp objects; confined spaces; lifting heavy objects; noise; electrical safety; heat/cold stress; moving or backing vehicles; and use of hand tools.

Sampling activities may involve sampling in excavations. Therefore, CRAs Health and Safety Program for Excavation and Trenching is to be followed. As a minimum, CRA personnel will not enter any excavation until it has been inspected by a competent person and deemed safe for entry. Sampling personnel may request to view the inspection log.

7.7 CONFINED SPACES

A confined space provides the potential for unusually high concentrations of contaminants, explosive atmospheres, oxygen deficient atmospheres, limited visibility, and restricted movement. This section establishes requirements for safe entry into, continued work in, and safe exit from confined spaces. Additional information regarding confined space entry can be found in 29 CFR 1926.21, 29 CFR 1910.146, and NIOSH-106. Entry into a confined space will only be undertaken after remote methods have been tried and found not to be successful. Such work will follow the guidelines presented in the CRA Health and Safety Confined Space Program or an approved contractor's Confined Space Entry Program. The contractor's Program must minimally meet the requirements set forth in the CRA Confined Space Program.

7.8 FALL HAZARDS

Site personnel may be exposed to fall hazards greater than six feet above another surface with no barriers in place to protect them. These hazards may be found in the following activities: working from elevated surfaces, working from ladders, near excavations, or on equipment, etc.

It is the contractor's responsibility to identify and control all fall hazards posed by the various Site activities. This information will be added to Site-specific HASP and will include procedures to implement preventative and corrective actions. The contractor will provide and document the necessary training on fall protection to affected employees.

7.9 BIOLOGICAL HAZARDS

Biological hazards may include poison ivy, poison oak, snakes, thorny bushes and trees, ticks, mosquitoes, and other pests.

7.9.1 TICK-BORNE DISEASES

Lyme Disease, Erlichiosis, and Rocky Mountain Spotted Fever (RMSF) are diseases transmitted by ticks and occur throughout the United States during spring, summer, and fall.

Lyme Disease: The disease commonly occurs in summer and is transmitted by the bite of infected ticks. "Hot spots" in the United States include New York, New Jersey, Pennsylvania, Massachusetts, Connecticut, Rhode Island, Minnesota, and Wisconsin. Few cases have been identified in other states.

Erlichiosis: The disease also commonly occurs in summer and is transmitted by the bite of infected ticks. "Hot spots" in the United States include New York, Massachusetts, Connecticut, Rhode Island, Minnesota, and Wisconsin. Few cases have been identified in other states.

These diseases are transmitted primarily by the Deer Tick, which is smaller and redder than the common Wood Tick. The disease may be transmitted by immature ticks, which are small and hard to see. The tick may be as small as a period on this page.

Symptoms of Lyme disease include a rash or a peculiar red spot, like a bull's eye, which expands outward in a circular manner. The victim may have headache, weakness, fever, a stiff neck, swelling and pain in the joints, and eventually, arthritis. Symptoms of

Erlichiosis include muscle and joint aches, flu-like symptoms, but there is typically no skin rash.

Rocky Mountain Spotted Fever: This disease is transmitted via the bite of an infected tick. The tick must be attached 4 to 6 hours before the disease-causing organism (*Rickettsia rickettsii*) becomes reactivated and can infect humans. The primary symptom of RMSF is the sudden appearance of a moderate-to-high fever. The fever may persist for two to three weeks. The victim may also have a headache, deep muscle pain, and chills. A rash appears on the hands and feet on about the third day and eventually spreads to all parts of the body. For this reason, RMSF may be confused with measles or meningitis. The disease may cause death if untreated, but if identified and treated promptly, death is uncommon.

Control: Tick repellent containing diethyltoluamide (DEET) should be used in tick-infested areas, and pants legs should be tucked into boots. In addition, workers should search the entire body every three or four hours for attached ticks. Ticks should be removed promptly and carefully without crushing, since crushing can squeeze the disease-causing organism into the skin. A gentle and steady pulling action should be used to avoid leaving the head or mouth parts in the skin. Hands should be protected with surgical gloves when removing ticks.

7.9.2 POISONOUS PLANTS

Poison ivy, poison sumac, and poison oak may be present in the work area. Personnel should be alerted to its presence, and instructed on methods to prevent exposure.

Control: The main control is to avoid contact with the plant, cover arms and hands, and frequently wash potentially exposed skin. Particular attention must be given to avoiding skin contact with objects or protective clothing that have touched the plants. Treat every surface that may have touched the plant as contaminated, and practice contamination avoidance. If skin contact is made, the area should be washed immediately with soap and water, and observed for signs of reddening.

7.9.3 POISONOUS SNAKES

The possibility of encountering snakes (cottonmouths and rattlesnakes) exists, specifically for personnel working in wooded/vegetated areas. Snake venoms are complex and include proteins, some of which have enzymatic activity. The effects produced by venoms include neurotoxic effects with sensory, motor, cardiac, and respiratory difficulties; cytotoxic effects on red blood cells, blood vessels, heart muscle, kidneys, and lungs; defects in coagulation; and effects from local release of substances by enzymatic actions. Other noticeable effects of venomous snake bites include swelling, edema, and pain around the bite, and the development of ecchymosis (the escape of blood into tissues from ruptured blood vessels).

Control: To minimize the threat of snake bites, all personnel walking through vegetated areas must be aware of the potential for encountering snakes, and the need to avoid actions promoting encounters, such as turning over logs, etc. If a snake bite occurs, an attempt should be made to kill the snake for identification. The victim must be transported to the nearest hospital within 30 minutes; first aid consists of applying a constriction band and washing the area around the wound to remove any unabsorbed venom.

In areas where snakes may be encountered, affected personnel are required to wear leather work gloves and snakeproof chaps and/or snakeproof boots. Additionally, a snake bite kit is to be readily available at all times.

7.10 NOISE

Exposure to noise over the OSHA action level can cause temporary impairment of hearing; prolonged and repeated exposure can cause permanent damage to hearing. The risk and severity of hearing loss increases with the intensity and duration of exposure to noise. In addition to damaging hearing, noise can impair voice communication, thereby increasing the risk of accidents on Site. CRA's Hearing Conservation Program is to be implemented for personnel exposed noise levels above the OSHA action level of 85 decibels (acoustic) (dBA).

Control: All personnel must wear hearing protection with a Noise Reduction Rating (NRR) of at least 20 when noise levels exceed 85 dBA. When it is difficult to hear a co-worker at normal conversation distance, the noise level is approaching or exceeding 85 dBA, and hearing protection is necessary. All Site personnel who may be exposed to noise must also receive baseline and annual audiograms and training as to the causes and prevention of hearing loss.

Whenever possible, equipment that does not generate excessive noise levels will be selected for this project. If the use of noisy equipment is unavoidable, barriers or increased distance will be used to minimize worker exposure to noise, if feasible.

7.11 SANITARY FACILITIES

Site sanitation will be maintained according to OSHA and Department of Health requirements.

7.11.1 BREAK AREA

Breaks must be taken in the SZ, away from the active work area after Site personnel go through decontamination procedures. There will be no eating, drinking, or chewing gum or tobacco in the area other than the SZ. Smoking is <u>not</u> permitted anywhere within the GMPT Bedford Facility.

7.11.2 POTABLE WATER

The following rules apply for all project field operations:

i) an adequate supply of potable water will be provided at each work Site. Potable water must be kept away from hazardous materials, contaminated clothing, and contaminated equipment;

ii) portable containers used to dispense drinking water must be capable of being tightly closed, and must be equipped with a tap dispenser. Water must not be drunk directly from the container, nor dipped from the container;

iii) containers used for drinking water must be clearly marked and not used for any other purpose; and

iv) disposable cups must be supplied, and both a sanitary container for unused cups and a receptacle for disposing of used cups must be provided.

7.11.3 TRASH COLLECTION

Trash collected from the CRZ will be separated as potentially contaminated waste. Trash collected in the support and break areas will be disposed of as non-hazardous waste. Trash receptacles will be set up in the CRZ and in the SZ.

7.12 ELECTRICAL HAZARDS

Electricity may pose a particular hazard to Site workers due to the use of portable electrical equipment. When electrical work is needed, it must be performed by a qualified electrician in accordance with the CRA Health and Safety Program for Electrical Safety.

General electrical safety requirements include:

a) all electrical wiring and equipment must be a type listed by Underwriters Laboratory (UL), Factory Mutual Engineering Corporation (FM), or other recognized testing or listing agency;

ii) all installations must comply with the National Electrical Safety Code (NESC), the National Electrical Code (NEC), or USCG regulations;

iii) portable and semi-portable tools and equipment must be grounded by a multi-conductor cord having an identified grounding conductor and a multi-contact polarized plug-in receptacle;

iv) tools protected by an approved system of double insulation, or its equivalent, need not be grounded. Double insulated tools must be distinctly marked and listed by UL or FM;

v) live parts of wiring or equipment must be guarded to prevent persons or objects from touching them;

vi) electric wire or flexible cord passing through work areas must be covered or elevated to protect it from damage by foot traffic, vehicles, sharp corners, projections, or pinching;

vii) all circuits must be protected from overload;

viii) temporary power lines, switch boxes, receptacle boxes, metal cabinets, and enclosures around equipment must be marked to indicate the maximum operating voltage;

ix) plugs and receptacles must be kept out of water unless approved for submersible construction;

x) all extension outlets must be equipped with ground fault circuit interrupters (GFCIs);

xi) attachment plugs or other connectors must be equipped with a cord grip and be constructed to endure rough treatment;

xii) extension cords or cables must be inspected prior to each use, and replaced if worn or damaged. Cords and cables must not be fastened with staples, hung from nails, or suspended by bare wire; and

xiii) flexible cords must be used only in continuous lengths without splice, with the exception of molded or vulcanized splices made by a qualified electrician.

7.13 MANUAL MATERIAL HANDLING HAZARDS

Ergonomics is the science of adapting project activities to the Site personnel that will actually be completing the activity/task. Ergonomics allows personnel to work safely and efficiently by considering the limitations, physical characteristics and other human factors involved during task activities. In this section we will address problems commonly associated with ergonomics, risk factors and preventing these ergonomic problems (commonly referred to as musculoskeletal disorders [MSDs]). An MSD is an injury/disorder of the muscles, tendons, joints, spinal column, and ligaments. (NOTE: This does not include injuries caused by slips, trips and falls. These hazards should be addressed in the task safety analysis.)

7.13.1 BACK DISORDERS

Back disorders are frequently caused by repeated lifting, sudden movements, whole body vibration, lifting and twisting movements, bending over for extended periods, poor physical condition, and bad posture. Lifting heavy and/or awkward objects during a single lift can cause back problems. However, most back problems result from cumulative trauma caused by minor strains accumulating over a period of time. Repetitive movements can irritate and weaken muscle and/or ligaments eventually causing a more serious injury. Tasks involving the frequent lifting of heavy objects present the highest risks for CRA Site personnel.

7.13.2 OTHER MSD DISORDERS

MSDs from manual lifting in the construction field usually involve the hands, wrists, neck, shoulders, upper/lower back, hips, and knees. The following list presents some of the more common MSDs:

i) sprains – injury/tear to a ligament;
ii) strains – injury to muscles;
iii) degenerative discs – damage to the spine;
iv) tendinitis – inflammation/soreness of tendons due to repeated movement;
v) carpal tunnel syndrome;
vi) thoracic outlet syndrome – hand and wrist nerve disorder; and
vii) carpet layer's knee – knee pain and sprains.

7.13.3 PREVENTION

Work practice controls for the task should be developed during the safety analysis. Personnel should be instructed on the proper posture for the task in order to alleviate stress and strain to the body.

7.13.3.1 PROPER LIFTING PROCEDURES

Proper lifting techniques can help you lift safely. When you are preparing to lift a load, check the load by testing the weight at one of the corners. Get help or use a device/machine if the load is too heavy. Do not be afraid to ask for help if the load looks too heavy. Do not carry a load you cannot see around or over.

Make sure route of travel is clear of debris and trash. There should be no slip, trip or fall hazards present. Check to make sure that there is enough room/space and that there are no obstructions or overhead hazards.

Always wear proper footwear to protect your feet and to avoid losing your footing. If the object has rough and/or sharp corners and edges wear suitable work gloves. Gloves will assist by providing a good grip (coupling factor) and by protecting the hands.

When attempting the lift, stand close to the load and center yourself over the load. Squat down and get a firm footing and a good grip on the object with feet apart (one foot should be slightly behind the other foot for good balance). As you rise, lift with your legs and keep the load as close to the body as possible. Remember that your legs are stronger than your arms.

When the lift has been made, do not twist or turn the body. If the load must be moved to the left or right, move/change the position of your feet to change direction. Twisting and turning with your back creates out-of-neutral forces that could injure your back. Carry the load as close as possible to your body. Do not carry a load above your head or on your side and never carry a load that is too heavy. Get help or get a machine such as a handcart, forklift, crane, etc.

Set the load down properly by reversing the lifting procedure (i.e., bend at the knees, use your legs instead of your back and arms, do not turn or rotate, etc.) The load should be touching the ground before you release control of it. Always push an object rather than attempting to pull it. Pushing puts less strain on the back.

7.13.3.2 OTHER PREVENTATIVE MEASURES

MSDs can be prevented through proper techniques (i.e., lifting, etc.), proper diet, exercise, and PPE. Examples of proper techniques and planning include obtaining tools include acquiring tools that are ergonomically designed. These include tools that have full hand grips instead of pinch grips, knives and other cutting utensils with ergonomically designed handles, cutting and shearing tools with long handles to increase leverage and power and the distance between the person and the object being cut, and shovels with curved handles to alleviate back strain.

Exercise and the proper diet can assist in the prevention of MSDs by maintaining an overall health body. Personnel should drink 8 glasses of water a day to remain hydrated. This will reduce tearing injuries and prevent stiffness in the muscles, joints and ligaments. A well balanced diet is important to maintain optimal physical and mental function. Caffeine intake should be modified as caffeine increases muscle sensitivity to pain. Additionally, exercise will strengthen your body and increase the body's flexibility. A strong, flexible body is less apt to become injured.

Back belts are used mostly in general industry but are becoming common in the construction industry as well. Short-term studies indicate that the use of back belts provides a significant reduction in back injuries. Back belts are not considered PPE.

7.13.4 PERSONAL PROTECTIVE EQUIPMENT

The use of PPE will complement the ergonomic solutions and other measures (engineering and administrative controls) implemented by CRA during manual material handling operations. PPE provides a barrier between the worker and the hazard source (sharp edge, hard surface, etc.). Safety shoes, gloves and hard hats are examples of required PPE when handling materials manually. However, for any given situation the proper PPE should be selected so that personnel are properly protected. Over-protection as well as under-protection should be avoided as both instances can be hazardous.

Training involving PPE should include the following: when PPE is necessary; what PPE is necessary; how to wear the required PPE; limitations of PPE; and the proper care/maintenance of PPE.

Hardhats are to be worn to protect against injuries caused by the impact and penetration of falling or flying objects and to prevent unprotected heads from bumping into fixed objects. Eye and face protection will be worn to protect against hazards from flying objects during material handling activities (i.e., cutting metal banding, straps, rope, etc.).

Hand protection is the most important form of PPE when handling materials manually. The Site HSO will select the appropriate hand protection for the task/activity. Gloves are often relied upon to prevent against abrasions, cuts, and burns during material handling activities and many types of gloves actually improve your grip factor. Therefore, it is most important that the most appropriate glove (leather, cotton, kevlar, metal mesh, nitrile, etc.) is selected for the given situation. The following table presents protection factors for commonly used gloves.

Type of Glove	*Protection*
Rubber	Acids, bases, alcohol – moderate resistance to cuts.
Canvas or cloth	Dirt, wood slivers, sharp edges – some resistance to cuts.
Metal mesh or kevlar	Highly resistant to cuts and scratches and caught between hazards (crushing, etc.)
Insulated	Electrical charges
Cuffed	Protects against liquids trickling into glove and protects the wrist/forearm area from cuts and abrasions.
Leather	Moderate resistance to cuts and abrasions and caught between hazards.

It is important to wash hands frequently when wearing gloves to prevent the build-up of sweat and dirt on the hands. Check gloves regularly for cracks, holes and rips/tears. Keep gloves clean and dry as much as possible.

7.14 DRILLING ACTIVITIES

Drilling operations taking place may include the drilling of boreholes and the installation of monitoring wells. Drilling and sampling activities present several potential hazards. Minimizing these hazards requires strict adherence to safe operating procedures.

Drilling personnel shall adhere to the following practices:

- Equipment should be inspected daily by the operator to ensure that there are no operational problems.
- Before leaving the controls, shift the transmission controlling the rotary drive into neutral and place the feed level in neutral. Before leaving the vicinity of the drill, shut down the drill engine.
- Do not drive the drill rig with the mast in the raised position.
- Before raising the mast, check for overhead obstructions.
- Before the mast of a drill rig is raised, the drill rig must first be leveled and stabilized with leveling jacks and/or cribbing. Re-level the drill rig if it settles after initial set up. Lower the mast only when the leveling jacks are down, and do not raise the leveling jack pads until the mast is lowered completely.

- Employees involved in the operation shall not wear any loose-fitting clothing that has the potential to catch in moving machinery.
- Personnel shall wear safety-toed shoes, safety glasses, hearing protection and hard hats during drilling operations and safety vests during non-intrusive work activities.
- The area shall be roped off, marked or posted, to keep the area clear of pedestrian traffic or spectators.
- All personnel should be instructed in the use of the emergency kill switch on the drill rig. Personnel should routinely verify that the kill switch is functional and documented.
- Any Hot Work activities, including brazing, cutting, torching and/or welding, must have a hot work permit issued prior to beginning operations. Personnel should seek additional information from the HSO prior to commencement of work.

7.15 UTILITY CLEARANCES

Elevated superstructures (e.g., drill rig, backhoe, scaffolding, ladders, cranes) shall remain a minimum distance of 10 feet away from utility lines (<50 kV) and 20 feet away from power lines. Distance from utility lines may be adjusted by the HSO depending on actual voltage of the lines. Contact GMPT Bedford Facility Contact for assistance in determining line voltage, etc.

During all intrusive activities (e.g., drilling, excavating, and probing), the locator line service should be contacted to mark underground lines before any work is started.

Personnel involved in intrusive work shall determine the minimum distance from marked utilities which work can be conducted with the assistance of the locator line service.

7.16 LADDERS

Personnel that will use ladders or have the potential hazard of working on elevated surfaces during project activities shall follow the CRA Program for fall protection. Specific guidelines for ladders are outlined below.

Portable Ladders

Employees who use ladders on worksites must be familiar with safe ladder usage. The pertinent OSHA regulations are found in 29 CFR 1926 – Subpart X Stairways and Ladders.

- Use the 4-to-1 ratio; that is, place the ladder so its feet are 1 foot away from what it leans against for every 4 feet in height to the point where the ladder rests. Example: If the top of a 16-foot ladder leans against a wall, its feet should be placed 4 feet from the wall. The "fireman's method" is a convenient way of checking the angle of the ladder. Place your toes against the base of the ladder; fully extend both arms toward the side rail and parallel to the ground. When standing erect you should be able to hold the ladder's side rails.
- Do not use a ladder in a horizontal position as a runway or a scaffold.
- Do not place a ladder in front of a door that opens toward it unless the door is locked, blocked, or guarded by someone.
- Place a portable ladder so that both side rails have a secure footing. Provide solid footing on soft ground to prevent the ladder from sinking.
- Place the ladder's feet on a substantial and level base, not on a movable object.
- On uneven surfaces, use a block, wedge, or ladder foot.
- On wet or oily pavement, a smooth floor, or an icy or metal surface, the ladder footing must be lashed, blocked, or otherwise secured.
- Do not lean a ladder against unsafe backing, such as loose boxes or barrels.
- When using a ladder for access to high places securely lash or otherwise fasten the ladder to prevent its slipping.
- To gain access to a roof or elevated platform, extend the ladder at least 3 rungs (3 feet) above the point of support.

Ascending or Descending of Ladders

- Maintain three points of contact at all times when going up or down. If material must be handled, raise or lower it with a rope.
- Always face the ladder when ascending or descending.
- Maintain clean, dry footwear as much as possible to prevent slipping on the rungs.

7.17 FLAMMABLE AND COMBUSTIBLE LIQUIDS

The storage, dispensing, and handling of flammable and combustible liquids must be in accordance with OSHA 29 CFR 1910.106. The specific flammable or combustible liquids used at the site may include gasoline, diesel, kerosene, oils, and solvents.
Flammable and combustible liquids are classified according to flash point. This is the temperature at which the liquid gives off sufficient vapors to readily ignite. Flammable liquids have flash points below 100°F. Combustible liquids have flash points above 100°F and below 200°F.

Flammable Liquid Classes

Flammable liquids are known as Class I liquids, and divided into three classes:

- **Class 1A**, liquids having a flash point below 73°F (22.8°C), and having a boiling point below100°F (37.8°C) (ethyl ether, isoprene, pentane, petroleum ether).
- **Class 1B**, liquids having a flash point below 73°F (22.8°C), and a boiling point at or above 100°F (37.8°C) (acetone, benzene, denatured alcohol, gasoline, methyl ethyl ketone, octane).
- **Class 1C**, liquids having a flash point at or above 73°F (22.8°C) and below 100°F (37.8°C) (amyl acetate, turpentine).

Combustible Liquid Classes

Combustible liquids are known as Class II and III liquids, and divided into three classes:

- **Class II,** liquids include those with a flash point at or above 100°F (37.8°C), and below 140°F (60°C) (diesel, fuel oils, kerosene, mineral spirits).
- **Class III**, liquids are those with a flash point above 140°F. Class III liquids are further divided into two subclasses:
- **Class IIIA**, liquids with a flash point above 140°F and below 200°F (93.3°C).
- **Class IIIB**, liquids with a flash point at or above 200°F (93.3°C).

Note: When a combustible liquid is heated for use to within 30°F (16.7°C) of its flash point, it must be handled in accordance with the requirements for the next lower class of liquids.

Storage

Many flammables can ignite at temperatures at or below room temperature. They are far more dangerous than combustibles when they are heated. As a result, these products must be handled very carefully. At normal temperatures, these liquids can release vapors that are explosive and hazardous to employee health. Exposure to heat can cause some of these liquids to break down into acids, corrosives, or toxic gases.
For this reason, flammable/combustible liquids should be stored in cool, well ventilated areas away from any source of ignition. Always consult the MSDS of the product for specific information.

Flammable and combustible liquids must be stored in designated areas. Such areas must be isolated from equipment and work activity, which may produce flames, sparks, heat or any form of ignition, including smoking. The most practical method is the use of one or more approved (commercially available) flammable/combustible liquid storage cabinets. Each cabinet may store up to the following quantities:

a) 60 gallons of Class I or II liquids.

b) 120 gallons of Class III liquids.

Cabinets must be labeled "Flammable – Keep Fire Away". Doors must be kept closed and labeled accordingly. Containers must be kept in the cabinet when not in use.
There are also restrictions on the maximum allowable container size depending on the class of the products. See table below.

Maximum Size of Containers and Portable Tanks

Container Type	***Flammable Liquids***			***Combustible Liquids***	
	Class 1A	***Class 1B***	***Class 1C***	***Class II***	***Class III***
Glass or approved plastic	1 pt	1 qt	1 gal	1 gal	1 gal
Metal (other than DOT drums)	1 gal	5 gal	5 gal	5 gal	5 gal
Safety cans	2 gal	5 gal	5 gal	5 gal	5 gal
Metal drums (DOT spec)	60 gal	60 gal	60 gal	60 gal	60 gal
Approved portable tanks	660 gal	660 gal	660 gal	660 gal	660 gal

General Requirements

- Keep containers of flammable/combustible liquids closed when not in use.
- Keep flammable/combustible liquids in designated areas and approved cabinets.
- Do not allow use of unapproved containers for transfer or storage. Use only approved safety cans (5-gallon maximum) with a spring closing lid and spout cover, designated to safely relieve internal pressure when exposed to heat or fire.
- Use only approved self-closing spigots, faucets, and manual pumps when drawing flammable/combustible liquids from larger containers/barrels.
- Use only approved metal waste cans with lids for disposal of shop towels/oily rags.
- Designate "Smoking" and "No Smoking" areas.
- Observe all signs indicating "No Smoking," "No Flames," "No Ignition."

Transferring Flammable/Combustible Liquids

- This seemingly routine task can be hazardous if certain precautions are not followed. Grounding and bonding must be observed at all times to prevent the accumulation of static electricity when transferring containers/barrels one to another:
    - Drums should be grounded (#4 copper conductor) to a grounding rod.
    - Bonding is necessary between conductive containers; (e.g., a barrel and a 5-gallon container).

8.0 AIR MONITORING

This section of the HASP presents the requirements for conducting air monitoring at the Site. The air monitoring program is designed to ensure protection for both personnel working on Site and the surrounding community. The on-Site monitoring program will be conducted by the HSO and will consist of monitoring Site personnel exposures to VOCs, inorganic compounds of concern, oxygen and combustible gas levels, hydrogen sulfide and carbon monoxide. This monitoring will be completed with the use of real-time reading instruments.

Identification of volatile organic vapor or particulate levels in excess of the action levels cited in Section 6.5 shall be reported to the HSO who, in conjunction with the Regional Safety and Health Manager, will determine when PPE should be upgraded or operations be shut down and restarted.

If work is stopped because action levels have been exceeded, air monitoring will continue from a safe distance to determine if there is a threat to the surrounding community.

On-Site Air Monitoring

The HSO or Environmental Monitoring Technician will perform air monitoring to evaluate the exposure of Site personnel to chemical and physical hazards, verify the effectiveness of engineering controls, and determine the proper level of PPE. Air quality will be monitored at the initiation of each work activity and periodically thereafter. Background measurements immediately upwind of the EZ will be taken before activities commence.

During the progress of excavation activities, the HSO will monitor the levels of VOCs, oxygen and combustible gases, and particulate levels on an hourly basis or more frequently as necessary. The following monitoring equipment will be used for this purpose:

i) a PID equipped with a 10.6 eV lamp;

ii) a multigas personal alarm meter (e.g., MSA Passport® Five Star Personal Alarm or equivalent); and

iii) personal aerosol monitor (e.g., MIE® Personal DataRam or equivalent).

All instruments will be calibrated on a daily basis in accordance with the manufacturer's guidelines. Records of all calibrations and real-time measurements will be kept in a bound field log book.

Real-Time VOC Monitoring

The HSO will monitor for the presence of VOCs based on Site characteristics, historical data, work being conducted in a previously uncharacterized area, etc. PID readings will be taken in and around the exclusion zone. Action levels for upgrading or downgrading of PPE have been established by the U.S. EPA for atmospheres containing unknown concentrations of VOCs.

Combustible Gas, Oxygen, Hydrogen Sulfide, and Carbon Monoxide

Air monitoring for combustible gases and oxygen will be conducted during excavation entry activities, test pitting activities and during other activities where oxygen deficient and/or flammable atmospheres may be encountered (e.g. confined spaces; entry into excavations). The point of excavation and the immediate work area around these activities must be monitored to ensure that an adequate level of oxygen is present, and to determine if a flammable atmosphere exists. Combustible gas and oxygen level monitoring will be conducted as needed in areas that are suspect. The HSO will determine the monitoring frequency based on the observed Site conditions. All work activity must stop where monitoring indicates the flammable vapors concentration is 10 percent of the lower explosive limit (LEL) at a location with a potential ignition source. Such an area must be ventilated to reduce the concentration to an acceptable level.

Action levels for oxygen and LEL are provided below:

- If oxygen concentrations <19.5 percent are obtained in any personnel work area, supplied air respiratory protection will be required and the area will be ventilated.
- If any oxygen concentrations >22.5 percent are obtained in any work area, retreat to a safe atmosphere. Consult the Regional Safety and Health Manager and Project Management for guidance.

Based upon the scope of work involved, oxygen enriched atmospheres are not anticipated. However, it is necessary to be apprised of such readings as they impact LEL readings and vice versa.

LEL Meter Reading: If any readings ≥10 percent LEL are obtained:	**Action Taken:** Stop all activities in the area to those that will not generate sparks; wear non-sparking gear and use non-sparking tools.
If any readings ≥20 percent LEL are obtained:	Cease all activities and retreat to a safe atmosphere. Consult the Regional Safety and Health Manager and Project Management.

In addition to combustible gas and oxygen, monitoring for hydrogen sulfide and carbon monoxide will be conducted during confined space entry activities, including excavation entry and test pitting activities.

Carbon Monoxide Reading: If any readings ≥20 ppm are obtained:	**Action Taken:** Cease work immediately and contact the Site HSO and confer with the CRA Regional Safety and Health Manager.
Hydrogen Sulfide Meter Reading: If any readings ≥10 ppm are obtained:	**Action Taken:** Cease all activities in the area and wait for direction from Site HSO and confer with the CRA Regional Safety and Health Manager.

Air Sampling Program

Selected remedial contractors will be responsible for developing and implementing a personal air-monitoring program for its workers. This program will be included in the contractor's Site-specific HASP.

CRA will implement a personnel air-monitoring program for CRA personnel and subcontractor workers having the highest potential for exposure to chemicals present on Site. Samples would be collected during the startup of activities, at locations where personnel would face potential exposure. The purpose of this is to verify the adequacy of personal protection and to document the actual exposure level to the selected chemicals of concern. Sampling frequency will be determined by the HSO. Samples will be collected and analyzed for the presence of the compounds of concern as determined by the HSO. It is expected that samples will be collected and analyzed for PCBs. Appropriate NIOSH procedures and methods will be followed and all samples are to be sent to an American Industrial Hygiene Association (AIHA) accredited laboratory. Results of the air-sampling program will be posted for personnel to review.

9.0 DECONTAMINATION PROCEDURES

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

The type of decontamination solution to be used is dependent on the type of chemical hazards. The decontamination solution for this Site is Liquinox (soap) for equipment and for any reusable PPE. A MSDS for Liquinox and all other chemical containing products will be maintained on-Site by the HSO.

9.1 EQUIPMENT DECONTAMINATION PROCEDURES

A temporary Equipment Decontamination Pad will be constructed and operational before any work begins involving contact with potentially contaminated material. All equipment must be decontaminated within the CRZ or on the decontamination pad by a high-pressure washer upon exit from the EZ. All waste transport vehicles must be inspected and clean prior to leaving the Site. Decontamination procedures should include: knocking soil/mud from machines; water rinsing using a solution of water and Liquinox; scraping and brushing with long-handled brushes to remove remaining soils and a final water rinse. Particular attention should be paid to tire treads, equipment tracks, springs, joints, sprockets, and under carriages. Equipment will be allowed to air dry in a clean zone before being moved from the Site or traveling onto clean areas. Personnel shall wear Level C or Modified D protection when decontaminating equipment. Modified D protection may be used if authorized by the HSO. Runoff and sediments will be collected and stored until appropriate disposal arrangements are made. Appropriate measures (i.e., wind shields) will be taken to minimize the drift of mist and spray during decontamination. Following decontamination and prior to equipment removal from the Site or travel on clean areas, each piece of equipment will be inspected by the CRA On-Site Construction Coordinator and/or the HSO to ensure that the equipment has been properly cleaned. This inspection shall be included in the Site logbook.

In general, equipment decontamination pads should be installed and operated under the following guidelines:

i) Sized for the width and weight of the heaviest equipment expected, leaving sufficient room for decontamination equipment, personnel, and waste fluid storage drums.

ii) Provide an impermeable barrier capable of containing all decontaminated liquids.

iii) Durably constructed to withstand the wear and tear of equipment tires/tracks.

iv) Provided with a low point sump where all decontaminated fluids can be collected and pumped out.

v) Be constructed such that a minimum amount of materials will require special disposal when the decontamination pad is decommissioned. The use of granular fills or stone as the primary load-bearing surface should be avoided.

vi) The length of the decontamination pad need not be sufficient to contain the entire vehicle. The vehicle can be decontaminated in sections as it passes over the pad.

vii) If possible, vehicle access into the work zone should be made around the decontamination pad rather than over it. This will reduce the wear and tear on the pad. If such access is made possible, the pad should remain blocked whenever it is not in use.

An equipment decontamination inspection record will be maintained onsite, which includes:

- equipment descriptions with identification numbers or license plates;
- time and date entering decontamination facility;
- time and date exiting the decontamination facility; and
- name of inspector(s) with comment stating that decontamination was performed and completed.

9.2 PERSONNEL DECONTAMINATION PROCEDURES

Personnel decontamination will be completed in accordance with the CRA Health and Safety Program for personnel decontamination. Washwater and sediments will be collected and stored with any runoff water collected for subsequent treatment/disposal. PPE, trash, etc. will be sent off-Site for disposal. It will be kept separate from trash generated in clean areas of the Site. A description of the proper procedures for doffing PPE as well as personnel decontamination procedures are prescribed in detail in the

CRA Health and Safety Programs. However, the general guidelines for a typical Level C decontamination line are described below:

i) upon entering the CRZ, rinse contaminated materials from boots or remove contaminated boot covers;

ii) clean reusable protective equipment;

iii) remove protective garments, equipment, and respirator. All disposable clothing should be placed in a covered container which is labeled;

iv) wash hands, face, and neck or shower (if necessary);

v) proceed to clean area and dress in clean clothing; and

vi) clean and disinfect respirator for next use.

10.0 GENERAL SAFETY AND PERSONAL HYGIENE

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

11.0 MEDICAL SURVEILLANCE

In accordance with the requirements detailed in 29 CFR 1926.65, 29 CFR 1926.62, and 29 CFR 1910.134, all Site personnel who will come in contact with materials with potentially elevated chemical presence will have received medical surveillance by a licensed physician or physician's group as per a medical surveillance program complying with 29 CFR 1926.65.

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

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

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

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

12.0 ENVIRONMENTAL CONTROL PROGRAM

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

12.1 WEATHER MONITORING

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

12.2 TORNADO SAFETY POLICY AND PROCEDURES

Tornadoes occur most frequently between April and October from 3:00 to 7:00 P.M. but can occur any time. In most cases, tornadoes move from a west/southwest direction. A typical tornado is a swirling storm of short duration with winds up to 300 miles per hour and a near vacuum at its center. It appears as a rotating funnel-shaped cloud, from gray to black in color, extending towards the ground from the base of a thundercloud.

Tornadoes usually only cover a limited geographical area and give off a roaring sound. A tornado is the most concentrated and destructive potential weather event at the Site. Tornadoes are usually the result of the interaction of a warm, moist air mass with a cool or cold air mass. Secondary effects of tornadoes include flash flooding, electric power outages, transportation-system and communication-system disruption, and fires.

Whenever weather conditions develop that indicate tornadoes are expected, the National Weather Service will issue a tornado watch to alert people in a designated area for a specific time period (normally six hours) to remain alert for approaching storms. The tornado watch is upgraded to a tornado warning when a funnel cloud (tornado) is actually sighted or indicated by weather radar.

When a tornado is approaching Site personnel will only have a short time to react. Therefore Site personnel must be prepared to react during periods of severe weather. Memorize the following tornado danger signs:

i) approaching clouds of debris can mark the location of a tornado even if a funnel cloud is not visible;

ii) before a tornado hits, the wind may die down and the air can become very still/calm; and

iii) it is not uncommon to see clear, sunlit skies behind a tornado as they usually occur at/near the trailing edge of thunderstorms.

Tornado Evacuation Procedures
(Tasks being conducted in close proximity of GMPT Bedford Facility and Downstream Creek Areas)

Plant Security continuously monitors weather related information provided by Weather Data Service. If Weather Data Service issues a tornado warning (an actual funnel cloud is heading in the direction of the GMPT Bedford Facility), Plant Security will activate the GMPT Bedford Facility emergency response plan. CRA will be notified verbally via the GMPT Bedford Facility two-way radio system by Plant Security. Note: Plant Security tornado notification will override all other radio transmissions.

The "take shelter" warning signal is a "slow wail" of the alarm system. This alarm will not be audible to all CRA personnel that are working near the plant. Therefore, all Site personnel will evacuate the work zone(s) when a tornado watch has been issued by the National Weather Service. Personnel will be contacted by cellular telephones or contractor-supplied two-way radios. Check remote areas of the work zone(s) to ensure all personnel have reacted to the alert. Personnel must proceed to the Site mustering point and wait for further instructions. If a tornado watch is upgraded to a tornado warning, all personnel will proceed to the designated tornado shelters. Once inside the shelter, proceed to the basement and conduct a head count to ensure that all personnel are accounted for. In general, stay away from all windows and doors that lead to the outside. Remain in the shelter until the "all clear" signal is given by Plant Security. The "all clear" signal is a steady horn.

The tornado shelter most accessible to CRA personnel, and personnel occupying the adjacent trailers at GM Drive and 4th Street, is located at the wastewater treatment plant on the west side of GM Drive. The shelter has a designated “Tornado Shelter” sign visible on the exterior east wall facing GM Drive. The entrance is located on the northwest side of the building.

The tornado shelter in close proximity to the downstream Creek Area activities (Peerless Road and Bud Ikerd Road is located at the DIVE Christian Church on Peerless Road. The entrance to the basement is located on the west side of the church.

Personnel that occupy the trailer at GM Drive and Breckenridge Road will be directed to use the main security guard house at the north end of the GM plant building as their tornado shelter.

Directions to the shelter are to be communicated to Site personnel during initial Site safety orientation and throughout the tornado season during subsequent safety meetings. See Figure 12.1 for shelter locations.

If unable to reach the designated shelter, refer to the emergency procedures listed in the next section for personnel working in remote areas. The best protection in a tornado is usually an underground area. If an underground area is not available, consider small interior rooms on the lowest floor without windows, hallways on the lowest floor away from doors and windows, rooms constructed with reinforced concrete/brick/block with a heavy concrete floor and roof, and protected areas away from doors and windows.

Tornado Evacuation Procedures
(Tasks being conducted in areas further from the GMPT Bedford Facility)

Personnel working in remote areas away from the GMPT Bedford Facility will need to implement additional safety and emergency response procedures. As personnel have the potential to work in areas away from the main trailer complex/GMPT Bedford Facility without adequate protective structures (creek/stream and floodplain areas) they will depend on having adequate warning of approaching tornadoes. Field personnel will utilize the following procedures when severe weather threatens:

i) monitor weather broadcasts via hand-held battery operated National Oceanic and Atmospheric Administration (NOAA) weather radios;

ii) communicate with base station at CRA trailer complex via hand-held two-way radios and/or cellular telephones in order to have current weather data from GM Plant Security, etc.;

iii) stay alert for tornado warning signs and evacuate to the trailer complex during thunderstorms; and

iv) be aware of the potential for flooding (do not drive through areas with high ponding water).

If outdoors during a tornado, personnel should attempt to get inside a safe building. However if shelter is unavailable or there is no time to get indoors, personnel should lie in a ditch or low-lying crouch near a strong building/structure or rock formation (try to stay on the east side). Use arms to protect the neck and head. If traveling in a car/truck, never try to out drive a tornado as tornadoes can change direction and lift a car or truck into the air. Get out of the car immediately and seek shelter.

12.3 RAIN AND SNOW

Excessive amounts of precipitation may cause potential safety hazards for all work tasks. The hazards that would be most commonly associated are slipping, tripping, or falling due to slippery surfaces. Further hazards are detailed by work task (Table 7.1).

Severe weather conditions will result in work stoppage and the implementation of further emergency measures, as described in the CRA Health and Safety Program.

12.4 TEMPERATURE

Site activities are expected to be conducted year-round. Temperature extremes may be experienced which require measures to be implemented to prevent health and safety hazards from occurring. Potential hazards arising from temperature extremes are heat stress and cold exposure.

12.5 WIND

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

i) restricted Site activity;
ii) battening down light equipment or building materials;
iii) partially enclosing work areas; and
iv) reduction or stoppage of work activities.

13.0 CONFINED SPACE ENTRY PROCEDURE

A confined space provides the potential for unusually high concentrations of contaminants, explosive atmospheres, oxygen deficient atmospheres, limited visibility, and restricted movement. Included in this definition is any excavation that is greater than or equal to four feet deep and has limited access. This section establishes requirements for safe entry into, continued work in, and safe exit from confined spaces. Additional information regarding confined space entry can be found in 29 CFR 1926.21, 29 CFR 1910.146, and NIOSH-106. Entry into a confined space will only be undertaken after remote methods have been tried and found not to be successful. If confined space entry is required, such work will only be undertaken following the guidelines presented in the CRA Health and Safety Programs or an approved contractor's Confined Space Entry Program. The contractor's Program must minimally meet the requirements of the CRA Program.

14.0 EMERGENCY RESPONSE

It is essential that Site personnel be prepared in the event of an emergency. Emergencies can take many forms; illnesses or injuries, chemical exposure, fires, explosions, spills, leaks, releases of harmful contaminants, or sudden changes in the weather (See Section 12 – Environmental Control Program). The following sections outline the general procedures for emergencies. Emergency information should be posted as appropriate. All serious emergencies will be reported to the local fire and/or police departments as well as the GMPT Bedford Facility Contact. Upon arriving at the Site, they will give CRA further direction as to the responsibilities during any emergency situation. It is possible they may wish to take the lead or they may ask CRA to take the lead.

14.1 EMERGENCY CONTACTS

Fire: 911

Police: 911

Ambulance: 911

Main Hospital: .... Bedford Medical Center
2900 16th Street
Bedford, Indiana 47421
Telephone: 812-275-1200

Directions to the Hospital: Exit Trailer Complex and make left (south) onto GM Drive (0.3 miles). Go to Stop Sign and make right (West) onto 5th Street (0.7 miles). At red light make left (south) onto Lincoln Avenue (0.7 miles). Make right (west) onto Williams Boulevard (0.7 miles). Make left (south) onto Beech Street (0.7 miles). Make right (west) onto 16th Street (0.5 miles). Bedford Medical Center is on left (see Figure 14.1 for map).

Optional Hospital: .... Dunn Memorial Hospital
1600 23rd Street
Bedford, Indiana 47421
Telephone: 812-275-3331

Directions to the Hospital: Exit Trailer Complex and make left (south) onto GM Drive (0.3 miles). Go to Stop Sign and make right (West) onto 5th Street (0.7 miles). At red light make left (south) onto Lincoln Avenue (0.7 miles). Make right (west) onto 15th Street (0.8 miles). Make left (south) onto M Street (0.1 miles). Make right (west) onto 25th Street (0.7 miles). Make a right into hospital entrance (see Figure 14.1 for map).

14.2 ADDITIONAL EMERGENCY NUMBERS

National Response Center (NRC)	800-424-8802
Agency for Toxic Substances and Disease Registry	404-488-4100 (24 Hours)
Poison Control Center	800-942-5969
U.S. EPA Emergency Response	800-424-8802
State of Indiana Emergency Response Commission	317-243-5176
Underground Utilities Location Service	800-382-5544
GM Contact (Cheryl Hiatt)	248-680-5219 (Office)
	313-510-4328 (Cell)
GM Contact (Ed Peterson)	248-680-5726 (Office)
	313-506-9465 (Cell)
GM Contact (Laura Fitzpatrick)	313-665-4881
CRA Project Manager (Glenn Turchan)	519-884-0510
CRA Regional Manager of Safety and Health (Jeffrey Maranciak)	412-963-7313 (Office)
	412-225-6375 (Cell)
CRA Overall Project Coordinator (Jim McGuigan)	773-380-9933 (Office)
	708-476-4793 (Cell)
CRA On-Site Construction Coordinator (Katie Kamm)	812-277-8954 (Office)
	651-295-7400 (Cell)
CRA On-Site HSO (Dan Nelson)	812-278-8965 (Office)
	812-276-3505 (Cell)

14.3 EMERGENCY EQUIPMENT AVAILABLE ON SITE

Communication Equipment	*Location*
Emergency Alarms/Horns	CRZ

Medical Equipment

OSHA Approved First Aid Kit Sized for a Minimum of 20 people	CRZ/SZ and Each Site Vehicle
Portable Emergency Eyewash Bottles	

Fire Fighting Equipment

Two 20-Pound ABC Type Dry Chemical Fire Extinguishers	CRZ
One 2.5-Pound ABC Type Dry Chemical Fire Extinguishers	Each Site Vehicle

14.4 PROJECT PERSONNEL RESPONSIBILITIES DURING EMERGENCIES

HEALTH AND SAFETY OFFICER (HSO)

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

i) take appropriate measures to protect personnel including: withdrawal from the EZ, total evacuation and securing of the Site or upgrading or downgrading the level of protective clothing and respiratory protection;

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

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

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

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

vi) ensure that Section 12 - Environmental Control Program is implemented when severe weather (flooding, tornado threats, high winds, rain/snow, etc.) threatens the Site; and

vii) ensure that all required reports have been prepared.

14.5 MEDICAL EMERGENCIES

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

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

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

14.6 FIRE OR EXPLOSION

In the event of a fire or explosion, the local fire department should be notified immediately. The local fire department may be deployed if there is a fire or the possibility of a fire or explosion. Upon their arrival, the HSO or designated alternate will advise the fire commander of the location, nature, and identification of the hazardous materials on Site. The nature of the emergency will dictate measures to be implemented.

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

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

ii) use fire fighting equipment available on Site; or

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

14.7 SPILLS OR CONTAINER LEAKS

In the event of a spill or leak, Site personnel will:

i) report spills and releases to the Agency On-Scene Coordinator, Project Manager, the NRC, and State Emergency Response Commission (SERC);

ii) locate the source of the spillage and stop the flow if it can be done safely; and

iii) begin containment and recovery of the spilled materials.

15.0 RECORD KEEPING

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

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

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

iii) daily air monitoring/sampling logs and daily instrument calibration logsheets;

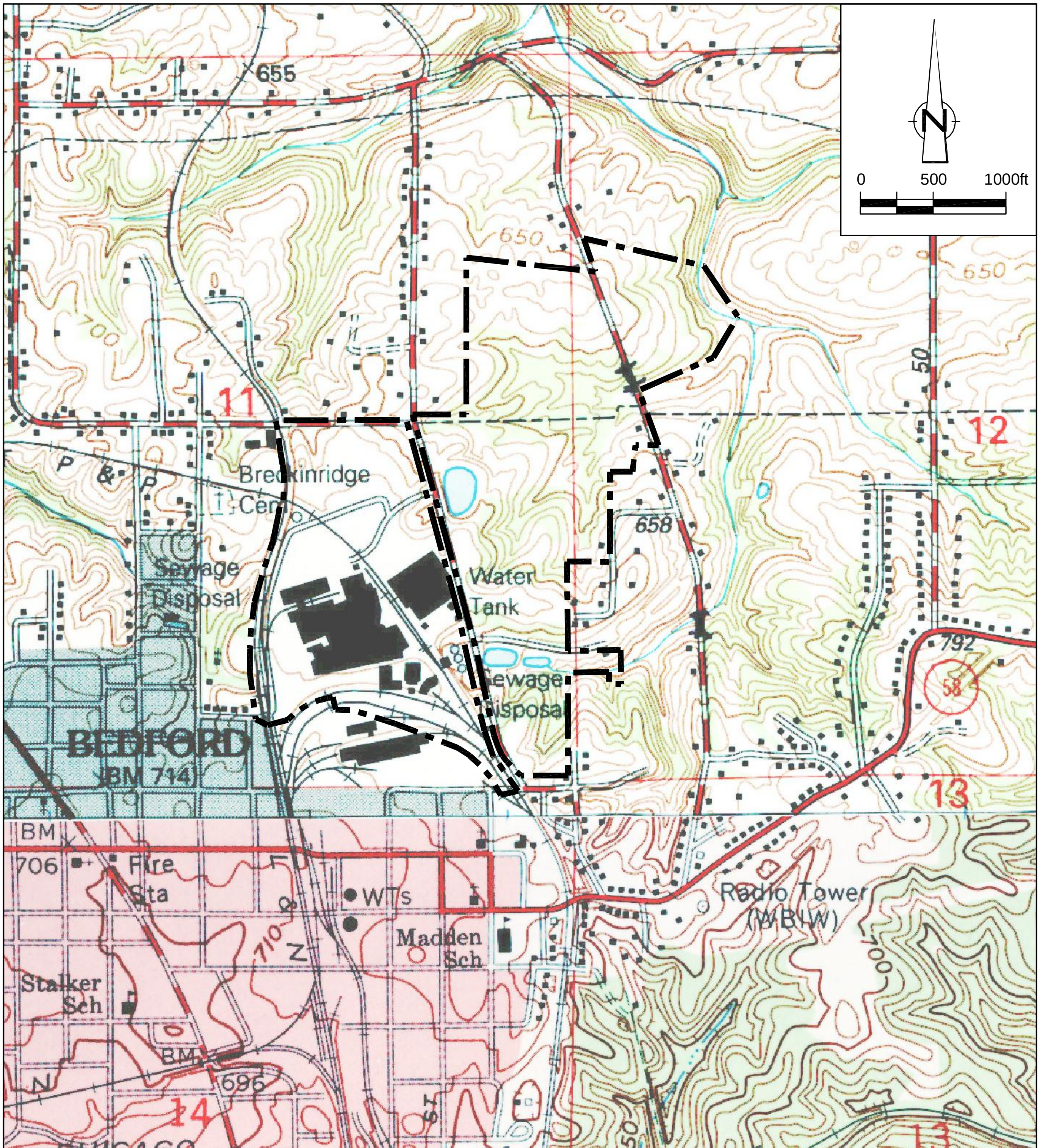
iv) air sampling results;

v) maintaining a Site safety logbook;

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

vii) records of training acknowledgment forms; and

viii) emergency reports describing any incidents or accidents.



BASE SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLES;
BARTLETTSVILLE, INDIANA 1994
BEDFORD EAST, INDIANA 1978
BEDFORD WEST, INDIANA 1993
OOLITIC, INDIANA 1987

LEGEND

FACILITY BOUNDARY

figure 1.1

SITE LOCATION
GM POWERTRAIN BEDFORD FACILITY
Bedford, Indiana

13968-00(095)GN-WA001 APR 17/2007

Nº	Revision	Date	Initial

0 100 200ft

LEGEND

- 600 EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- APPROXIMATE GM PROPERTY BOUNDARY
- STREAMS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS

SCALE VERIFICATION

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

Approved

DRAWING STATUS

Status	Date	Initial

GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

SITE PLAN

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001

Project Manager: J.M.	Reviewed By: M.K.	Date: NOVEMBER 2004	
Scale: AS SHOWN	Project Nº: 13968-00	Report Nº: 095	Drawing Nº: figure 1.2

13968-00(095)GN-WA006 APR 17/2007

APPENDIX B

SAMPLE ANALYSIS PLAN

MAY 25, 2004

SAMPLING AND ANALYSIS PLAN (SAP)

BAILEY'S BRANCH AND PLEASANT RUN REMOVAL ACTION

BEDFORD, INDIANA

MAY 2004
REF. NO. 13968 (46) APPC
This report is printed on recycled paper.

TABLE OF CONTENTS

LIST OF TABLES
(Following Text)

LIST OF ACRONYMS

Bedford Facility	General Motors Corporation Powertrain Bedford Facility
CRA	Conestoga-Rovers & Associates
Creek Areas	designated creek and adjacent floodplain areas of Pleasant Run and its tributaries
DOT	Department of Transportation
GM	General Motors Corporation
QAPP	Quality Assurance Project Plan
SAP	Sampling and Analysis Plan
U.S.EPA	United States Environmental Protection Agency
Work Plan	Interim Measures Work Plan

1.0 INTRODUCTION

This Sampling and Analysis Plan (SAP) is submitted as an appendix to and forms part of the Removal Action Work Plan(s) (Work Plan) submitted by General Motors Corporation (GM) to the United States Environmental Protection Agency (U.S. EPA) for the designated creek and adjacent floodplain areas of Pleasant Run and its tributaries (Creek Areas) at the GM Powertrain Bedford Facility in Bedford, Indiana (Bedford Facility). This SAP covers investigation and removal action activities to be conducted at the Parcel where polychlorinated biphenyls (PCBs) have been identified in soil.

The SAP describes procedures for the collection of verification and stockpile soil samples, that will be collected during the implementation of the Work Plan. A detailed scope of work for the activities associated with this SAP can be found in Section 3.0 of the Work Plan.

2.0 GENERAL SAMPLING PROTOCOLS

2.1 SAMPLING

Samples will be collected at the locations and frequencies specified for each Parcel.

The following protocols will be employed during all sampling conducted during implementation of the Work Plan:

1. All sampling instruments and equipment will be cleaned in accordance with the protocols presented herein prior to collecting samples for chemical analyses at each location.
2. A new pair of disposable latex gloves will be used at each location to be sampled for chemical analyses. Additional glove changes will be made for conditions such as: if the gloves are observed to be torn, or the gloves are suspected of being soiled from a source other than the sample media itself.
3. Quality assurance/quality control samples will be collected as outlined in the approved project Quality Assurance Project Plan (QAPP) for the Site, and summarized in Table C.2.1.
4. All sampling generated wastes such as gloves, tyveks, etc. will be collected and containerized for proper disposal.
5. Samples will be identified using labels and a tag affixed to the neck of the container. Samples will also be labeled and tags noting the site, sample location, sample interval (if appropriate), analysis required, preservative added, date, time and sampler's initials. All sample preservation protocols will be followed in adherence with the QAPP. A hard cover bound field book will be maintained to record all samples and sampling events.
6. Containers for sample collection and preservation requirements will be determined as required by the analytical parameters. All sample bottles will be provided by the laboratory and will be prepared using a standard laboratory validated washing procedure. The sample bottles will be delivered to the site in sealed containers.
7. All collected sample shipments for chemical analysis will be immediately iced in laboratory supplied coolers after collection and labeling. Any remaining space will be filled with packing to cushion the containers within the shipment

coolers. Each cooler will be sealed with a transportation custody seal containing the sampler's initials. The cooler will then be sealed with packing tape.

All samples will be delivered to the laboratory by commercial courier or Conestoga-Rovers & Associates (CRA) personnel, the day following sample collection.

8. Samples will be shipped under chain-of-custody procedures as outlined in the QAPP.

2.2 EQUIPMENT CLEANING

Prior to the collection of each sample designated for chemical analyses, all sampling equipment and tools, except for dedicated equipment and pre-cleaned disposable tools, will be thoroughly cleaned in accordance with the following procedure:

A. General Procedure Discussion

Decontamination activities must be preformed in a controlled area outside any exclusion zones established on the site. Care must be taken to minimize the potential for transfer of contaminated materials to the ground or onto other materials. Regardless of the size or nature of the equipment being decontaminated, the process will utilize a series of steps that involve removal of gross material (dirt, grease, oil, etc.), washing with a detergent, and multiple rinsing steps. Steam cleaning with low-volume, high-pressure equipment (i.e. steam cleaner) is acceptable.

Control and containerization of all decontamination fluids is critical. A decontamination pad must be constructed that is appropriate for the size and type of equipment being decontaminated. At a minimum, the decontamination pad will have the following elements:

- an impermeable barrier capable of containing decontamination fluids;
- a low point where fluids will collect and can be pumped into appropriate containers;
- durability to withstand equipment such as vehicle and foot traffic;

- appropriate ancillary equipment such as racks to place decontaminated equipment to drain without further exposure to contaminated fluids;
- labels to alert personnel as to the potential presence of contaminated materials

B. Decontamination of Non-Dedicated Specific Sampling Equipment

The following specific decontamination procedure is recommended:

- brush loose soil off equipment;
- wash equipment with laboratory grade detergent (i.e. Alconox or equivalent);
- rinse with potable water (three times minimum);
- rinse equipment with reagent grade methanol for VOC samples (this requirement may not be appropriate for sites where methanol is a contaminant of concern);
- rinse with distilled water;
- rinse equipment with nitric acid for metal samples (especially important for sites with potentially high metal concentrations);
- rinse equipment with distilled water;
- allow water to evaporate before reusing equipment

Decontamination waste fluid may be minimized by utilizing spray bottles (marked as to contents). Collect rinsate in a separate bucket. Rinsate and wastewater shall be handled in accordance with the Waste Management Plan.

C. Decontamination of Monitoring Equipment (if required)

Because monitoring equipment is difficult to decontaminate, care should be exercised to prevent contamination. Sensitive monitoring instruments should be protected when they are at risk of exposure to contaminants. This may include enclosing them in plastic bags allowing an opening for the sample intake. Ventilation ports should not be covered.

If contamination does occur, decontamination of the equipment will be required; however, immersion in decontamination fluids is not possible. As such, care must be taken to wipe the instruments down with detergent-wetted wipes or sponges, and wiped with deionized water-wetted wipes or sponges.

2.3 WASTE HANDLING

All wash and rinse waters generated during excavation activities will be containerized in storage tanks or Department of Transportation (DOT) approved 55-gallon drums or equivalent, labeled, and sealed prior to characterization for disposal consistent with the Waste Management Plan.

3.0 SOIL SAMPLING PROTOCOL

3.1 VERIFICATION SOIL SAMPLING

Verification soil samples will be collected after excavation in accordance with Section 3.7.4 of the Work Plan and using the following protocols:

1. Discrete soil sample aliquots for composite samples will be collected using a pre-cleaned stainless steel trowel or other appropriate tool;
2. A new pair of disposable gloves will be used at each sample location;
3. Prior to use at each sample location, all sampling tools will be decontaminated in between each sample location, using the prescribed cleaning protocol presented in Section 2.2;
4. The collected discrete sample aliquots for each composite sample will be placed in a pre-cleaned stainless steel bowl and homogenized;
5. The homogenized soil will be placed directly in a clean, pre-labeled sample jar and sealed with a teflon-lined cap. Samples to be split for duplicate analyses will also be collected as necessary from the homogenized sample;
6. Samples will be labeled noting the location, date, time, and sampler's initials. Sample details will be recorded in a hard-cover bound field book; and
7. Samples will be placed in ice or cooler packs in laboratory supplied coolers after collection.

Characterization samples will be analyzed for PCBs by U.S. EPA method SW846 8081, in accordance with the approved project QAPP and all other parameters necessary for waste acceptance at the selected disposal facility(ies).

3.2 STOCKPILE SOIL SAMPLING

Sampling of stockpiled soils designated for disposal at commercial facilities, will be performed at the frequency specified by the disposal facility to characterize the soil for disposal purposes. The soil will have been already disturbed during excavation and mixed to a degree, therefore, the procedures used to obtain representative samples from in situ soils are not applicable in this situation. The stockpile will be divided into a sufficient number of quadrants to provide the required number of sample aliquots with one sample aliquot being collected from each quadrant to form a composite sample, according to the following protocols:

1. Prior to use at each stockpile to be sampled, the sampling equipment will be cleaned according to the protocol presented in Section 2.2;
2. A new pair of disposable gloves will be used at each sample location;
3. Stockpiled soil samples will be collected using a stainless steel trowel or other appropriate tool. Samples will be collected from approximately 1 foot below the surface of the stockpiled soil;
4. the discrete soil samples aliquots collected from each quadrant will be emptied into a clean stainless steel bowl and homogenized prior to collecting the composite analytical sample;
5. The collected soil will be placed directly in a clean, pre-labeled sample jar and sealed with a teflon-lined cap. Samples to be split for duplicate analyses will first be homogenized in a pre-cleaned stainless steel bowl;
6. A sufficient number of samples will be collected to satisfy disposal facility requirements.
7. Samples will be labeled noting the location, data, time, and sampler's initials. Sample details will be recorded in the hard-cover bound field book; and
8. Samples will be placed in ice or cooler packs in laboratory supplied coolers after collection.

Characterization samples will be analyzed for PCBs and all other parameters necessary for waste acceptance at the selected disposal facility(ies).

4.0 FIELD LOG

The field log book will be a bound document with consecutively numbered pages. The entries for each day commence on a new page which will be dated. All entries will be made only in indelible ink. Corrections will be made by marking through the error with a single line, so as to remain legible, and initialing this action followed by writing the correction. The field log books generated will be numbered consecutively and maintained by CRA.

The following information will be recorded in the field log book for each sample collected:

i) site location identification;
ii) unique sample identification number;
iii) date and time (in 2400 hour time format) of sample collection;
iv) weather conditions;
v) designation as to the type of sample (sediment, soil, or water);
vi) designation as to the means of collection;
vii) name of sampler;
viii) analyses to be performed on sample; and
ix) any other relevant comments such as odor, staining, texture, filtering, preservation, etc.

5.0 SAMPLE SHIPMENT AND CONTAINERS

5.1 CHAIN-OF-CUSTODY FORMS

Chain-of-custody records will be used to track all samples from time of sampling to the arrival of samples at the laboratory.

Each shipping container being sent to the laboratory will contain a chain-of-custody form. The chain-of-custody form consists of four copies which are distributed to the sampler, to the shipper, to the contract laboratory and to the office file of CRA. The sampler and shipper will maintain their copies while the other two copies are enclosed in a water proof enclosure within the sample container. The laboratory, upon receiving the samples, will complete the remaining copies. The laboratory will maintain one copy for its records. The executed original will be returned to CRA with the data deliverables package.

5.2 SAMPLE CONTAINERS AND HANDLING

Required sample containers, sample preservation methods, maximum holding times and filling instructions are provided in the QAPP.

All samples will be placed in appropriate sample containers, labeled, tagged and properly sealed. In addition, sample labels and sample tags (which will be affixed to the neck with a wire) will include sample number, place of collection, date and time of collection, and analyses to be performed. Samples will be cushioned within the shipping coolers by the use of vermiculite and/or bubble pack. Samples will be kept cool by the use of plastic bags of ice or cooler packs, as required and each sample will have an individual sample tag.

Samples will be shipped by commercial courier on a daily basis to the project laboratory.

Two seals comprised of CRA's chain-of-custody tape will be placed around each shipping cooler prior to shipment to secure the lid and provide evidence that the samples have not been tampered with en route to the laboratory. Clear tape will be placed over the seals to ensure that they are not accidentally broken during shipment.

Upon receipt of the cooler at the laboratory, the cooler will be inspected by the designated sample custodian. The condition of the cooler and seal will be noted on the chain-of-custody form by the sample custodian. The sample custodian will document the date and time of receipt of the cooler and sign the chain-of-custody forms.

The sample custodian then will check the contents of the cooler with those samples listed on the chain-of-custody form. If damage or discrepancies are noticed, they will be recorded in the remarks column of the chain-of-custody form, dated and signed. They will be reported to the laboratory supervisor who will inform the laboratory manager and QA officer.

Sample disposal will be the responsibility of the laboratory. Upon disposal, the laboratory shall sign the next open "Relinquished by" box, and the word "Disposed" shall be written in the "Received by" box.

APPENDIX C

CRA WASTE MANAGEMENT PLAN

MAY 25, 2004

WASTE MANAGEMENT PLAN (WMP)

BAILEY'S BRANCH AND PLEASANT RUN REMOVAL ACTION

BEDFORD, INDIANA

MAY 2004
REF. NO. 13968 (46) APPD
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LIST OF FIGURES
(Following Text)

LIST OF ATTACHMENTS

LIST OF ACRONYMS

AOC	Administrative Order by Consent
CA	Corrective Action
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
Creek Areas	designated creek and adjacent floodplain areas of Pleasant Run and its tributaries
GM	General Motors Corporation
HASP	Health and Safety Plan
RA	Interim Measures
PCB	Polychorinated Biphenyls
POTW	Publicly Owned Treatment Works
PPE	Personal Protective Equipment
ppm	parts per million
RA	Removal Action
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
TCLP	Toxicity Characteristic Leaching Procedure
TSCA	Toxic Substances Control Act
U.S. DOT	U.S. Department of Transportation
U.S. EPA	U.S. Environmental Protection Agency
WMP	Waste Management Plan
WWTP	Wastewater Treatment Plant

1.0 INTRODUCTION

The Waste Management Plan (WMP) presented herein, describes policies, procedures, and protocols for the handling of waste materials generated during the Removal Action (RA) being conducted for the designated creek and adjacent floodplain areas of Pleasant Run and its tributaries (Creek Areas) under an Administrative Order by Consent (AOC) by General Motors Corporation (GM) in Bedford, Indiana and Lawrence County, Indiana. Types of wastes that may be generated, potentially include but may not be limited to the following:

- Toxic Substances Control Act (TSCA) polychlorinated biphenyls (PCB) remediation waste (includes solids and liquids from drilling and excavating activities), as defined by 40 CFR Part 761; and
- solid waste (includes solids and liquids from excavating activities, personal protective equipment (PPE), debris, and soil).

Procedures for the proper management, handling, transportation, and staging of bulk soil excavated from the Creek Areas are presented in the Work Plan. This WMP presents details related to other waste materials which may be generated during the implementation of the RA.

The procedures and protocols outlined in the following subsections of this WMP include proper management, characterization testing/sampling, storage, transportation and/or disposal of wastes generated during project activities. These procedures will be performed in conjunction with those presented in the Site Health and Safety Plan (HASP). In addition, the WMP will be revised/expanded, as appropriate, while the RA work progresses to include information, methodologies and procedures associated with any changes in work scope and/or Site conditions.

2.0 WASTE MATERIALS

Waste materials generated as part of the RA activities**,** summarized in Section 1.0, may include:

- Drummed and/or containerized aqueous wastes consisting of decontamination water and dewatering of excavations;
- Drummed and/or containerized solid wastes from excavating (may include a mixture of soils, PPE, and cleared vegetation);
- Stockpiled solid wastes from drilling and excavation activities handled in accordance with 40 CFR Part 261.65 and consistent with the RA Work Plan; and
- Drummed and/or containerized mixed aqueous and solid waste consisting of river/stream sediments, or soils (may include PPE also).

None of the above wastes are considered to be explosive or shock-sensitive, therefore, provisions for these types of waste are not presented, herein. A detailed inventory by waste types/categories of all wastes produced during performance of the RA activities will be maintained by CRA's Site Representative using CRA's Waste Manager database program (see Attachment D-1).

2.1 RA GENERATED WASTES

Bulk soil excavated from Creek Areas as part of the RA will be staged in accordance with the RA Work Plan. Other RA generated wastes may include drummed or containerized waste which will be stored daily at the Parcel, while the drums/containers are still being filled. Once full, all drummed or containerized wastes will be transferred to the GM waste storage pad pending on-Site treatment and/or off-Site treatment/disposal.

Waste intended for off-Site disposal will be sent for disposal as soon as possible following proper waste characterization. The locations for waste storage are presented on Figure D.2.1.

Depending on the quantity of liquid waste produced, the water may be processed through GM's wastewater treatment plant (WWTP). The acceptability of utilizing the GM WWTP would be determined based on an evaluation of plant capacity and permit conditions.

3.0 DRUM AND CONTAINERIZED WASTE HANDLING PROTOCOLS

3.1 GENERAL

This section applies to all activities involved in the handling of the generated waste drums and containers that may potentially contain non-hazardous or TSCA waste materials in either solid or liquid state. All drum and container handling activities will be conducted in accordance with the HASP.

3.2 SAFETY EQUIPMENT/HANDLING EQUIPMENT

During the handling of drums or containers, PPE as specified in the HASP will be worn at all times. All handling, moving and transporting of drums or containers will be performed with mechanical equipment whenever possible.

Minimum equipment and materials will be maintained on Site at all times for control/cleanup in response to any spill, release, or discharge.

3.3 DRUM HANDLING

3.3.1 DRUM STAGING AND HANDLING

Drummed or containerized waste generated during RA activities will be stored daily at the Parcel, while the drums/containers are still being filled. Once full, all drummed or containerized wastes will be transferred to the GM waste storage pad (see Figure D.2.1) pending on-Site treatment and/or off-Site treatment/disposal.

All drums will be transferred to the Site's waste storage pad using mechanical equipment whenever possible. Drums will be moved by grappler, non-metallic slings, within a backhoe bucket or front end loader or by other means that will minimize damage to the drums and the potential release of contents therefrom. All drums will be placed on pallets and oriented to permit sampling of each individual drum, if necessary.

All drummed waste placed in the waste storage will be initially marked to include waste generation method, date produced (first date waste placed in drum), and unique drum number. All drums will be recorded by entering the container information in the CRA Waste Manager database program. Subsequent to completing waste sampling and characterization, as discussed in Sections 5.0 and 6.0, all drums containing hazardous/TSCA wastes designated for off-Site disposal/treatment will be labeled and manifested, as discussed in Section 4.0.

Containers/drums with TSCA waste will be stored on the GM hazardous waste storage pad for a period of up to 30 days from the initial waste generation date prior to shipment (generally shipped every two weeks). Drums which are more than 30 days old will be overpacked to provide secondary containment thereby allowing the storage time to be extended to ensure disposal in a period of less than 1 year. The TSCA containers more than 30 days old will be inspected for leaks pursuant to 40 CFR Part 761.

3.3.2 SPILL PREVENTION AND RESPONSE

The handling and transport of drummed and/or containerized waste will be, at all times, conducted in a controlled and safe manner which will minimize damage to the containers and prevent release of the contents.

In the event that a drum or container of liquid is spilled, the Site personnel will immediately respond to the spill. The spilled liquids will be confined to the immediate area of the spill and the liquids will be pumped, with the use of a portable hand pump, into a repack drum. The spilled liquids will be confined by diking around the spill with native material or with an inert absorbent. Any residual liquids which cannot be pumped will be absorbed with a sufficient quantity of inert absorbent to ensure that no free liquids remain. If the spill occurred on soil, outside of a previously identified contaminated area, CRA's Site Representative will immediately consult with CRA's Project Manager and the GM Project Manager to determine the appropriate response. If the spilled liquid consisted of decontamination water, the decision to excavate the visibly affected soils will be based on whether the water was generated from a source known to exhibit contamination. However, if a decontamination water spill occurred on soil within a previously identified contaminated area, the affected soil will not be excavated since the soils in these identified areas will be remediated, and verification sampling completed, as part of the RA.

All spills above reportable quantities will be reported according to local, state, and federal regulations, after consultation with GM personnel.

4.0 WASTE TRANSPORTATION AND DISPOSAL

4.1 MANIFESTING AND LABELING

All hazardous/TSCA wastes designated for off-Site disposal will be labeled and manifested prior to leaving the Site for off-Site treatment/disposal facilities. The manifest forms and records will be consistent with 40 CFR Part 262 "Environmental Protection Agency (EPA) Hazardous Waste Generator Standards", 40 CFR Part 263 "EPA Hazardous Waste Transporter Standards", 40 CFR Part 268, "Land Disposal Restriction Standards", 40 CFR Part 761, "EPA Polychlorinated Biphenyls Rules" and the State of Indiana. Attachment D-2 presents example waste labels. Attachment D-3 presents example manifests.

The Facility United States Environmental Protection Agency (U.S. EPA) ID number will be used on all manifests. A site-specific waste tracking form, as described in the RA Work Plan, will be utilized to track the shipment of bulk excavated soils from Creek Areas to the staging area at the GM Powertrain facility.

A customized version of CRA's Waste Manager database program will be installed at the CRA Site trailer in Bedford, Indiana (see Attachment D-1). CRA's Waste Manager program will track individual waste containers from generation through disposal. Specifically the program will track container start dates, container locations, container contents, regulatory storage/disposal timeframes, container labeling requirements, approved disposal locations, approved waste stream profiles and shipping documentation, including generating manifests and tracking receipt of returned manifests.

4.2 PREPARATION OF OFF-SITE TRANSPORT VEHICLES

All off-Site transport vehicles will be prepared as appropriate prior to receiving drummed or bulk waste. Drummed wastes will be loaded and secured in a manner which will prevent damage to the containerized materials.

A weatherproof tarp will be provided and secured over each shipment leaving Site. Exception will only be made for enclosed transport units.

Transport drivers will remain in their vehicle cabs while they are in an Exclusion Zone, temporary Exclusion Zone, or Contaminant Reduction Zone, as defined in the HASP.

Following tarping, each transport vehicle will enter the decontamination facility if leaving an Exclusion Zone, temporary Exclusion Zone, or Contaminant Reduction Zone. Each vehicle will be decontaminated to ensure that no loose soil, sludge or other material is tracked off Site. Particular attention will be paid to removing materials from the tires, under carriage and portions of vehicles which may have been in contact with waste material during loading operations. Decontamination activities will include sweeping, brushing and/or steam cleaning, as appropriate.

CRA's Site Representative will inspect and document that each vehicle leaving the decontamination area has been decontaminated properly, tarps are secured, proper placards are in place, manifest/documents are correct and there are no visible signs of leaks from the drums/containers that have been loaded onto the vehicles.

4.3 AUTHORIZED TRANSPORTERS

Only transporters which are licensed by U.S. EPA, U.S. Department of Transportation (U.S. DOT), and the State of Indiana will be used for the transport of hazardous waste. Transporters will be in compliance with applicable state and federal hazardous waste transportation requirements (i.e., 40 CFR Part 263). If shipments are scheduled for facilities outside of the State of Indiana, transporters will be required to be licensed in the appropriate State(s) as well as comply with other applicable Federal laws including DOT requirements.

If wastes are deemed to be non-hazardous, then transporters will be licensed for general transportation of sanitary wastes or as required by the State of Indiana for the transport of Special Waste. These wastes may be disposed of in an appropriate sanitary landfill or into an appropriately permitted wastewater treatment facility, as appropriate.

4.4 TRANSPORTATION ROUTES

Transportation routes to off-Site facilities will be pre-determined by the authorized transporter prior to commencing off-Site transport of waste materials. A primary and secondary route to each facility will be identified. The secondary route will be used only if the primary route becomes impassible due to weather and road conditions or blockage from traffic accidents. The appropriate State and interstate officials will be consulted as to whether any proposed routes are scheduled for construction or seasonal closures which will occur during implementation of this project.

Transportation route maps shall be provided for each phase of the RA prior to initiating material transport.

4.5 OFF-SITE TREATMENT/DISPOSAL

All off-Site treatment/disposal of waste materials will be conducted accordance with applicable state and federal regulations.

4.5.1 APPROVED TREATMENT/DISPOSAL FACILITIES

Off-Site facilities for the treatment, storage, or disposal of drummed/containerized or bulked wastes will be approved by GM prior to commencing transport to these facilities. All facilities identified for hazardous waste treatment/disposal will be Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) approved, RCRA compliant and/or TSCA compliant, as applicable.

Any wastes deemed to be non-hazardous may be transported to a sanitary landfill and/or Publicly Owned Treatment Works (POTW) system, as applicable, for disposal.

5.0 WASTE SAMPLING

5.1 GENERAL

Waste characterization and testing will be conducted as required on containerized liquid and solid wastes designated for off-Site disposal at permitted facilities, to determine the appropriate disposal mode and ensure compliance with 40 CFR 261, 40 CFR Part 268, 40 CFR Part 761, and/or the Indiana Regulations (Title 13). Soil/sediments may also be characterized and delineated in-situ then removed and shipped in bulk based on the in-situ characterization.

The following subsections describe the procedures which will be implemented for sampling bulk wastewater, drummed liquid wastes, drummed or containerized solid wastes, and drummed/containerized or bulk mixtures of solids and liquids for disposal characterization purposes.

5.2 SAMPLE COLLECTION PROTOCOLS

5.2.1 COLLECTED WASTEWATERS SAMPLING

Containerized wastewaters will be sampled and analyzed in accordance with requirements of the receiving off-Site treatment/disposal facility(ies). During the sampling of containerized wastes, personal protective equipment as specified in the HASP will be worn at all times. Collected wastewaters in wastewater tanks may include equipment decontamination washwaters, extraction test waters, and purging/development water. The frequency of sample collection will be determined in consultation with the disposal facility. Samples of containerized wastewaters will be collected as follows:

1. New disposable latex gloves will be used when collecting each liquid sample. Additional new glove changes will be made as conditions warrant.
2. Samples will be collected using a pre-cleaned glass sampling thief, a stainless steel bailer or a sampler capable of taking samples from discrete depths (i.e. bacon bomb sampler, kemmerer, etc.). Samples will be collected from the top, middle and bottom of the liquid volume, as appropriate, if multiple phases are present, or from the approximate mid-depth of liquid depending on the depth of liquid, if the liquid is a single phase. Samples will be collected in the appropriate precleaned bottles to be supplied by the laboratory. Bottle containers will be chosen, cleaned and quality controlled according to OSWER

Directive No. 9240.0-05*A* entitled "Specifications and Guidance for Obtaining Contaminant-Free Sample Containers", December 1992.

3. All disposable gloves will be collected and contained for proper disposal with other PPE materials during the RFI, RA, and CA operations.
4. The chain-of-custody procedures will follow those specified in Section 5.2.3.

5.2.2 DRUMMED/CONTAINERIZED MATERIAL SAMPLING

This section describes the general procedures that will be followed when sampling drummed or bulk waste containers.

5.2.2.1 SAFETY EQUIPMENT

During the sampling of containerized materials, personal protective equipment as specified within the HASP will be worn at all times.

5.2.2.2 SAMPLING EQUIPMENT

Materials and equipment that may be required for sampling are as follows:

1. Chain-of-Custody data sheets.
2. Glass sampling thief for collection of liquid samples.
3. Stainless steel trowel, spoon or trier for collection of solid or sludge samples, if applicable.
4. Bung wrench.

All drums will be sampled on the storage pad to mitigate potential spillage onto ground surface.

5.2.2.3 SAMPLING PROCEDURES

The following procedures will be adhered to during sampling of drummed liquid waste.

1. Remove cover from sample container and remove lid / bung from the drum.
2. Insert sampling thief almost to the bottom of the drum or until a solid layer is encountered. If the liquid in the drum is a single phase, a representative sample of the liquid in the entire drum will be collected for compatibility testing, if necessary, and waste characterization. If more than a single phase of liquid is determined to be present in the drum, each phase of liquid will be sampled separately.
3. Allow the liquid waste in the drum to reach its natural level in the tube.
4. Cap the top of the sampling tube with a double-gloved thumb or stopper, ensuring liquids do not come into contact with the sampler's thumb or stopper.
5. Carefully remove the capped tube from the drum and insert the uncapped end in the sample container. Do not spill liquid on outside of bottle.
6. Slowly release the thumb or stopper and allow the glass thief to drain completely and fill the sample container. Repeat the above steps until sufficient volume has been collected for analysis.
7. Cap the sample container tightly and place pre-labeled sample container in a carrier.
8. Transport the sample to the laboratory for analysis.

Sampling of drummed and / or containerized solids or sludges will, in general, conform to the preceding procedures with the following exceptions:

1. Sample collection will be accomplished using a stainless steel trowel, spoon or trier. All sampling equipment will be cleaned prior to use. Reusable sampling equipment will be cleaned between subsequent drums using the protocol presented in Section 7.0.
2. A representative sample of drummed and / or containerized solids or sludges**,** will be collected, if practical.
3. The sample collected will be a composite of a minimum of four 25-gram samples collected from representative locations throughout the containerized material unless it is known that the containerized material is homogeneous in nature (e.g. soil cuttings**,** spent carbon). In this case, only one sample will be collected from the drum or container.

Samples collected from containerized waste containing the same material may be composited during sample collection into one sample for disposal characterization purposes.

5.2.3 SAMPLE SHIPMENT/CHAIN-OF-CUSTODY

All sample shipments will follow appropriate chain-of-custody procedures.

6.0 WASTE CHARACTERIZATION

The physical and chemical testing protocols which may be required to meet the general testing requirements of various treatment/disposal facilities vary. The waste characterization requirements will be confirmed following selection and identification of the treatment/disposal facility(ies).

In general, investigative soil samples will also be utilized for waste characterization purposes. Analytical laboratory results for total constituent concentrations (not leachable concentrations) will be compared to 20 times the RCRA Toxicity Characteristic Leaching Procedure (TCLP) limits and the TSCA polychlorinated biphenyl (PCB) limit of 50 parts per million (ppm). Should a total result for a RCRA parameter exceed 20 times the RCRA TCLP limit, a waste characterization sample will be collected from the container in question and the sample will be analyzed for TCLP for the parameter(s) in question.

Attachment D-4 presents copies of waste profiles and approvals for waste included under this WMP.

7.0 EQUIPMENT CLEANING

Since samples are being collected for waste characterization for disposal purposes, all sampling equipment and tools (other than pre-cleaned disposable tools) will be decontaminated prior to the collection of samples, at the Decon facility using the following rinse sequence:

i) wash with low phosphate detergent using a brush to remove particulate matter or surface film, if any;

ii) potable water rinse;

iii) rinse with pesticide-grade isopropanol;

iv) rinse with deionized water; and

v) air dry.

Fluids used for cleaning will not be recycled. All wash water and rinse water will be transferred to drums and/or a wastewater tank on Site pending final disposal. Isopropanol rinsings will be kept separate from wash/rinse waters and will be transferred to drums pending final disposal.

Following final rinse, sampling equipment will be visually inspected to verify that they are free of soil particulates and other solid material which may contribute to possible sample cross-contamination. Dedicated equipment which is used only once (e.g. glass thiefs) will not be subject to the above decontamination procedures.

8.0 PERSONNEL

Figure D.8.1 presents project personnel and their roles and responsibilities regarding this WMP.

ATTACHMENT D-1

CRA WASTE MANAGER INFORMATION

CRA WASTE MANAGER

MPS/GM VERSION

USER GUIDE

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1.0 INTRODUCTION

1.1 GENERAL

The CRA Waste Manager is a data management system for tracking and reporting solid, hazardous, and other wastes. Among other features, the system:

- operates as a stand-alone database, in Microsoft ACCESS format;
- tracks and reports waste information, shipments, and disposition for multiple waste classifications;
- maintains detailed data on individual facility waste, shipments, transporters, shippers, disposers/waste management contractors, and container storage;
- allows data entry/tracking for multiple companies (or facilities) within the database, and waste tracking by generating unit or department within a facility;
- can export data, for possible future use with other data management systems;
- has drop-down menus for entry of recurring data items;
- provides disposal breakdowns by company, facility production unit/department, and waste stream;
- produces reports in various formats;
- produces date-sensitive tickler/exception reports for stored wastes and expiring waste profiles; and
- can maintain at least three-level user access security (User, Editor, and Administrator; others can be defined by the Administrator).

The enhanced Container Management version, included for most MPS installations, also includes the following:

- keeps detailed information about each container (generating facility, waste stream, profile, shipping label information, accumulation location, quantity, date of origination, changes of location, etc);
- allows selection of containers to be shipped in a particular shipment and creation of a shipment record from the selected drums, plus the selection of the transporter and disposal facility;
- produces various reports indicating location(s) and type(s) in holding areas, with emphasis on storage time and a report tracing history of container; and
- additional tracking of containers through various accumulation and holding locations (e.g., satellite storage, holding area) prior to disposal.

Additional options, included for most MPS installations, provide for manifest and bill of lading printing.

Many client- and facility-specific reports and charts, described below, have been included in the MPS versions as required. These include GM We Care reporting and charting based on disposition (landfill, recycle/reuse, etc.).

Chemical reporting, included in some versions of the CRA Waste Manager, is currently not included in MPS installations. When installed, it includes:

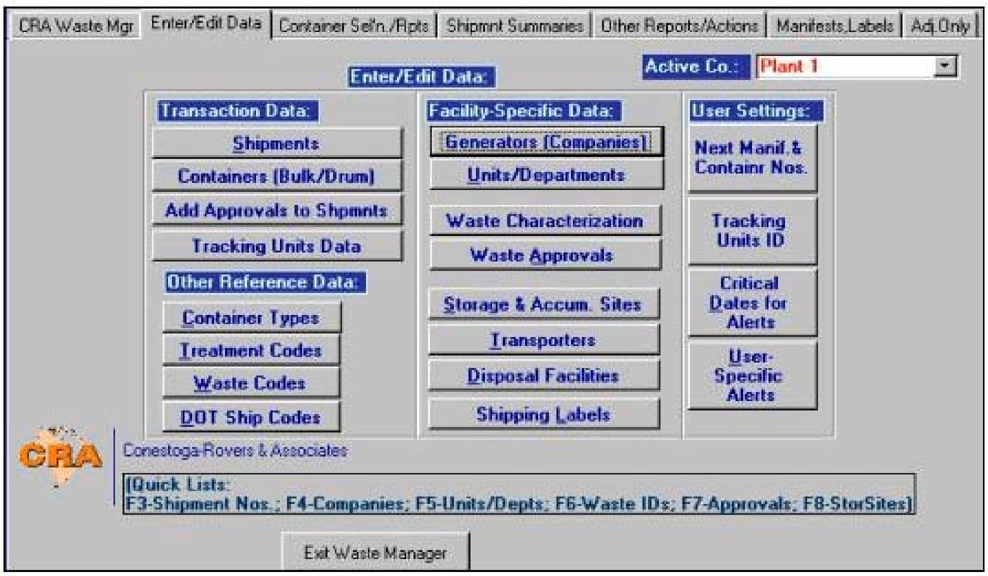
- definition of waste stream to include component percentages for SARA chemicals;
- computation of quantities of SARA chemicals based on percentages of waste stream quantities shipped; and
- lists and reports sorted/summed by SARA chemical for any selected period.

1.2 OVERVIEW – MAIN SWITCHBOARD SCREEN AND DATA FLOW

The Main Switchboard is composed of five distinct Waste Manager components under the following tab headings: Enter/Edit Data, Container Selection and Reports, Shipment Summaries, Other Reports and Actions, Manifest Printing, and Adjustments.

1.2.1 ENTER/EDIT DATA COMPONENTS

The Enter/Edit Data tab contains the forms and tables under four subheadings, including Facility-Specific Data, Transaction Data, Other Reference Data, and User Settings. Each of these subsections and their components are detailed in this section of the User Guide.



Facility-Specific Data

Prior to entering details related to waste shipments or container storage and disposal, Facility-Specific start-up data forms and tables should be filled out. This information will be used during data entry for Transactions to automatically fill in data or to provide drop-down lists. The Facility-Specific Data components are listed and described below.

Generators (Company Info)	Identification information for the companies (or generators) for which waste is being managed.
Units/Departments	Information on individual units or departments within the facility or company for which waste is being managed.
Transporters	Identification information for waste transporters.
Disposal Facilities	Identification information for the disposal and/or treatment facility (e.g., landfill to which waste is transported).

Waste Characterization (or Facility Wastes)	Information on individual waste streams being managed (includes waste codes, description, DOT shipping information, and profile/approval information).
Waste Approvals	Information on approvals/profiles for disposal and/or treatment facilities accepting waste from the generator.
Storage/Accumulation Sites	Information on waste storage and accumulation sites used by the waste generator. This information will be used in the Container transaction records to track the location of a particular container.
Shipping Labels	Identification for type of label required for waste shipments.

Transactions

Once the Facility-Specific Data information has been entered, specific information related to shipments and container storage may be entered. The Transaction subsection components are listed and described below.

Shipments	Details from shipment manifests and/or logs (manifest identification, transporter, disposal facility, etc.) may be entered here. Upon entry of the Waste ID code, waste identification data (EPA HW Codes, DOT shipping codes, etc.) are automatically entered from the Waste Characterization reference table. Shipment data may be broken down by unit or department.
Containers	Details about wastes in storage (drums, tanks, etc.). Upon entry of the Waste ID code, waste identification data (EPA HW Codes, etc.) are automatically entered from the Waste Characterization reference table. Dates of initial use and of disposal, as well as movement about the facility, are stored here.
Add Approvals to Shipments	A speedy entry form for adding Approvals to Shipments for which no approvals have yet been identified. Approval information can also be entered via the Shipments entry procedure, or through the pop-up "Auto Alerts" forms.

Tracking Units	Tracking Units can be anything for which the facility wants to track waste volumes per unit (of the Tracking Unit item). The identification of the Tracking Unit, such as number of widgets produced or manhours worked, is entered with the User Preferences. A form is provided for entering quantities of the Tracking Units produced by date.

<u>Other Reference Data</u>

Other Reference Data includes information from standard reference tables, such as EPA Waste and Treatment Codes, and DOT Shipping Codes.

Container Types	Identification for the type of containers used for storage and shipment of waste. Container weights entered here will be subtracted from the waste weight prior to computing SARA chemical quantities.
Treatment Codes	Identification for methods of waste disposal and treatment.
Waste Codes	Information regarding EPA and/or other waste codes and related information assigned to the waste stream.
DOT Ship Codes	Department of Transportation Shipping Names, UN Numbers, Packing Groups, etc.

<u>User Settings</u>

Next Manifest and	Shows the next available manifest and container ID numbers
Container No.	for each generator. These numbers are used as defaults for entering new shipments or containers, but can be overridden with specific IDs.
Tracking Units ID	Defines the unit to be tracked based on waste volumes per unit (e.g., manhours).
Critical Dates for Alerts	The number of days to be used to trigger Alerts is defined here for age of containers in storage, time that required manifests have not been returned, and time to waste approval expiration.

User-Specific Alerts	Any user-specified notes or to-do items can be entered here, along with an item-specific number of days prior to the target date that an Alert notification should be triggered.

Additional guidance concerning the components of the Enter/Edit Data portion of the CRA Waste Manager is provided in Section 2.

1.2.2 CONTAINER SELECTION AND REPORTS

There are two main subcategories under this tab, including Select and Update, and Reports and Lists. The components of each subcategory are listed and described below.

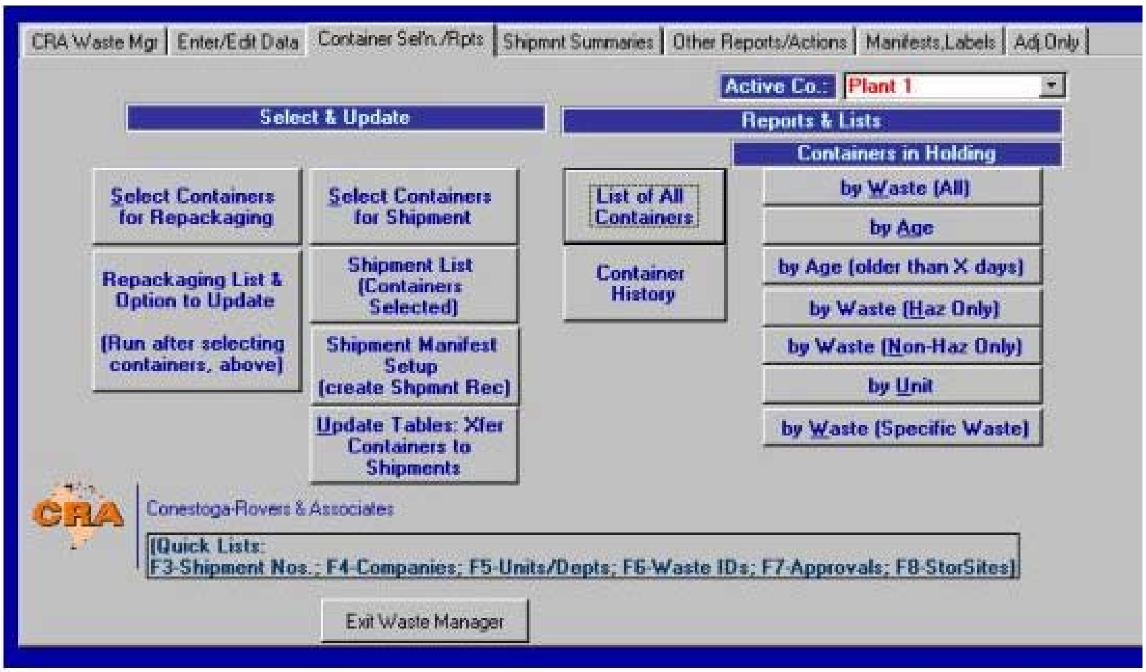
Select and Update

Select Containers for Repackaging	Table allowing user to select containers to be repackaged.
Repackaging List and Option to Update	Report presenting list of containers to be repackaged by group and receiving container. Allows option to update Container Table.
Select Containers for Shipment	Table allowing user to select containers for shipment.
Shipment List (Containers Selected)	Report presenting Shipment List by shipment number, scheduled date, transporter, disposer, etc. This is a proofing report only; no records are changed.
Shipment Manifest Setup (Create Shpmnt Rec)	Form allowing creation of shipment record (only manifest number and date required).
Update Tables: Xfer Containers to Shpmnts	Outgoing Shipments Report sorted by shipment number and date. Allows option to update Shipments Table. This routine actually performs the record updating to indicate on the container records that the waste has been shipped, and to summarize the container quantities and waste info on the shipment record.

Additional guidance concerning the components of the Container Select and Update features is provided in Section 3.

<u>Container Reports and Lists</u>

List of All Containers	Presents list of containers by company, unit, ID, type, initial use date, and waste information.
Container History	Presents history of containers (through storage/ accumulation areas and to ultimate repackaging or shipment) by company, unit, ID, type, initial use date, and waste information.



Containers in Holding:

By Waste (All)	Presents list of containers in holding with all wastes.
By Age	Presents list of all containers sorted by number of days since their initial use. Also lists information such as company, unit, ID, type, and waste information.
By Age (older than X days)	Presents list of containers older than x days since their initial use. Also lists information such as company, unit, ID, type, and waste information.
By Waste (Haz)	Presents list of containers in holding sorted by hazardous waste.

By Waste (Non-Haz)	Presents list of containers in holding sorted by non-hazardous waste.
By Unit	Presents list of containers in holding by all units.
By Waste (Specific Waste)	Presents list of containers in holding sorted by specific waste.

1.2.3 SHIPMENT SUMMARIES

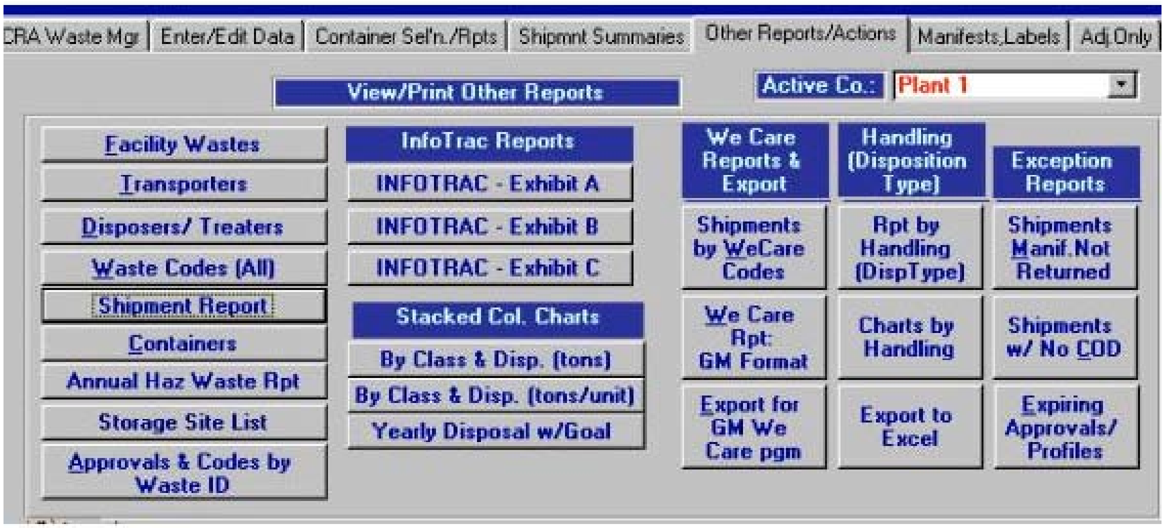
Summary reports may be generated for the information entered into the database through the Enter/Edit Data portion of the Waste Manager. These reports may be sorted/summarized by four different categories: reporting categories (can include multiple related waste streams), waste, transporter, and disposal facility.

Within each category, data may be sorted by date for a specific company, a specific unit/department, a specific waste, or for all companies, units, and wastes in the database.

Additional guidance concerning the components of the Summary Reports portion of the CRA Waste Manager is provided in Section 4.

1.2.4 OTHER REPORTS AND ACTIONS (INCLUDES CHARTS AND EXPORTS)

There are other report categories including Reference, Transaction, and Site Data Reports; InfoTrac Reports; Charts; We Care Reports; Handling/Disposition Reports; and Exception Reports. Each of these categories is described below.



Reference, Transaction, and Site Data Reports

Facility Wastes	Presents waste IDs, names, classes, and descriptions by facility (data entered as Waste Characterization).
Transporter	Presents transporter IDs, names, and contact information.
Disposers	Presents disposal facility IDs, names, and contact information.
Waste Codes (All)	Presents waste codes, descriptions, and date reported.
Shipment Report	Presents shipment information by manifest within a selected date range.
Containers	Summary of container data and movement.
Annual Haz Waste Rpt	Presents information useful for the preparation of annual hazardous waste reports for selected company and date range.

Storage Site List	Lists all waste storage and accumulation area locations and associated waste type.
Approvals and Codes by Waste ID	List of all waste streams generated and the associated disposal facility, approval number and approval expiration date.

<u>InfoTrac Reports</u>

Exhibit A, B, and C	Used for obtaining and documenting waste stream authorizations and notifications.

<u>Charts</u>

By Class and Disp. (tons)	Illustrates in stacked column charts the quantity of waste disposed for each waste class according to disposal type for a defined time period. Also shows the annual monthly average for disposition type.
By Class and Disp (tons/unit)	Similar to the previous charts, but normalized by dividing waste quantity by Tracking Unit (e.g., manhours).
Yearly Disposal w/Goal	Charts showing annual disposal quantities as vertical bars, overlain by a line representing waste reduction goals.

<u>We Care Reports</u>

Shipments by We Care Codes	Summary of total waste disposed according to the GM We Care descriptions for each waste stream (not in GM format).
We Care Rpt: GM Format	A summary report in GM format for submission to GM may be generated as well as a detailed report showing the manifest and approval numbers associated with each shipment for each waste stream.
Export for GM We Care Pgm	A series of queries allows for the export of CRA Waste Manager We Care data to a file suitable for import into a GM database.

Handling/Disposition Reports

Rpt by Handling	Presents summary of the waste generated according to disposition type.
Charts by Handling	Generates pie charts showing summary of percent waste by disposition type.
Export to Excel	Allows handling/disposition data to be exported into an Excel file.

Exception Reports

Shipments: Manif. Outstanding	Presents list of shipments for which manifests are required but have not yet been returned by selected date range.
Shipments w/No COD	Presents list of shipments without a certificate of disposal (COD).
Expiring Approvals	Presents list of approvals/profiles expiring within a selected number of days. Provides waste ID, name, class, and disposal information.

1.2.5 MANIFEST PRINTING

Selecting a manifest number may generate and print a Manifest, Bill of Lading, and/or Weight Ticket.

1.2.6 ADJUSTMENTS ONLY

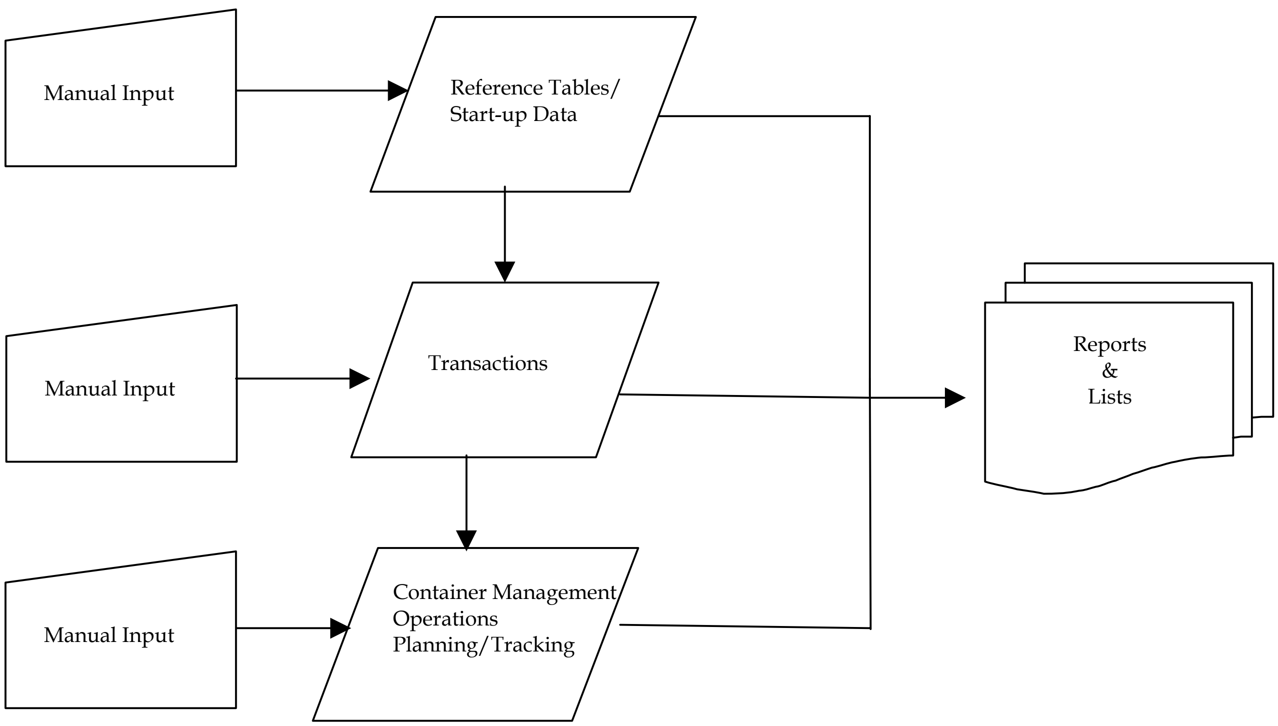
These selections will be rarely used; adjustments that can be made here can also be made in the Shipments Entry/Edit forms. These procedures allow access to information related to shipments, broken out into separate tables according to the overall manifest information, data concerning the waste stream, and unit/quantity details for the manifests. The components provided under this subheading are listed and described below.

Shipment Manifests	Form for making adjustments to summary manifest data. See Shipments (under Transactions) for detail manifest data.
Shipment Sequence	Table for making adjustments to the individual waste stream identification and approval/profile number.
Shipment Details	Form for making adjustments to manifest details, including department, quantity, measurement type, units, weight, container type, cost, etc.

Options also allow for global changes of Waste IDs, Approval Numbers, and Manifest Numbers**. Note: global changes will be performed on data for ALL companies in the system, and should be used with caution.**

1.2.7 GENERAL DATA FLOW

The following flow chart illustrates the general flow of data in the database from manual data entry to the generation of reports and lists.



2.0 DATA ENTRY/EDIT

2.1 GENERAL

Most data related to specific waste shipments and/or storage is entered in the Shipments entry/edit screen. Here are entered items normally found on the manifest, such as the waste identification, transporter(s), disposal facilities (listed in the database and below as disposers), quantities, and allocation to facility units or departments. In order to facilitate routine entry, tables of reference data are used to provide immediate data pull-in from the reference files and/or drop-down lists of available selections. Start-up data, such as the waste stream definitions and waste approval (or profile) information is also critical to the entry of shipment transactions.

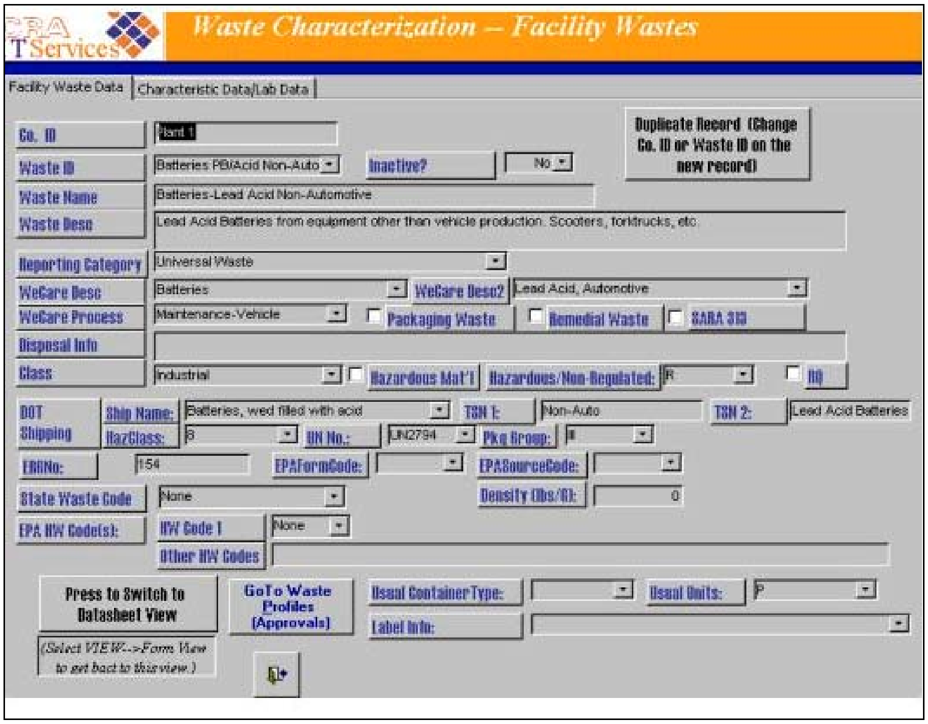
Note: The user's MS Access "Options" settings affect the number and type of Caution or Warning messages the user receives, as well as behavior of the "Find" utility. See Section 5.0 for suggested settings.

2.2 FACILITY-SPECIFIC DATA

The Facility-Specific Data, which should be entered prior to entering specific shipment data, includes:

- Generators (Companies) – If multiple companies' waste are being managed at the same site, assign (create) a brief company ID code and enter EPA ID numbers, contact information, etc. The only required information is the Company ID and the Company Name.
- Units/Departments – For tracking wastes within the facility by units or departments. Includes Unit ID (which you assign) and contact information. For each unit or department to be tracked, enter at least the facility-assigned Unit ID and description. Note: tracking by unit/department is not required, and no records are required in this table.
- Waste Characterization – This is a two-part form; select by using the tabs.

  Under the Facility Waste Data tab, enter a waste ID, name, description, disposal information, material class, and shipping information. Much of this information is printed on manifests, and items from this form are used for selection of records to be included in reports.



Under the Waste Data tab, enter primary and secondary characteristics, lab data, as well as the physical state and properties. All information on this tab is optional.

- Waste Approvals (or Waste Profiles) – Enter approval (or profile) number assigned by the receiving facility, waste ID, and name, receiving (disposal) facility, start date, expiration date, known price information, treatment type, disposal type, and treatment site type. Note: It is the Waste Approval record that provides the ultimate disposition type (e.g., recycle or landfill) information for the waste stream. If not entered, reports/charts based on disposition type will be incorrect.

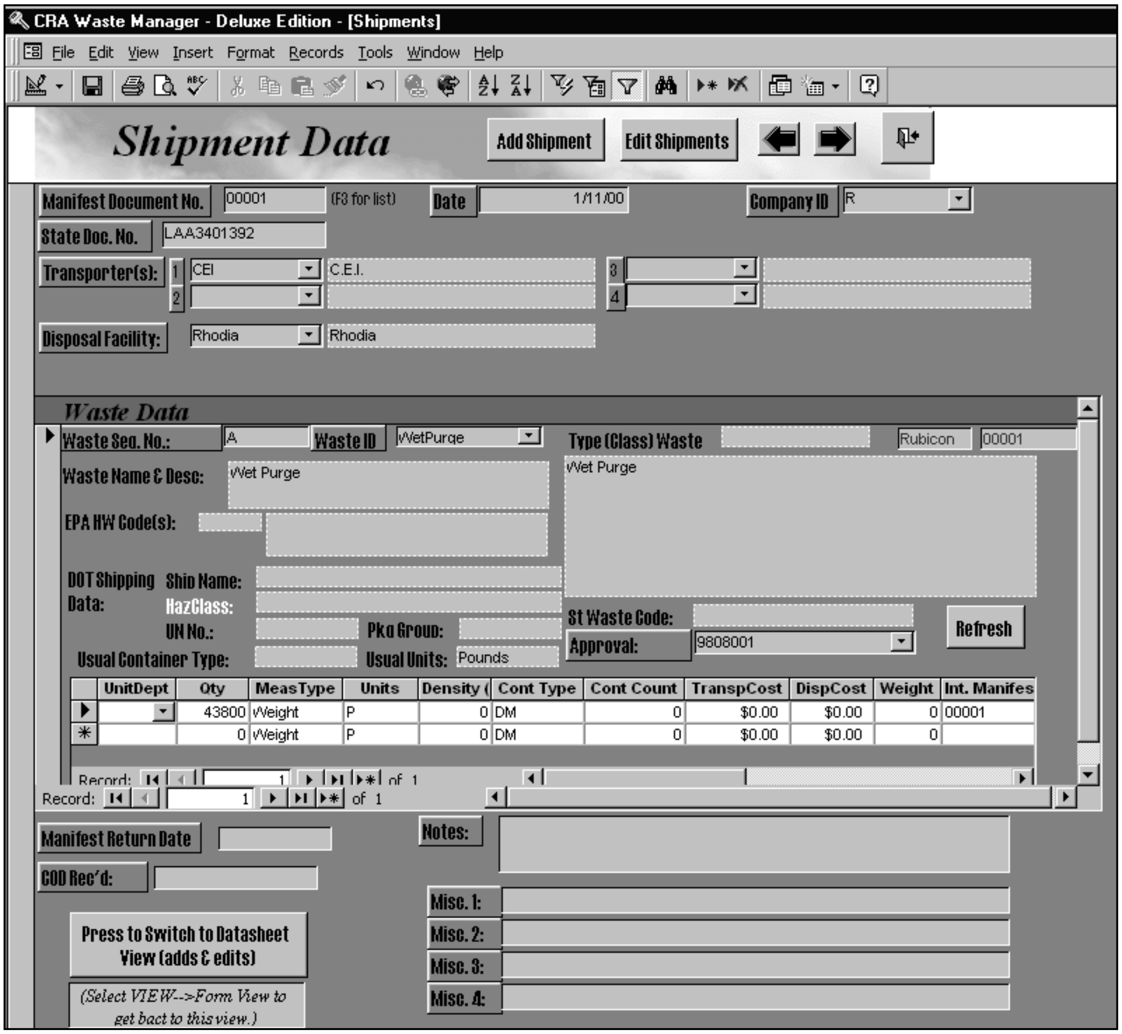
- Storage/Accum. Sites – For each storage or accumulation site, enter a storage site ID, location, description, department, storage type, and driver information. This information is used for tracking container movement.
- Transporters – Enter ID numbers, contact information, etc. This information is used for drop-down menus in the Shipments entry screen.
- Disposal Facilities - ID numbers, contact information, etc. for disposal or treatment facilities. This information is used for drop-down menus in the Shipments entry screen, and is printed on reports and manifests.

- Shipment Labels – For each waste shipment type, add a label type to the table. This information is optional.

2.3 TRANSACTIONS

The Transactions, which include most data related to specific shipments, include:

- Shipments – For each shipment, enter manifest number, date, transporter, disposal facility, and waste data. Each record has a unique Manifest Number (alpha or numeric), which can be assigned by the facility. A separate field is provided for state or other manifest document number. As the Facility Waste ID is entered, relevant fields are automatically filled in from the pre-defined Waste Characterization table. These include Waste Description, EPA (and other) Waste Codes, and DOT shipping data. Drop-down menus (using data from relevant master tables) are provided to facilitate entry of Transporter and Disposal Facility IDs, etc. A sub-form in the entry screen allows multi-line entry of Shipment Details for various Units/Departments. Details include quantity of waste, weight/volume units, density (for conversion to weight if volume is entered), number and type of containers, and cost for transport and disposal. Fields are also available in the Shipments record for waste profile information, additional notes, and manifest return date. Records can be deleted by highlighting the gray bar to their left and pressing the Delete key.



Notes:

(1) When you first enter the Shipments form, you will be in ADD-ONLY mode. A default manifest number will be provided, based on the "Next Manifest No." entry for this company; the default can be overridden with a specific entry.

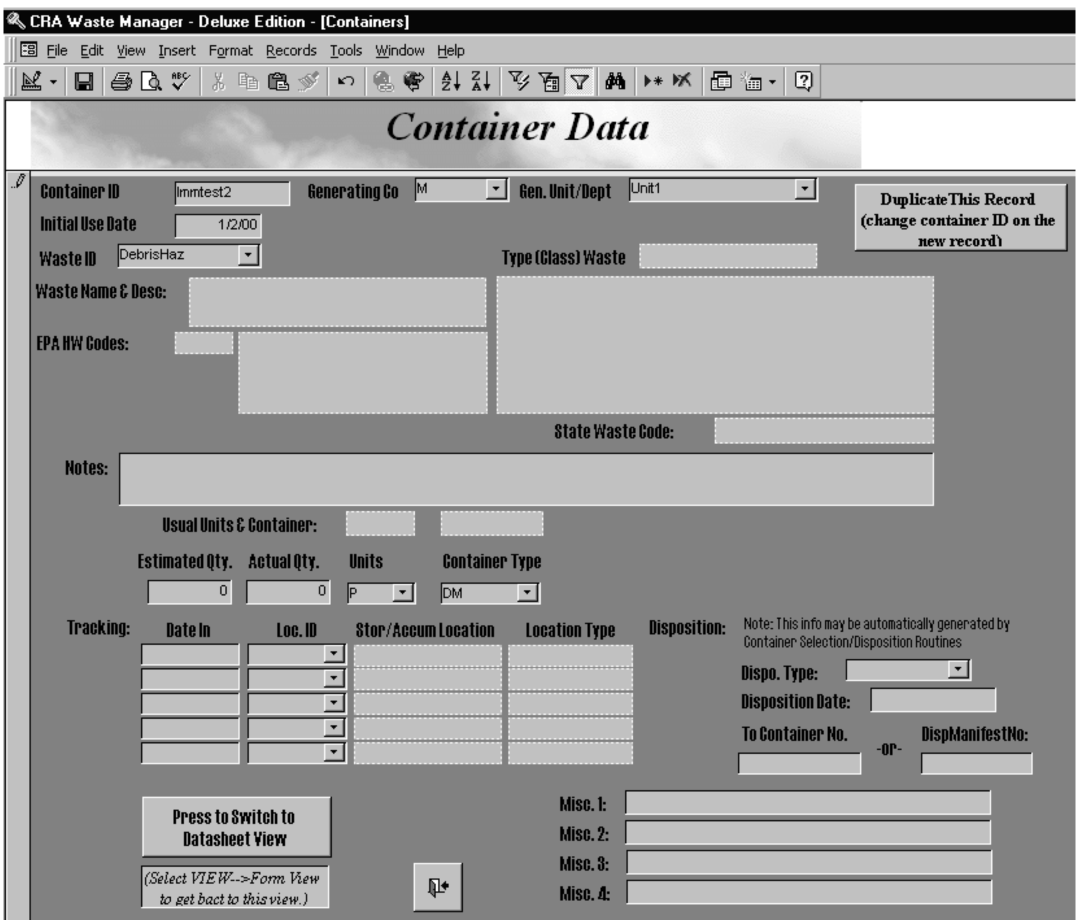
(2) To review or EDIT existing Shipment records, press the "Edit Shipments" button on the form title bar. You will then have available all records for the active company. Navigate (a) via the arrow buttons for Previous/Next Record in the title bar; (b) using the record toolbar at the bottom of the screen; or (c) using FIND (binoculars button) or SORT (AZ/ZA button).

(3) Waste data for this shipment is entered in the middle of the form. Be sure to select an Approval. To add a new waste line item, use the "New Line" button or the -->* button at the bottom of the Waste Data box.

(4) The grid subform in the Waste Data box allows entry of waste quantities and container information. Density will default from the Waste Characterization record, and is required to compute weight if the Quantity is entered as a volume (e.g., gallons). The "Weight" column should ONLY be used if you want to plug an override quantity in pounds for report calculations; otherwise, leave it blank/0.

- Container Storage – Enter container ID, unit/department, initial use date, waste name and description, EPA codes, units, and tracking information. Each record should have a unique container ID. Waste descriptions are pulled from the reference data tables. Container history can be tracked by entering Storage/Accumulation Location movement tracking information.

  Note: As with Shipments, you first enter in ADD-ONLY mode. Navigation is similar to that described above for Shipments.



When the Container Update routines are run (either the Update for Repackaging or the Update for Shipping), the Disposition information is automatically filled in by the Update routine.

To reverse a container shipment Update, delete the Disposition Date (GenDate) and the Manifest Number from each container record affected, and delete and re-setup the pertinent Shipment record (at least delete all waste records from the shipment).

- Add Approvals to Shipments – Provides a streamlined method of adding Approvals to Shipment records lacking them. Only records with no Approvals are shown.
- Tracking Units Data – Enter the company ID, unit/department, date, and tracking unit quantity.

2.4 OTHER REFERENCE DATA

The Other Reference Data, which is comprised of basic waste-related information, includes:

- Container types – For each distinct container type, enter a type code, description, weight, and EPA description and storage code. Standard EPA container types are already entered.
- Treatment Codes – Enter each on- or off-site treatment type.
- Waste Codes – Information can be entered into this file (1) to provide drop-downs for EPA HW Codes (e.g., F001) and other codes (e.g., state-assigned); and (2) to provide a location for recording, where required, that the first use of a new waste code has been reported to the regulatory agency. It is not required that information be entered into this table.
- DOT Ship Codes – Enter DOT information for each waste stream including shipping name, hazard class, UN/NA number, packaging group, label information, and ERG number. The shipping codes are available in a dropdown menu under the Waste Characterization form.

2.5 USER SETTINGS

The User Settings are available to define and set-up user-specific functions and automated actions and include:

- Next Manifest and Container No. - Shows the next available manifest and container ID numbers for each generator. These numbers are used as defaults for entering new shipments or containers, but can be overridden with specific IDs.
- Tracking Units ID - Defines the unit to be tracked based on waste volumes per unit (e.g., manhours).
- Critical Dates for Alerts - The number of days to be used to trigger is defined here.
- Alerts - For age of containers in storage, time that required manifests have not been returned, and time to waste approval expiration.
- User-Specific Alerts - Any user-specified notes or to-do items can be entered here, along with an item-specific number of days prior to the target date that an Alert notification should be triggered.

3.0 CONTAINER MANAGEMENT

3.1 GENERAL

A Container Management module has been included in the CRA Waste Manager MPS/GM version. This function allows for containers to be tracked from initial use through to shipment off site for treatment or disposal. It also provides an alternate method for preparing shipment records for containers being shipped off site. In addition, container history and current status reports may be generated. The container reports were previously described in Section 1.2.2. The following section describes the steps involved in selecting and tracking container movement.

3.2 SELECT AND UPDATE

This function allows for the selection and modification of records in data tables, including:

- Select Containers for Repackaging – This will bring up, in datasheet view (i.e., one record per line), all the records of containers that have not yet been shipped or repackaged. To select for repackaging, enter a number (which you assign to the selection set) in the Selection Number field. You may select for multiple repackaging at the same time, by using separate Selection Numbers.
- Repackaging List and Option to Update – Print list of From and To containers, and Update the container records.
- Select Containers for Shipment – This will bring up, in datasheet view, all the records of containers that have not yet been shipped or repackaged. To select for shipment, enter a number (which you assign to the selection set) in the Selection Number field. You may select for multiple shipments at the same time, by using separate Selection Numbers.
- Shipment List (Containers Selected) - List containers to be shipped (the only required data is the Selection Set and the date). This is a proofing report only. No records are changed.
- Shipment Manifest Setup (Create Shipment records) – A Shipment (manifest) record must be created before the container data can be summarized to it. You may create the Shipment record via the Shipments form or the one provided here. If you use one already created elsewhere, be sure it does not contain any waste (sequence) records.

- Update Tables: Xfer Containers to Shipments – Update the Shipment and Container records per the designated operation.
- Notes:

  (1) During the update process, temporary tables are created and updated. Answer "Yes" or "OK" to any caution here about overwriting the temporary tables.

  (2) To reverse a container shipment Update, delete the Disposition Date (GenDate) and the Manifest Number from each container record affected, and delete and re-setup the pertinent Shipment record (at least delete all waste records from the shipment).

4.0 REPORTS

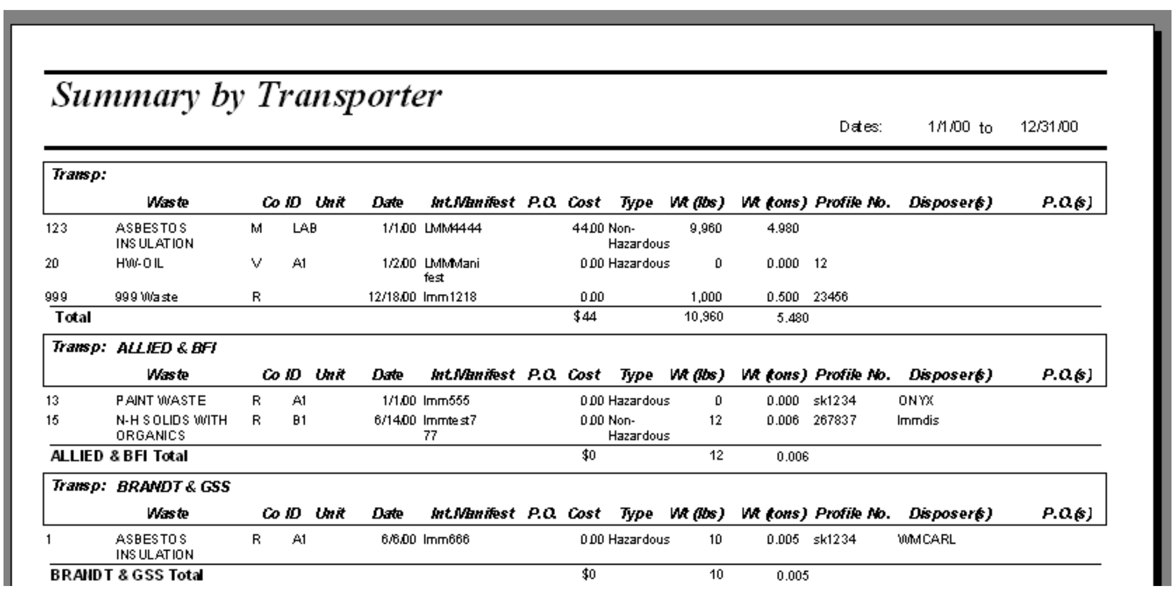
4.1 GENERAL

The CRA Waste Manager contains two main categories of reports, Summary Reports and Other Reports. Each report within these categories is detailed below.

Note: For most reports, a pop-up dialog box will prompt for report dates and other criteria as appropriate. Pressing the "OK" or "Print Preview" button on that dialog box produces a report image on screen. To review the report, the dialog box may be moved about, but should not be closed until after printing as the report generation uses the criteria from the dialog box in headings to be printed. If closed, dates and other criteria will not be printed correctly.

4.2 SUMMARY REPORTS

Several options for Summary Reports are provided, each including concise lists of Shipment data for a specified date range. Reports can be created by Waste, Transporter, or by Disposal Facility. These reports can simultaneously display information for all Companies, Units/Departments, and Wastes, or may be selected to display information regarding a specific Company, Unit, or Waste.



Summary by Transporter

Dates: 1/1/00 to 12/31/00

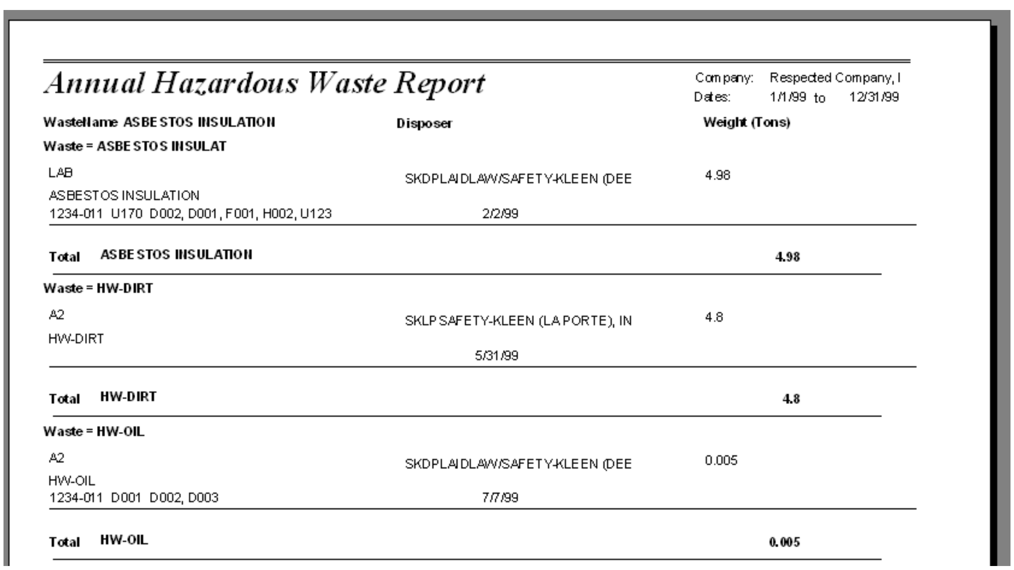
	Waste	Co ID	Unit	Date	Int.Manifest	P.O.	Cost	Type	Wt (lbs)	Wt (tons)	Profile No.	Disposer(s)	P.O.(s)
Transp:													
123	ASBESTOS INSULATION	M	LAB	1/1/00	LMM4444		44.00	Non-Hazardous	9,960	4.980			
20	HW-OIL	V	A1	1/2/00	LMMManifest		0.00	Hazardous	0	0.000	12		
999	999 Waste	R		12/18/00	lmm1218		0.00		1,000	0.500	23456		
Total							$44		10,960	5.480			
Transp: ALLIED & BFI													
13	PAINT WASTE	R	A1	1/1/00	lmm555		0.00	Hazardous	0	0.000	sk1234	ONYX	
15	N-H SOLIDS WITH ORGANICS	R	B1	6/14/00	lmmtest777		0.00	Non-Hazardous	12	0.006	267837	lmmdis	
ALLIED & BFI Total							$0		12	0.006			
Transp: BRANDT & GSS													
1	ASBESTOS INSULATION	R	A1	6/6/00	lmm666		0.00	Hazardous	10	0.005	sk1234	WMCARL	
BRANDT & GSS Total							$0		10	0.005			

4.3 OTHER REPORTS

Several Custom Reports have been included in the Deluxe Edition of the CRA Waste Manager, which are detailed below. Others can be added as the need is identified.

Reference, Transaction, and Site Data Reports produce reports of basic reference data, including:

- Facility Wastes – Presents waste ID, name, characteristic, description, and disposal information.
- Transporters – Presents transporter ID and name, as well as contact information.
- Disposers – Presents disposal facility ID and name, as well as contact information.
- Waste Codes (All) – Presents waste code, description, date reported (if reported.)
- Shipment Report – Presents manifest details for shipments selected by date.
- Containers – Presents container ID, type, date of initial use, disposition, and waste information.
- Annual Hazardous Waste Report – Presents summary of annual hazardous waste disposed including waste ID, waste codes, disposal facility, and quantity disposed.



Annual Hazardous Waste Report

Company: Respected Company, I
Dates: 1/1/99 to 12/31/99

WasteName ASBESTOS INSULATION	Disposer	Weight (Tons)
Waste = ASBESTOS INSULAT		
LAB ASBESTOS INSULATION 1234-011 U170 D002, D001, F001, H002, U123	SKDPLAIDLAW/SAFETY-KLEEN (DEE 2/2/99	4.98
Total ASBESTOS INSULATION		**4.98**
Waste = HW-DIRT		
A2 HW-DIRT	SKLP SAFETY-KLEEN (LA PORTE), IN 5/31/99	4.8
Total HW-DIRT		**4.8**
Waste = HW-OIL		
A2 HW-OIL 1234-011 D001 D002, D003	SKDPLAIDLAW/SAFETY-KLEEN (DEE 7/7/99	0.005
Total HW-OIL		**0.005**

- Storage Site List – Present the building, column location, waste type, site number and signage available for each waste storage and accumulation location.
- Approvals and Codes by Waste ID – Presents the company ID, waste type, disposal facility, approval number and approval expiration date.

InfoTrac Reports produce documentation to be used for obtaining and documenting authorizations for shipping hazardous materials, including facility profile information (company, address, emergency contacts), a hazardous materials list identifying material being shipped, and waste stream-specific details (waste description, codes, etc.).

Charts may be generated to show summary reports in columnar format and include a summary by class and disposition type in tons, in tons/unit, and by yearly disposal with goal identified.

We Care Reports are a GM reporting requirement and include:

- Shipments by We Care Codes – Presents waste information according to We Care description and identifies waste type, unit, We Care process, and shipment details. This report is not in GM format.
- We Care Rpt: GM Format – Presents the summary report in the GM We Care Report format; the detailed report is similar and identifies the manifest and approval numbers associated with each shipment for each waste stream.

Handling/Disposition Reports generates reports according to method of waste handling/disposal and include:

- Rpt by Handling – Presents disposition types and sum of weight in tons for each disposition type.
- Charts by Handling – Presents summary of disposition type by percent waste in pie chart format.

Exception Reports produce reports regarding outstanding manifests, certificates of destruction, and approvals, including:

- Shipments: Manifests Outstanding - Presents manifest number, date, transporter ID, and disposal facility ID for a selected period of time for shipments (requiring manifest return) for which the manifest has not been returned.
- Shipments w/No COD – Presents company ID, manifest number, date, state document number, transporter ID, and disposal facility ID for shipments without a COD date.
- Expiring Approvals – Presents waste ID, name, class, description, and disposal information for approvals/profiles expiring within a selected number of days.

Similar information is presented via the pop-up Auto-Alerts which run at program start-up or at will.

Expiring Approvals (Waste Profiles) Profiles expiring within 90 days of 19-Jan-01

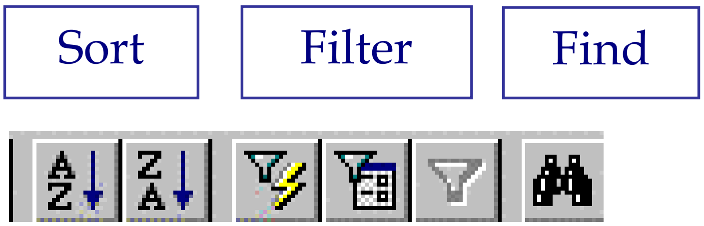
Waste ID	Waste Name	Class	Description Disposal Info.
1	ASBESTOS INSULATION	Non-Hazardous	FRIABLE AND NON-FRIABLE ASBESTOS.
	SW Code: TestSWC		
	HW Codes: U170 D002		Profile: WASTE MANAGEMENT (WOODSIDE) - WM1234 Exp. 6/6/00
1	ASBESTOS INSULATION	Hazardous	FRIABLE AND NON-FRIABLE ASBESTOS.
	SW Code: 1234-011		
	HW Codes: U170 D002, D001, F001, H002, U123		Profile: WASTE MANAGEMENT (WOODSIDE) - WM1234 Exp. 6/6/00
1	ASBESTOS INSULATION	Non-Hazardous	FRIABLE AND NON-FRIABLE ASBESTOS.
	SW Code: 1234-011		
	HW Codes: U170 D002		Profile: WASTE MANAGEMENT (WOODSIDE) - WM1234 Exp. 6/6/00

Manifests and Label Printing produce manifests and shipment labels, including:

- Print Manifest, Bill of Lading and/or Weight Ticket – Produces typical manifest, Bill of Lading or Weight Ticket.

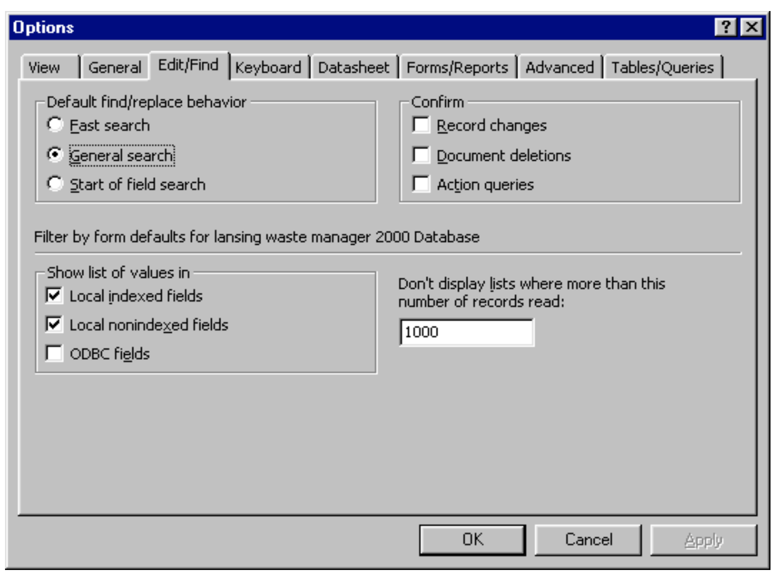
5.0 RECORD VIEWING AND EDITING FEATURES

For each table, in each Form View or Datasheet View, Standard MS Access Searching and Sorting Features are available.



- To sort on a field - Place cursor in field and press "A-Z" or "Z-A" button.
- Use "binoculars" button to search for specific text. Search criteria can be general (all fields) or limited to the specific field by adjusting responses in "Find" dialog box.
- To limit a view to the records meeting a "Find" criterion, press the "Filter by Example" (lightning bolt) button. Press the "Filter Button" (funnel) to return to the all records (no filter) view.
- To delete a record, highlight the gray bar to the left of the record and press the Delete key.

Note: The user's MS Access "Options" settings affect the number and type of Caution or Warning messages the user receives, as well as behavior of the "Find" utility. For CRA Waste Manager, the following settings for "Default find/replace behavior" and "Confirm" are suggested (under drop-down menu item Tools -> Options -> Edit/Find Tab).



6.0 SECURITY

Multi-level security by user and password can be implemented. A typical multi-level set-up might include levels such as the following:

User

- Default set-up.
- Can view records in all form and datasheet views, search and sort.
- Cannot add or change data, cannot save searches or sorts.
- Can view and print reports.

Editor

- Has All User Rights.
- Additionally, can add or change data format and report format.

Administrator

- Has all editor rights.
- Additionally, can add or change system users and rights.

7.0 EXAMPLE

A new waste stream has been identified and is being disposed by Company A1. The initial shipment is transported by transporter T1 to the Landfill L1.

Before entering initial shipment information, be sure the following master file information has been entered:

- Generator (Company) Table - Company information for Company A1. (At a minimum, a Company ID, created and assigned for this system, and a company name.)
- Unit/Department Table - Unit information for the Unit(s)/Department(s) that will be generating this waste stream. (At a minimum, the Unit ID, created and assigned for this system, and a Unit description.)
- Waste Code Table (Optional) – All applicable waste codes for this waste (e.g., D001, F005, or state-assigned). If entered, these codes will be available as drop-downs for subsequent entry screens for Facility Wastes.
- Waste Characterization (Facility Waste) Table – A facility-assigned waste stream ID, description of the waste stream, waste profile information, DOT shipping information, and associated waste codes. (This information will subsequently be automatically entered for you in the Shipment entry screen as soon as you identify the Facility Waste ID.)
- Waste Approval (Profile) Information – The specific approval number provided by the disposal facility (or other), along with the method of disposition, treatment, etc. Information in this table is vital to reporting waste disposition by handling method.
- Transporter Table (Optional) – The ID number and name of the transporter. If entered, this will be available in drop-downs during Shipment data entry.
- Disposer Table (Optional) – The ID number and name of the disposal facility. If entered, this will be available in drop-downs during Shipment data entry.

At this point, Shipment data may be entered using the "Shipments" button from the Data Entry/Edit switchboard.

ATTACHMENT D-2

EXAMPLE WASTE LABELS

CAUTION

CONTAINS

PCBs

PCB
Out of
Service
Date =
x/x/xx

(Polychlorinated Biphenyls)

A toxic environmental contaminant requiring special handling and disposal in accordance with U.S. Environmental Protection Agency Regulations 40 CFR 761 – For Disposal Information contact the nearest U.S. E.P.A. Office.

In case of accident or spill, call toll free the U.S. Coast Guard National Response Center: 800-424-8802

Also Contact: ______________________________

Tel No.: ______________________________

NON-RCRA REGULATED WASTE

THIS WASTE NOT REGULATED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY 40CFR(RCRA) BUT MAY BE SUBJECT TO DEPT. OF TRANSPORTATION REGULATIONS, (49CFR) OR STATE OR LOCAL REGULATIONS.

GENERATOR INFORMATION:

SHIPPER General Motors Powertrain Div.

ADDRESS 105 GM Drive

CITY, STATE, ZIP Bedford, IN 47421

PROPER D.O.T. SHIPPING NAME RQ, Polychlorinated Biphenyls, solid, Mixture, 9, UN2315, II

UN OR NA NO.: UN2315

PHONE:

NON-RCRA REGULATED WASTE

BWMV REV.11-1-92 Printed by Labelmaster, An American Labelmark Co., Chicago, IL 60646 (800) 621-5808

ATTACHMENT D-3

EXAMPLE MANIFESTS

NYB9567198

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

(Hazardous Waste Manifest 5/00)

Type or print. Do not staple.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA No. IND006036099 Manifest Doc. No.
2. Page 1 of 2

Information within heavy bold line is not required by Federal Law.

A. NYB9567198

3. Generator's Name and Mailing Address
General Motors Corp.
105 GM Drive
Bedford, IN 47421

B. Generator's ID Same

4. Generator's Telephone Number (812) 279-7360

5. Transporter 1 (Company Name) Wills Trucking
6. US EPA ID Number OHD068913409

C. State Transporter's ID
D. Transporter's Telephone (800) 362-3570

7. Transporter 2 (Company Name)
8. US EPA ID Number

E. State Transporter's ID
F. Transporter's Telephone ( )

9. Designated Facility Name and Site Address
CWM Chemical Services, LLC
1550 Balmer Rd.
Model City, NY 14107

10. US EPA ID Number NYD049836679

G. State Facility ID
H. Facility Telephone (716) 754-8231

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers Number	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Polychlorinated Biphenyls, Solid Mixture, 9, UN 2315, PG II	001	DM		K	EPA / STATE B007
b. Non-Hazardous, Non-Regulated Material per 40 CFR & 49 CFR (drilling mud)	004	DM		K	EPA / STATE None
c. Non-Hazardous, Non-Regulated Material per 49 CFR & 40 CFR (soil cuttings)	004	DM		K	EPA / STATE None
d.					EPA / STATE

J. Additional Descriptions for Materials listed Above
a. GMM050
b. GMM048
c. GMM049
d.

K. Handling Codes for Wastes Listed Above
a. L
b. L
c. L
d.

15. Special Handling Instructions and Additional Information
PCB out of service date = 2/11/02
Chemtrec Emergency Response Number = (800) 424-9300

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.

If I am large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR if I am a smaller generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Jeff Nichols, CRA for GM
Signature:
Mo. Day Year: 03 12 02

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Mo. Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Mo. Day Year

TRANSPORTER

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name
Signature
Mo. Day Year

PCB MANIFEST CONTINUATION FORM

c include on the manifest or on an attachment to the manifest:

que ID # or Serial # of container	Profile of waste	Type of PCB Waste	Date of Removal From Service	Weight in Kg.
H	GMM050	soil w/ PCB>50ppm	2/11/02	

(Make additional copies if needed)

DISPOSAL STANDARDS FOR NEW YORK STATE REGULATED HAZARDOUS PCB WASTES

GENERATOR NAME: General Motors

MANIFEST #: ________ CWM PROFILE #: GmM050

UNIQUE DRUM#: H OUT OF SERVICE DATE: 02/11/02

The following New York State regulated and land restricted wastes are subject to 6 NYCRR Part 376. Refer to 6 NYCRR 376.4(f) for New York land disposal requirements. Check all that apply:

[ ] B001 [ ] B002 [ ] B003 [ ] B004 [ ] B005 [ ] B006 [X] B007

Certification - Waste Meets Treatment Standards

[X] I am the generator of the waste as identified above, that is restricted under 6 NYCRR Part 376. I have determined that this waste meets all applicable treatment standards set forth in 6 NYCRR 376 and, therefore, it can be land disposed without further treatment. Waste does not include solidified B002 material (liquid with PCBs 50-500 ppm).

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that waste complies with the treatment standards specified in Part 376, Section 376.4 and all applicable prohibitions set forth in subdivision 376.3(b) of Part 376 or RCRA Section 3004(d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification including the possibility of a fine or imprisonment.

Notification - Waste Does Not Meet Treatment Standards

[ ] I am the generator of a waste restricted under 6 NYCRR Part 376 as identified above. I notify that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this notification that the waste does not comply with the treatment standards specified in 6 NYCRR Part 376.4(f). This waste must be treated to the applicable standard set forth in 6 NYCRR 376.4(f) prior to land disposal.

GENERATOR'S SIGNATURE: ____________________

TITLE: ____________________ DATE: ____________________

Updated 05/1998

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. IND006036099 Manifest Document No.

2. Page 1 of 1

A. Non-hazardous Manifest Document Number Z 0048233

3. Generator's Name and Mailing Address
GENERAL MOTORS CORP
105 GM DRIVE
BEDFORD, IN 47421

4. Generator's Phone (812) 279-7360

B. State Generator's ID SAME

5. Transporter 1 Company Name

6. US EPA ID Number

C. State Trans. ID

D. Transporter's Phone ( )

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Trans. ID

F. Transporter's Phone ( )

9. Designated Facility Name and Site Address
Metalworking Lubricants Company
1509 S. Senate Ave
Indianapolis, IN 46225

10. US EPA ID Number IND000646950

G. State Facility's ID

H. Facility's Phone (317) 269-2444

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Non-regulated, non-hazardous material per 40 & 49 CFR (wastewater)			TT		G	
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
a. CW #7867
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
CHEMTREL EMERGENCY RESPONSE NUMBER => (800) 424-9300

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

I hereby certify that the above-named material is not hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Printed/Typed Name | Signature | Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of non-hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name | Signature | Month Day Year

GENERATOR

TRANSPORTER

FACILITY

ATTACHMENT D-4

WASTE PROFILES AND APPROVALS

.e 3/08/02 WASTE MANAGEMENT DECISION Page . . : 1

ie 9:00:31

Location of Original MIDWEST REGIONAL LAB

Tracking #: 4567451 Priority : MC
Profile # : GMM050 Date Received: 03/07/02
Effective Date: 03/07/02
Generator : GENERAL MOTORS CORP
Waste Category Code:
Description : SOIL/DEBRIS (>50 PPM PCBS)

enerator and Facility Information

Decision Site CWM MODEL CITY FACILIT
Proposed Management Facility CWM MODEL CITY FACILIT

*** This Decision is APPROVED

Decision to Deny Approval for Management of Waste

Reason for Denying Approval

al Approval ______________ Name (print) ______________ Date ______________

:. Decision to Approve
Approved

a) Approved Management Methods
CA Landfill.

b. recaution Conditions or Limitations on Approval

(1) Site Conditions
RMU 1(ANY)

(2) Contracting Conditions

(3) Site and Contracting Conditions
- Waste must not contain any free liquid,
source >500 ppm.
manifests and drums.
Serv.,Inc. for delays at Model City for on-site
arranges their own transportation.
should place the phrase "Certificate of
manifest.
Certification Form must be properly executed
- Drummed waste must be properly marked with the
labeling under RCRA and/or DOT provisions.
qualifying for landfill to be full and have no
upon the generator waste being contained in
- Shipment of PCB material must meet the manifest
761.207.
void space or to absorb free liquids must be
- Sorbents present in bulk shipments must be
a solidification agent to remove free standing

solidified B002 liquids or liquids with PCB
- Waste profile sheet numbers must appear on
- No demurrage will be paid by CWM Chemical
acceptance procedures when generator/customer
- Customers who require Certificates of Disposal
Disposal Required" in Section 15 of the
- Special Land Disposal Notification and
and accompany first shipment of this waste.
profile number and bear only the appropriate
- SLF restrictions require all drummed solids
void space. Price and disposal is contingent
open top drums.
requirements outlined by the USEPA in 40 CFR
- Any sorbents used in drum loads to eliminate
nonbiodegradable.
non biodegradable and must not have been used as
liquid in the load.

c nalytical Requirements for Each Load

Location of Original MIDWEST REGIONAL LAB

Tracking #: 4567451 Priority : MC
Profile # : GMM050 Date Received: 03/07/02
Effective Date: 03/07/02
Generator : GENERAL MOTORS CORP
Waste Category Code:
Description : SOIL/DEBRIS (>50 PPM PCBS)

nerator and Facility Information

Decision Site CWM MODEL CITY FACILIT
Proposed Management Facility CWM MODEL CITY FACILIT

*** This Decision is APPROVED

Continuation.....

Wap tests: Miscellaneous.
Suitable to smash if drums contain void space.

Soil ID required on first load after 3/7/02.
LDR form with first shipment.

Per Waste Analysis Plan

d) Decision Expiration Date 03/07/04

Final Decision

State any Additional Precautions, Conditions, or Limitations

Approval ______________________ Name (print) JILL KNICKERBOCKER Date 03/07/02

WM
WASTE MANAGEMENT, INC.

GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Profile Number: GMM050

ice Agreement on File? ☒ YES ☐ NO

Renewal Date

Hazardous ☐ Non-Hazardous ☒ TSCA

Waste Generator Information

Generator Name:	General Motors Corporation – Bedford Facility	2.	SIC Code	3365 and 3363
Facility Street Address:	105 GM Drive	4.	Phone	(812) 279-7404
Facility City:	Bedford	6.	State/Province:	Indiana
Zip/Postal Code:	47421	8.	Generator USEPA/FED ID #:	IND006036099
County:	Lawrence	10.	State/Province ID#:	
Customer Name:	Waste Management National Accounts	12.	Customer Phone::	(866) 469-2783
Customer Contact:	Kelly Morrissey	14.	Customer Fax:	(586) 573-3636
Billing Address	Waste Management - National Accounts, 12200 E. 13 Mile Rd., Warren, MI 48088		☐ Same as above	

Waste Stream Information

DESCRIPTION

a. Name of Waste: Soil/Debris (>50 ppm PCBs)

b. Processing Generating Waste: Site investigation and remediation activities. (Use analytical from Profile #GMF068)

c. Color	d. Strong odor	e Physical state @ 70°F	f. Layers	g. Free liquid range
Grey/brown	(describe)	☒ Solid ☐ Liquid ☐ Gas ☐ Sludge ☐ Other	☒ Single Layer ☐ Multi-Layer	0 % to
				h. PH: Range to 10

i. Liquid Flash Point: ☐ <73°F ☐ 73-99°F ☐ 100-139°F ☐ 140-199°F ☐ ≥ 200°F ☒ Not Applicable

j. Chemical Composition (List all constituents [including halogenated organics, debris, and UHC's] present in any concentration and submit representative analysis):.

Constituents	Concentration Range	Constituents	Concentration Range
Inerts (soil/concrete debris)	25-100%		
Other Debris (Plastic liners/PPE)	0-75%		
Polychlorinated biphenyls	≥50 ppm		

TOTAL COMPOSITION MUST EQUAL OR EXCEED 100%

k. ☐ Oxidizer ☐ Pyrophoric ☐ Explosive ☐ Radioactive ☐ Carcinogen ☐ Infectious ☐ Shock Sensitive ☐ Water Reactive

l. Does the waste represented by this profile contain any of the carcinogens which require OSHA Notification? (list in Section B.1.) ☐ YES ☒ NO

m. Does the waste represented by this profile contain dioxins? (list in B.1.j) ☐ YES ☒ NO

n. Does the waste represented by this profile contain asbestos? ☐ YES ☒ NO
If yes ☐ friable ☐ non-friable

o. Does the waste represented by this profile contain benzene ☐ YES ☒ NO
If yes, concentration ppm
Is the waste subject to benzene waste operations NESHAP? ☐ YES ☒ NO

p. Is the waste subject to RCRA Subpart CC controls ☐ YES ☒ NO
If yes, volatile organic concentration
Does the waste contain any Class I or Class II ozone-depleting substance? ☐ YES ☒ NO
Does the waste contain debris? (list in Section B.1.j) ☒ YES ☐ NO

2. ıantity of Waste
ıstimated Annual Volume 35,000 ☐ Tons ☐ Yards ☐ Drums ☒ Other (specify) Kg

Shipping Information

a. Packaging:
☒ Bulk Solid; Type/Size: Roll-off box (23-yard box) ☐ Bulk Liquid, Type/Size
☒ Drum; Type/Size: 55 gal or overpacked drums ☐ Other:

b. Shipping Frequency: Units Varies – 0-5 Per: ☒ Month ☐ Quarter ☐ Year ☐ One Time ☐ Other

... Material? (If no, skip d, e and f) ☒ YES ☐ NO

GENERATOR'S WASTE PROFILE SHEET
PLEASE PRINT IN INK OR TYPE

Reportable Quantity (lbs.; kgs.): 1 pound PCBs e. Hazard Class/ID#: UN2315
USDOT Shipping Name: Polychlorinated biphenyls, Solid Mixture, 9, UN2315, PG II
Personal Protective Equipment Requirements: ERG #171
Transporter/Transfer Station:

nerator's Certification (Please check appropriate responses, sign, and date below.)

Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2 ☐ YES ☒ NO

a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D,F,K,P,U)

b. If a characteristic hazardous waste, do underlying hazardous constituents (UHCs) apply? (if yes, list in Section B.1.j) ☐ YES ☒ NO

c. Does this waste contain debris? (if yes, list size and type in Chemical Composition- B.1.) ☐ YES ☒ NO

Is this a state hazardous waste? ☒ YES ☐ NO
Identify ALL state hazardous waste codes B007 – New York State

Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up? ☐ YES ☒ NO
If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up for activity. For state mandated clean-up, provide relevant documentation.

Does the waste represented by this waste profile sheet contain radioactive material, or is disposal regulated by the Nuclear Regulatory Commission? ☐ YES ☒ NO

Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j) ☒ YES ☐ NO

a. If yes, were the PCBs imported into the U.S.? ☐ YES ☒ NO

Do the waste profile sheet and all the attachments contain true and accurate descriptions of the waste material, and has all relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste been disclosed to the Contractor? ☒ YES ☐ NO

Will all changes which occur in the character of the waste be identified by the Generator and disclosed to the Contractor prior to providing the waste to the Contractor? ☒ YES NO

Check here if a Certificate of Destruction or Disposal is required.

ny sample submitted is representative as defined in 40 CFR 261 - Appendix 1 or by using an equivalent method. I authorize WMI to obtain a sample om any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as authorized agent of the enerator and has confirmed the information contained in this Profile Sheet from information provided by the generator and additional information as it as determined to be reasonably necessary. If approved for management, Contractor has all the necessary permits and licenses for the waste that has een characterized and identified by this approved profile.

Certification Signature: Kimberly Dobosenski Title: Environmental Engineer
Name (Type or Print): Kimberly Dobosenski
Company Name: General Motors Corporation Date: 3/6/02

☐ Check if additional information is attached. Indicate the number of attached pages.

FOR WMI USE ONLY

D. WMI Management's Decision

1. Management Method ☐ Landfill ☐ Non-hazardous Solidification ☐ Bioremediation ☐ Incineration ☐ Hazardous Stabilization ☐ Other (Specify)

2. Proposed Ultimate Management Facility:

3. Precautions, Special Handling Procedures, or Limitation on Approval

4. Waste Form: 5. Source 6. System Type

☐ Approved ☐ Disapproved

cial Waste Decision Date:
esperson's Signature: Date:
Division Approval Signature (Optional): Date:
Special Waste Approvals Person Signature

:e 3/08/02 WASTE MANAGEMENT DECISION Page . . : 1
1e 9:01:55

Location of Original MIDWEST REGIONAL LAB

Tracking #: 4567450 Priority : MC
Profile # : GMM049 Date Received: 03/07/02
Effective Date: 03/07/02
Generator : GENERAL MOTORS CORP
Waste Category Code:
Description : SOIL/DEBRIS (<50 PPM PCBS)

enerator and Facility Information

Decision Site CWM MODEL CITY FACILIT
Proposed Management Facility CWM MODEL CITY FACILIT

*** This Decision is APPROVED

Decision to Deny Approval for Management of Waste

Reason for Denying Approval

ial Approval ____________ Name (print) ____________ Date ________

I. Decision to Approve
Approved

a) Approved Management Methods
ubtitle C Landfill.

b recaution Conditions or Limitations on Approval

(1) Site Conditions
RMU 1(ANY) MC:N

(2) Contracting Conditions

(3) Site and Contracting Conditions
- Waste profile sheet numbers must appear on manifests/shipping papers and drums.
- No demurrage will be paid by CWM Chem. Services Inc. for delays at Model City for on-site acceptance procedures when generator/customer arranges their own transportation. Customers who require Certificates of Disposal should place the phrase "Certificate of Disposal Required" in Section 15 of the manifest.
- Drummed waste must be properly marked with the profile number and bear only the appropriate labeling under RCRA and/or DOT provisions.
- SLF restrictions require all drummed solids for landfill to be full and have no void space. Price and disposal is contingent upon the generator's waste being contained in open top drums.
- Any sorbents used to absorb free liquids or eliminate void space in drums must be non-biodegradable.
- Sorbents present in bulk shipments must be non-biodegradable and must not have been used as a solidification agent to remove free-standing liquid in the load.
- If material is shipped as non-hazardous, appropriate non-hazardous labels must be on drums, per Model City permit requirements.

c) Analytical Requirements for Each Load
No tests: Misc
1 id on first soil load received after 03/07/02.
Suitable to smash if drums contain void space.

Location of Original MIDWEST REGIONAL LAB

Tracking #: 4567450 Priority : MC
Profile # : GMM049 Date Received: 03/07/02
Effective Date: 03/07/02
Generator : GENERAL MOTORS CORP
Waste Category Code:
Description : SOIL/DEBRIS (<50 PPM PCBS)

enerator and Facility Information

Decision Site CWM MODEL CITY FACILIT
Proposed Management Facility CWM MODEL CITY FACILIT

*** This Decision is APPROVED

Continuation.....

Per Waste Analysis Plan

d) Decision Expiration Date 03/07/04

Final Decision

State any Additional Precautions, Conditions, or Limitations

1 Approval ______________________ Name (print) JILL KNICKERBOCKER Date 03/07/02

WM
WASTE MANAGEMENT, INC.

GENERATOR'S WASTE PROFILE SHEET
PLEASE PRINT IN INK OR TYPE

Profile Number: GMM049

Renewal Date

...ice Agreement on File? ☒ YES ☐ NO

Hazardous ☒ Non-Hazardous ☐ TSCA

Waste Generator Information

Generator Name:	General Motors Corporation – Bedford Facility	2.	SIC Code	3365 and 3363
Facility Street Address:	105 GM Drive	4.	Phone	(812) 279-7404
Facility City:	Bedford	6.	State/Province:	Indiana
Zip/Postal Code:	47421	8.	Generator USEPA/FED ID #:	IND006036099
County:	Lawrence	10.	State/Province ID#:	
Customer Name:	Waste Management National Accounts	12.	Customer Phone::	(866) 469-2783
Customer Contact:	Kelly Morrissey	14.	Customer Fax:	(586) 573-3636
Billing Address	Waste Management - National Accounts, 12200 E. 13 Mile Rd., Warren, MI 48088		☐ Same as above	

Waste Stream Information

DESCRIPTION

a. Name of Waste: Soil/Debris (<50 ppm PCBs)

b. Processing Generating Waste: Site investigation and remediation activities. (Use analytical from profile #GMF067)

c. Color	d. Strong odor	e. Physical state @ 70°F	f. Layers	g. Free liquid range
Grey/brown	(describe)	☒ Solid ☐ Liquid ☐ Gas ☐ Sludge ☐ Other	☒ Single Layer ☐ Multi-Layer	0 % to
				h. PH: Range to 10 ☒ Not Applicable

i. Liquid Flash Point ☐ <73°F ☐ 73-99°F ☐ 100-139°F ☐ 140-199°F ☐ ≥ 200°F

j. Chemical Composition (List all constituents [including halogenated organics, debris, and UHC's] present in any concentration and submit representative analysis):.

Constituents	Concentration Range	Constituents	Concentration Range
Inerts (soil/concrete debris)	25-100%		
Other Debris (Plastic liners/PPE)	0-75%		
Polychlorinated biphenyls	<50 ppm		

TOTAL COMPOSITION MUST EQUAL OR EXCEED 100%

k. ☐ Oxidizer ☐ Carcinogen ☐ Pyrophoric ☐ Infectious ☐ Explosive ☐ Shock Sensitive ☐ Radioactive ☐ Water Reactive

l. Does the waste represented by this profile contain any of the carcinogens which require OSHA Notification? (list in Section B.1.)........ ☐ YES ☒ NO

m. Does the waste represented by this profile contain dioxins? (list in B.1.j)........ ☐ YES ☒ NO

n. Does the waste represented by this profile contain asbestos?........ ☐ YES ☒ NO
If yes........ ☐ friable ☐ non-friable

o. Does the waste represented by this profile contain benzene........ ☐ YES ☒ NO
If yes, concentration ppm
Is the waste subject to benzene waste operations NESHAP?........ ☐ YES ☒ NO

p. Is the waste subject to RCRA Subpart CC controls........ ☐ YES ☒ NO
If yes, volatile organic concentration
Does the waste contain any Class I or Class II ozone-depleting substance?........ ☐ YES ☒ NO
Does the waste contain debris? (list in Section B.1.j)........ ☒ YES ☐ NO

2. Quantity of Waste
Estimated Annual Volume 35,000 ☐ Tons ☐ Yards ☐ Drums ☒ Other (specify) Kg

Shipping Information

a. Packaging:
☒ Bulk Solid; Type/Size: Roll-off box (23-yard box)
☒ Drum; Type/Size: 55 gal drums
☐ Bulk Liquid, Type/Size
☐ Other:

Units Varies ~ 0-5 Per: ☒ Month ☐ Quarter ☐ Year ☐ One Time ☐ Other

☐ YES ☒ NO

GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

d. Reportable Quantity (lbs.; kgs.): ______ e. Hazard Class/ID#: ______

f. USDOT Shipping Name: ______

g. Personal Protective Equipment Requirements: ______

h. Transporter/Transfer Station: ______

C. Generator's Certification (Please check appropriate responses, sign, and date below.)

1. Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2 .... ☐ YES ☒ NO
   a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D,F,K,P,U) ______
   b. If a characteristic hazardous waste, do underlying hazardous constituents B.1.j) (UHCs) apply? (if yes, list in Section .... ☐ YES ☒ NO
   c. Does this waste contain debris? (If yes, list size and type in Chemical Composition- B.1.) .... ☐ YES ☒ NO
2. Is this a state hazardous waste? .... ☐ YES ☒ NO
   Identify ALL state hazardous waste codes ______
3. Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up? .... ☐ YES ☒ NO
   If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up for activity. For state mandated clean-up, provide relevant documentation.
4. Does the waste represented by this waste profile sheet contain radioactive material, or is disposal regulated by the Nuclear Regulatory Commission? .... ☐ YES ☒ NO
5. Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated Biphenyls (PCBs) regulated by 40 CFR 761? (If yes, list in Chemical Composition - B.1.j) .... ☐ YES ☒ NO
   a. If yes, were the PCBs imported into the U.S.? .... ☐ YES ☐ NO
6. Do the waste profile sheet and all the attachments contain true and accurate descriptions of the waste material, and has all relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste been disclosed to the Contractor? .... ☒ YES ☐ NO
7. Will all changes which occur in the character of the waste be identified by the Generator and disclosed to the Contractor prior to providing the waste to the Contractor? .... ☒ YES NO

☒ Check here if a Certificate of Destruction or Disposal is required.

Any sample submitted is representative as defined in 40 CFR 261 - Appendix 1 or by using an equivalent method. I authorize WMI to obtain a sample from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as authorized agent of the generator and has confirmed the information contained in this Profile Sheet from information provided by the generator and additional information as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary permits and licenses for the waste that has been characterized and identified by this approved profile.

Certification Signature: Kimberly Dobosenski Title: Environmental Engineer

Name (Type or Print): Kimberly Dobosenski Company Name: General Motors Corporation Date: 3/6/02

☐ Check if additional information is attached. Indicate the number of attached pages.

D. WMI Management's Decision FOR WMI USE ONLY

1. Management Method ☐ Landfill ☐ Non-hazardous Solidification ☐ Bioremediation ☐ Incineration ☐ Hazardous Stabilization ☐ Other (Specify) ______
2. Proposed Ultimate Management Facility: ______
3. Precautions, Special Handling Procedures, or Limitation on Approval ______
4. Waste Form: ______ 5. Source ______ 6. System Type ______

Special Waste Decision .... ☐ Approved ☐ Disapproved

Salesperson's Signature: ______ Date: ______

Division Approval Signature (Optional): ______ Date: ______

Special Waste Approvals Person Signature ______ Date: ______

WASTE MANAGEMENT DECISION

.9/02
15:35

Location of Original MIDWEST REGIONAL LAB

Tracking #: 4567739 Priority : MC
Profile # : GMM051 Date Received: 03/18/02
Effective Date: 03/18/02
Generator : GENERAL MOTORS CORP
Waste Category Code:
Description : DRILLING MUD/SOIL >50 PPM PCBS

rator and Facility Information

ision Site CWM MODEL CITY FACILIT
posed Management Facility CWM MODEL CITY FACILIT

This Decision is APPROVED

ision to Deny Approval for Management of Waste

ason for Denying Approval

Name (print) Date

pproval

ecision to Approve
pproved

) A ved Management Methods
Landfill.

) caution Conditions or Limitations on Approval

(1) Site Conditions
RMU 1(ANY) MC:X Stabilize any free liquid with sufficient CKD.

(2) Contracting Conditions

(3) Site and Contracting Conditions
- Waste profile sheet numbers must appear on
- No demurrage will be paid by CWM Chemical
acceptance procedures when generator/customer
- Customers who require Certificates of Disposal
Disposal Required" in Section 15 of the
- Special Land Disposal Notification and
and accompany first shipment of this waste.
profile number and bear only the appropriate
- SLF restrictions require all drummed solids
void space. Price and disposal is contingent
open top drums.
requirements outlined by the USEPA in 40 CFR
- Any sorbents used in drum loads to eliminate
nonbiodegradable.

manifests and drums.
Serv.,Inc. for delays at Model City for on-site
arranges their own transportation.
should place the phrase "Certificate of
manifest.
Certification Form must be properly executed
- Drummed waste must be properly marked with the
labeling under RCRA and/or DOT provisions.
qualifying for landfill to be full and have no
upon the generator waste being contained in
- Shipment of PCB material must meet the manifest
761.207.
void space or to absorb free liquids must be

c) nalytical Requirements for Each Load
p tests: Miscellaneous.
Suitable to smash.

LDR form with first shipment.

WASTE MANAGEMENT DECISION

3/19/02
9:45:35

Location of Original MIDWEST REGIONAL LAB

Tracking #: 4567739 Priority : MC
Profile # : GMM051 Date Received: 03/18/02
Effective Date: 03/18/02
Generator : GENERAL MOTORS CORP
Waste Category Code:
Description : DRILLING MUD/SOIL >50 PPM PCBS

enerator and Facility Information

Decision Site CWM MODEL CITY FACILIT
Proposed Management Facility CWM MODEL CITY FACILIT

*** This Decision is APPROVED

Continuation.....
Per Waste Analysis Plan

d) Decision Expiration Date 03/18/03

tial Approval ______________ Name (print) ANTHONY OSWALD Date 03/18/02

Final Decision

State any Additional Precautions, Conditions, or Limitations

nal Approval ______________ Name (print) JILL KNICKERBOCKER Date 03/18/02

Chemical Waste Management, Inc.

Profile #
MDC GMM051

: Printed 03/19/02

GENERATOR'S WASTE PROFILE SHEET

Cher re if this is a Recertification LOCATION OF ORIGINAL CWM MODEL CITY FACILITY

AL INFORMATION

.nerator Name: GENERAL MOTORS CORP

Generator USEPA ID: IND006036099

Generator Address: 105 GM DR

PO BOX 271

BEDFORD IN 47421

Billing Address: (_) Same WASTE MANAGEMENT NATL ACCTS

720 BUTTERFIELD RD

LOMBARD IL 60148

Technical Contact/Phone:

Alternate Contact/Phone:

Billing Contact/Phone: KELLY MORRISSEY 866/469-2783

OPERTIES AND COMPOSITION

Process Generating Waste: SITE INVESTIGATION AND REMEDIATION ACTIVITIES

Waste Name: DRILLING MUD/SOIL >50 PPM PCBS

\. Is this a USEPA hazardous waste (40 CFR Part 261)? Yes (_) No (X)

). Identify ALL USEPA listed and characteristic waste code numbers (D,F,K,P,U):

State Waste Codes: B007

. Physical State @ 70F: A. Solid(_) Liquid(_) Both(X) Gas(_) B. Single Layer (_) Multilayer (X) C. Free liq. range 0 to 75%

A. pH: Range ___ to 10.0 or Not applicable (_) B. Strong Odor (_):describe

0.Liq‑‑d Flash Point: < 73F (_) 73-99F (_) 100-139F (_) 140-199F (_) >= 200F (_) N.A. (X) Closed Cup (X) Open Cup (_)

.1. C CAL COMPOSITION: List ALL constituents (incl. halogenated organics) present in any concentration and forward analysis

(ituents	Range	Unit Description
	to	
INERTS	25 to 100	%
DRILLING MUD/SOIL/CONCRETE DEBRIS	0 to 75	%
WATER	to	
COMMENTS	to	
PCB CONCENTRATION ON LIQUID-0.35 UG/L	to	

TOTAL COMPOSITION (MUST EQUAL OR EXCEED 100%): 175.000000

12\. OTHER: PCBs if yes, concentration 54 ppm. PCBs regulated by 40 CFR 761 (X). Pyrophoric (_) Explosive (_) Radioactive (_) Benzene if yes, concentration _ ppm. NESHAP (_) Shock Sensitive (_) Oxidizer (_) Carcinogen (_) Infectious (_) Other

13\. If waste subject to the land ban & meets treatment standards, check here: _ & supply analytical results where applicable.

SHIPPING INFORMATION

14\. PACKAGING: Bulk Solid (_) Bulk Liquid (_) Drum (X) Type/Size: 55 GALLON DRUM Other

15\. ANTICIPATED ANNUAL VOLUME: 6 Units: 55 GALLON DRUM Shipping Frequency: MONTH

Sample Tracking Number: 4567521

SAMPLING INFORMATION

16a. Sample source (drum, lagoon, pond, tank, vat, etc.):

Date Sampled: Sampler's Name/Company:

16b .erator's Agent Supervising Sampling:

17\. (_) No sample required (See instructions.)

GENERATOR'S CERTIFICATION

reby certify that all information submitted in this and all attached documents contains true and accurate descriptions of . waste. Any sample submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. All relevant information regarding known or suspected hazards in the possession of the generator has been disclosed. I authorize CWM to obtain a sample from any waste shipment for purposes of recertification.

Signature on original profile GMM051 KIMBERLY DOBOSENSKI ENVIRONMENTAL ENGINEER 3/07/02

Name and Title Date

WM
WASTE MANAGEMENT, INC.

GENERATOR'S WASTE PROFILE SHEET
PLEASE PRINT IN INK OR TYPE

Service Agreement on File? ☒ YES ☐ NO   Profile Number: GMM051
Renewal Date

☐ Hazardous ☐ Non-Hazardous ☒ TSCA

A. Waste Generator Information

1. Generator Name:	General Motors Corporation – Bedford Facility	2. SIC Code	3365 and 3363
3. Facility Street Address:	105 GM Drive	4. Phone	(812) 279-7404
5. Facility City:	Bedford	6. State/Province:	Indiana
7. Zip/Postal Code:	47421	8. Generator USEPA/FED ID #:	IND006036099
9. County:	Lawrence	10. State/Province ID#:	
11 Customer Name:	Waste Management National Accounts	12. Customer Phone::	(866) 469-2783
13. Customer Contact	Kelly Morrissey	14. Customer Fax:	(586) 573-3836

15. Billing Address: Waste Management - National Accounts, 12200 E. 13 Mile Rd., Warren, MI 48088 ☐ Same as above

B. Waste Stream Information

1. DESCRIPTION
   a. Name of Waste: Drilling Mud/Soil (≥50 ppm PCBs)
   b. Processing Generating Waste: Site investigation and remediation activities.

c. Color	d. Strong odor	e Physical state @ 70°F	f. Layers	g. Free liquid range
Grey/brown	(describe)	☐ Solid ☐ Liquid ☐ Gas ☒ Sludge ☐ Other	☐ Single Layer ☒ Multi-Layer	0 % to 75
				h. PH: Range to 10

i. Liquid Flash Point: ☐ <73°F ☐ 73-99°F ☐ 100-139°F ☐ 140-199°F ☐ ≥200°F ☒ Not Applicable

j. Chemical Composition (List all constituents [including halogenated organics, debris, and UHC's] present in any concentration and subm representative analysis):.

Constituents	Concentration Range	Constituents	Concentration Ran.
Inerts (drilling mud/soil/concrete debris)	25-100%		
Other Debris (Plastic liners/PPE)	0-75%		
Polychlorinated biphenyls in solid	≥50 ppm		
Polychlorinated biphenyls in liquid	<50 ppm		
Water from drilling	0-75%		

TOTAL COMPOSITION MUST EQUAL OR EXCEED 100%

k. ☐ Oxidizer ☐ Pyrophoric ☐ Explosive ☐ Radioactive ☐ Carcinogen ☐ Infectious ☐ Shock Sensitive ☐ Water Reactive

l. Does the waste represented by this profile contain any of the carcinogens which require OSHA Notification? (list in Section B.1.)........ ☐ YES ☒ NO

m. Does the waste represented by this profile contain dioxins? (list in B.1.j)........ ☐ YES ☒ NO

n. Does the waste represented by this profile contain asbestos?........ ☐ YES ☒ NO
   If yes........ ☐ friable ☐ non-friable

o. Does the waste represented by this profile contain benzene........ ☐ YES ☒ NO
   If yes, concentration ppm
   Is the waste subject to benzene waste operations NESHAP?........ ☐ YES ☒ NO

p. Is the waste subject to RCRA Subpart CC controls........ ☐ YES ☒ NO
   If yes, volatile organic concentration

q. Does the waste contain any Class I or Class II ozone-depleting substance?........ ☐ YES ☒ NO

r. Does the waste contain debris? (list in Section B.1.j)........ ☒ YES ☐ NO

2. Quantity of Waste
   Estimated Annual Volume 8,750 ☐ Tons ☐ Yards ☐ Drums ☒ Other (specify) Kg

3. Shipping Information
   a. Packaging:
      ☒ Bulk Solid; Type/Size: Roll-off box (23-yard box) ☐ Bulk Liquid, Type/Size
      ☒ Drum; Type/Size: 55 gal or overpack drums ☐ Other:
   b. Shipping Frequency: Units Varies – 0-5 Per ☒ Month ☐ Quarter ☐ Year ☐ One Time ☐ Other
   c. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If no, skip d, e and f)........ ☒ YES ☐ NO

GENERATOR'S WASTE PROFILE SHEET
PLEASE PRINT IN INK OR TYPE

Reportable Quantity (lbs.; kgs.): 1 pound PCBs e. Hazard Class/ID#: UN2315
f. USDOT Shipping Name: Polychlorinated biphenyls, Solid Mixture, 9, UN2315, PG II
g. Personal Protective Equipment Requirements: ERG #171
h. Transporter/Transfer Station:

C. Generator's Certification (Please check appropriate responses, sign, and date below.)

1. Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to 2 ☐ YES ☒ NO
   a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D,F,K,P,U)
   b. If a characteristic hazardous waste, do underlying hazardous constituents B.1.J) (UHCs) apply? (if yes, list in Section ☐ YES ☒ NO
   c. Does this waste contain debris? (If yes, list size and type in Chemical Composition- B.1.) ☐ YES ☒ NO
2. Is this a state hazardous waste? ☒ YES ☐ NO
   Identify ALL state hazardous waste codes B007 – New York State
3. Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up? ☐ YES ☒ NO
   If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up for activity. For state mandated clean-up, provide relevant documentation.
4. Does the waste represented by this waste profile sheet contain radioactive material, or is disposal regulated by the Nuclear Regulatory Commission? ☐ YES ☒ NO
5. Does the waste represented by this waste profile sheet contain concentrations of Polychlorinated Biphenyls (PCBs) regulated by 40 CFR 761? (if yes, list in Chemical Composition - B.1.j) ☒ YES ☐ NO
   a. If yes, were the PCBs imported into the U.S.? ☐ YES ☒ NO
6. Do the waste profile sheet and all the attachments contain true and accurate descriptions of the waste material, and has all relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste been disclosed to the Contractor? ☒ YES ☐ NO
7. Will all changes which occur in the character of the waste be identified by the Generator and disclosed to the Contractor prior to providing the waste to the Contractor? ☒ YES NO

☒ Check here if a Certificate of Destruction or Disposal is required.

Any sample submitted is representative as defined in 40 CFR 261 - Appendix 1 or by using an equivalent method. I authorize WMI to obtain a sample from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as authorized agent of the generator and has confirmed the information contained in this Profile Sheet from information provided by the generator and additional information as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary permits and licenses for the waste that has been characterized and identified by this approved profile.

Certification Signature: Kimberly Dobosenski Title: Environmental Engineer
Name (Type or Print) Kimberly Dobosenski Company Name General Motors Corporation Date: 3/7/02

☐ Check if additional information is attached. Indicate the number of attached pages.

D. WMI Management's Decision FOR WMI USE ONLY

1. Management Method ☐ Landfill ☐ Non-hazardous Solidification ☐ Bioremediation ☐ Incineration ☐ Hazardous Stabilization ☐ Other (Specify)
2. Proposed Ultimate Management Facility:
3. Precautions, Special Handling Procedures, or Limitation on Approval
4. Waste Form: 5. Source 6. System Type

S... Waste Decision ☐ Approved ☐ Disapproved
S... ...erson's Signature: Date:
...on Approval Signature (Optional): Date:
...al Waste Approvals Person Signature Date:

SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Conestoga Rovers & Assoc., Inc — PAGE 1

Lot #: A2C130104 — GM-BEDFORD — Date Reported: 3/15/02

Project Number: 13968

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Client Sample ID: MW-X045Y258				
Sample #: 001 Date Sampled: 03/12/02 10:00 Date Received: 03/13/02 Matrix: WATER				
PCBs by SW-846 8082				In Review
Aroclor 1016	ND	0.20	ug/L	SW846 8082
Aroclor 1221	ND	0.20	ug/L	SW846 8082
Aroclor 1232	ND	0.40	ug/L	SW846 8082
Aroclor 1242	ND	0.20	ug/L	SW846 8082
Aroclor 1248	**0.35**	**0.20**	**ug/L**	**SW846 8082**
Aroclor 1254	ND	0.20	ug/L	SW846 8082
Aroclor 1260	ND	0.20	ug/L	SW846 8082

SEVERN TRENT LABORATORIES, INC.
PRELIMINARY DATA SUMMARY

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Conestoga Rovers & Assoc., Inc
GMPT BEDFORD
Project Number: 13968

Lot #: A2A310106

Date Reported: 2/14/02

Client Sample ID: S-013002-KMV-518
Sample #: 002 Date Sampled: 01/30/02 09:05 Date Received: 01/31/02 Matrix: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
PCBs by SW-846 8082				Reviewed ✓
Aroclor 1016	ND	3900	ug/kg	SW846 8082
Aroclor 1221	ND	3900	ug/kg	SW846 8082
Aroclor 1232	ND	3900	ug/kg	SW846 8082
Aroclor 1242	ND	3900	ug/kg	SW846 8082
Aroclor 1248	51000	3900	ug/kg	SW846 8082
Aroclor 1254	ND	3900	ug/kg	SW846 8082
Aroclor 1260	3100 J	3900	ug/kg	SW846 8082

Results and reporting limits have been adjusted for dry weight.
J Estimated result. Result is less than RL.

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Volatile Organics by GC/MS				Reviewed ✓
Acetone	ND	22	ug/kg	SW846 8260B
Benzene	ND	5.5	ug/kg	SW846 8260B
Bromodichloromethane	ND	5.5	ug/kg	SW846 8260B
Bromoform	ND	5.5	ug/kg	SW846 8260B
Bromomethane	ND	5.5	ug/kg	SW846 8260B
2-Butanone	ND	22	ug/kg	SW846 8260B
Carbon disulfide	ND	5.5	ug/kg	SW846 8260B
Carbon tetrachloride	ND	5.5	ug/kg	SW846 8260B
Chlorobenzene	ND	5.5	ug/kg	SW846 8260B
Chloroethane	ND	5.5	ug/kg	SW846 8260B
Chloroform	ND	5.5	ug/kg	SW846 8260B
Chloromethane	ND	11	ug/kg	SW846 8260B
Cyclohexane	ND	5.5	ug/kg	SW846 8260B
Dibromochloromethane	ND	5.5	ug/kg	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	11	ug/kg	SW846 8260B
1,2-Dibromoethane	ND	5.5	ug/kg	SW846 8260B
1,2-Dichlorobenzene	ND	5.5	ug/kg	SW846 8260B
1,3-Dichlorobenzene	ND	5.5	ug/kg	SW846 8260B
1,4-Dichlorobenzene	ND	5.5	ug/kg	SW846 8260B
Dichlorodifluoromethane	ND	5.5	ug/kg	SW846 8260B
1,1-Dichloroethane	ND	5.5	ug/kg	SW846 8260B
1,2-Dichloroethane	ND	5.5	ug/kg	SW846 8260B

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SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Conestoga Rovers & Assoc., Inc
GMPT BEDFORD
Project Number: 13968

Lot #: A2A310106

Date Reported: 2/14/02

Client Sample ID: S-013002-KMV-518
Sample #: 002 Date Sampled: 01/30/02 09:05 Date Received: 01/31/02 Matrix: SOLID

Reviewed

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Volatile Organics by GC/MS				
1,1-Dichloroethene	ND	5.5	ug/kg	SW846 8260B
cis-1,2-Dichloroethene	ND	2.7	ug/kg	SW846 8260B
trans-1,2-Dichloroethene	ND	2.7	ug/kg	SW846 8260B
1,2-Dichloropropane	ND	5.5	ug/kg	SW846 8260B
cis-1,3-Dichloropropene	ND	5.5	ug/kg	SW846 8260B
trans-1,3-Dichloropropene	ND	5.5	ug/kg	SW846 8260B
Ethylbenzene	ND	5.5	ug/kg	SW846 8260B
2-Hexanone	ND	22	ug/kg	SW846 8260B
Isopropylbenzene	ND	5.5	ug/kg	SW846 8260B
Methyl acetate	ND	11	ug/kg	SW846 8260B
Methylene chloride	ND	5.5	ug/kg	SW846 8260B
Methylcyclohexane	ND	11	ug/kg	SW846 8260B
4-Methyl-2-pentanone	ND	22	ug/kg	SW846 8260B
Methyl tert-butyl ether	ND	22	ug/kg	SW846 8260B
Styrene	ND	5.5	ug/kg	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	5.5	ug/kg	SW846 8260B
Tetrachloroethene	ND	5.5	ug/kg	SW846 8260B
Toluene	ND	5.5	ug/kg	SW846 8260B
1,2,4-Trichloro-benzene	ND	5.5	ug/kg	SW846 8260B
1,1,1-Trichloroethane	ND	5.5	ug/kg	SW846 8260B
1,1,2-Trichloroethane	ND	5.5	ug/kg	SW846 8260B
Trichloroethene	ND	5.5	ug/kg	SW846 8260B
Trichlorofluoromethane	ND	5.5	ug/kg	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.5	ug/kg	SW846 8260B
Vinyl chloride	ND	5.5	ug/kg	SW846 8260B
Xylenes (total)	ND	5.5	ug/kg	SW846 8260B

Results and reporting limits have been adjusted for dry weight.

Reviewed ✓

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Semivolatile Organic Compounds by GC/MS				
Acenaphthene	ND	390	ug/kg	SW846 8270C
Acenaphthylene	ND	390	ug/kg	SW846 8270C
Acetophenone	ND	390	ug/kg	SW846 8270C
Anthracene	ND	390	ug/kg	SW846 8270C

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SEVERN TRENT LABORATORIES, INC.
PRELIMINARY DATA SUMMARY

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Conestoga Rovers & Assoc., Inc
GMPT BEDFORD
Project Number: 13968

Lot #: A2A310106

Date Reported: 2/14/02

Client Sample ID: S-013002-KMV-518
Sample #: 002 Date Sampled: 01/30/02 09:05 Date Received: 01/31/02 Matrix: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Semivolatile Organic Compounds by GC/MS					Reviewed
Atrazine	ND	390	ug/kg	SW846 8270C	
Benzo(a)anthracene	ND	390	ug/kg	SW846 8270C	
Benzo(a)pyrene	ND	390	ug/kg	SW846 8270C	
Benzo(b)fluoranthene	ND	390	ug/kg	SW846 8270C	
Benzo(ghi)perylene	ND	390	ug/kg	SW846 8270C	
Benzo(k)fluoranthene	ND	390	ug/kg	SW846 8270C	
Benzaldehyde	ND	390	ug/kg	SW846 8270C	
1,1'-Biphenyl	ND	390	ug/kg	SW846 8270C	
bis(2-Chloroethoxy) methane	ND	390	ug/kg	SW846 8270C	
bis(2-Chloroethyl)-ether	ND	390	ug/kg	SW846 8270C	
bis(2-Ethylhexyl) phthalate	72 J	390	ug/kg	SW846 8270C	
4-Bromophenyl phenyl ether	ND	390	ug/kg	SW846 8270C	
Butyl benzyl phthalate	ND	390	ug/kg	SW846 8270C	
Caprolactam	ND	390	ug/kg	SW846 8270C	
Carbazole	ND	390	ug/kg	SW846 8270C	
4-Chloroaniline	ND	390	ug/kg	SW846 8270C	
4-Chloro-3-methylphenol	ND	390	ug/kg	SW846 8270C	
2-Chloronaphthalene	ND	390	ug/kg	SW846 8270C	
2-Chlorophenol	ND	390	ug/kg	SW846 8270C	
4-Chlorophenyl phenyl ether	ND	390	ug/kg	SW846 8270C	
Chrysene	ND	390	ug/kg	SW846 8270C	
Dibenz(a,h)anthracene	ND	390	ug/kg	SW846 8270C	
Dibenzofuran	ND	390	ug/kg	SW846 8270C	
3,3'-Dichlorobenzidine	ND	1900	ug/kg	SW846 8270C	
2,4-Dichlorophenol	ND	390	ug/kg	SW846 8270C	
Diethyl phthalate	ND	390	ug/kg	SW846 8270C	
2,4-Dimethylphenol	ND	390	ug/kg	SW846 8270C	
Dimethyl phthalate	ND	390	ug/kg	SW846 8270C	
Di-n-butyl phthalate	ND	390	ug/kg	SW846 8270C	
4,6-Dinitro-2-methylphenol	ND	1900	ug/kg	SW846 8270C	
2,4-Dinitrophenol	ND	1900	ug/kg	SW846 8270C	

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SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Conestoga Rovers & Assoc., Inc
GMPT BEDFORD
Project Number: 13968

Lot #: A2A310106

Date Reported: 2/14/02

Client Sample ID: S-013002-KMV-518
Sample #: 002 Date Sampled: 01/30/02 09:05 Date Received: 01/31/02 Matrix: SOLID

Reviewed

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Semivolatile Organic Compounds by GC/MS				
2,4-Dinitrotoluene	ND	390	ug/kg	SW846 8270C
2,6-Dinitrotoluene	ND	390	ug/kg	SW846 8270C
Di-n-octyl phthalate	ND	390	ug/kg	SW846 8270C
Fluoranthene	ND	390	ug/kg	SW846 8270C
Fluorene	ND	390	ug/kg	SW846 8270C
Hexachlorobenzene	ND	390	ug/kg	SW846 8270C
Hexachlorobutadiene	ND	390	ug/kg	SW846 8270C
Hexachlorocyclopenta-diene	ND	1900	ug/kg	SW846 8270C
Hexachloroethane	ND	390	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	390	ug/kg	SW846 8270C
Isophorone	ND	390	ug/kg	SW846 8270C
2-Methylnaphthalene	ND	390	ug/kg	SW846 8270C
2-Methylphenol	ND	390	ug/kg	SW846 8270C
4-Methylphenol	ND	390	ug/kg	SW846 8270C
Naphthalene	ND	390	ug/kg	SW846 8270C
2-Nitroaniline	ND	1900	ug/kg	SW846 8270C
3-Nitroaniline	ND	1900	ug/kg	SW846 8270C
4-Nitroaniline	ND	1900	ug/kg	SW846 8270C
Nitrobenzene	ND	390	ug/kg	SW846 8270C
2-Nitrophenol	ND	390	ug/kg	SW846 8270C
4-Nitrophenol	ND	1900	ug/kg	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	390	ug/kg	SW846 8270C
N-Nitrosodiphenylamine	ND	390	ug/kg	SW846 8270C
2,2'-oxybis(1-Chloropropane)	ND	390	ug/kg	SW846 8270C
Pentachlorophenol	ND	390	ug/kg	SW846 8270C
Phenanthrene	ND	390	ug/kg	SW846 8270C
Phenol	ND	390	ug/kg	SW846 8270C
Pyrene	ND	390	ug/kg	SW846 8270C
2,4,5-Trichloro-phenol	ND	390	ug/kg	SW846 8270C
2,4,6-Trichloro-phenol	ND	390	ug/kg	SW846 8270C

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

(Continued on next page)

SEVERN TRENT LABORATORIES, INC.
PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Conestoga Rovers & Assoc., Inc
GMPT BEDFORD
Project Number: 13968

Lot #: A2A310106

Date Reported: 2/14/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD

Client Sample ID: S-013002-KMV-518
Sample #: 002 Date Sampled: 01/30/02 09:05 Date Received: 01/31/02 Matrix: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Inorganic Analysis				Reviewed ✓
Amenable Cyanide	ND	0.60	mg/kg	SW846 9012
Cyanide, Total	ND	0.60	mg/kg	SW846 9012A
Total Organic Carbon	4000	120	mg/kg	MSA WALKLEY-BLACK
Total Residue as Percent Solids	83.7	10.0	%	MCAWW 160.3 MOD

Results and reporting limits have been adjusted for dry weight.

Client Sample ID: EB-013002-KMV-001 ✓
Sample #: 003 Date Sampled: 01/30/02 14:00 Date Received: 01/31/02 Matrix: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Trace Inductively Coupled Plasma (ICP) Metals				Reviewed ✓
Arsenic	ND	0.010	mg/L	SW846 6010B
Lead	ND	0.0030	mg/L	SW846 6010B
Selenium	ND	0.0050	mg/L	SW846 6010B
Thallium	0.0063 B	0.010	mg/L	SW846 6010B
Inductively Coupled Plasma (ICP) Metals				Reviewed ✓
Silver	ND	0.010	mg/L	SW846 6010B
Aluminum	0.084 B	0.20	mg/L	SW846 6010B
Barium	ND	0.20	mg/L	SW846 6010B
Beryllium	ND	0.0050	mg/L	SW846 6010B
Cadmium	ND	0.0050	mg/L	SW846 6010B
Cobalt	ND	0.050	mg/L	SW846 6010B
Chromium	ND	0.010	mg/L	SW846 6010B
Copper	ND	0.025	mg/L	SW846 6010B
Iron	ND	0.10	mg/L	SW846 6010B
Manganese	0.0011 B	0.015	mg/L	SW846 6010B
Nickel	ND	0.040	mg/L	SW846 6010B
Antimony	ND	0.060	mg/L	SW846 6010B
Vanadium	ND	0.050	mg/L	SW846 6010B
Zinc	0.019 B	0.020	mg/L	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)				Reviewed ✓
Mercury	ND	0.00020	mg/L	SW846 7470A

(Continued on next page)

ate 3/08/02 WASTE MANAGEMENT DECISION Page . . : . 1
ime 9:01:03

Location of Original MIDWEST REGIONAL LAB

Tracking #: 4567449 Priority : MC
Profile # : GMM048 Date Received: 03/07/02
Effective Date: 03/07/02
Generator : GENERAL MOTORS CORP
Waste Category Code:
Description : DRILLING MUD WITH PCBS

enerator and Facility Information

Decision Site CWM MODEL CITY FACILIT
Proposed Management Facility CWM MODEL CITY FACILIT

*** This Decision is APPROVED

I. Decision to Deny Approval for Management of Waste

Reason for Denying Approval

inal Approval ______________ Name (print) ______________ Date ________

II. Decision to Approve
Approved

a) Approved Management Methods
Subtitle C Landfill.

b) Precaution Conditions or Limitations on Approval

(1) Site Conditions
RMU 1(ANY) MC:N,X If free liquid present, stabilize non-reg, then landfill.

(2) Contracting Conditions

(3) Site and Contracting Conditions
- Waste profile sheet numbers must appear on manifests/shipping papers and drums.
- No demurrage will be paid by CWM Chem. Services Inc. for delays at Model City for on-site acceptance procedures when generator/customer arranges their own transportation. Customers who require Certificates of Disposal should place the phrase "Certificate of Disposal Required" in Section 15 of the manifest.
- Drummed waste must be properly marked with the profile number and bear only the appropriate labeling under RCRA and/or DOT provisions.
- SLF restrictions require all drummed solids for landfill to be full and have no void space. Price and disposal is contingent upon the generator's waste being contained in open top drums.
- Any sorbents used to absorb free liquids or eliminate void space in drums must be non-biodegradable.
- Sorbents present in bulk shipments must be non-biodegradable and must not have been used as a solidification agent to remove free-standing liquid in the load.
- If material is shipped as non-hazardous, appropriate non-hazardous labels must be on drums, per Model City permit requirements.

c) Analytical Requirements for Each Load
Wap tests: Misc. (non-haz soil with analysis provided)
generator will be running analysis on each

.te 3/08/02 WASTE MANAGEMENT DECISION Page . . : 2

.me 9:01:03

Location of Original MIDWEST REGIONAL LAB

:nerator and Facility Information

Tracking #: 4567449 Priority : MC
Profile # : GMK048 Date Received: 03/07/02
Effective Date: 03/07/02
Generator : GENERAL MOTORS CORP
Waste Category Code:
Description : DRILLING MUD WITH PCBS

Decision Site CWM MODEL CITY FACILIT
Proposed Management Facility CWM MODEL CITY FACILIT

*** This Decision is APPROVED

:I. Continuation.....

container to insure PCBs <50 ppm. A spreadsheet of the results will be provided prior to shipment

Per Waste Analysis Plan

d) Decision Expiration Date 03/06/04

r. Final Decision

State any Additional Precautions, Conditions, or Limitations

.nal Approval ____________________ Name (print) JILL KNICKERBOCKER Date 03/07/02

WASTE MANAGEMENT, INC.

GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Profile Number: GMM 048

Service Agreement on File? ☒ YES ☐ NO

Renewal Date

☐ Hazardous ☒ Non-Hazardous ☐ TSCA

A. Waste Generator Information

1. Generator Name: General Motors Corporation – Bedford Facility
2. SIC Code: 3365 and 3363
3. Facility Street Address: 105 GM Drive
4. Phone: (812) 279-7404
5. Facility City: Bedford
6. State/Province: Indiana
7. Zip/Postal Code: 47421
8. Generator USEPA/FED ID #: IND006036099
9. County: Lawrence
10. State/Province ID#:
11. Customer Name: Waste Management National Accounts
12. Customer Phone:: (866) 469-2783
13. Customer Contact: Kelly Morrissey
14. Customer Fax: (586) 573-3636
15. Billing Address: Waste Management - National Accounts, 12200 E. 13 Mile Rd., Warren, MI 48089 ☐ Same as above

B. Waste Stream Information

1. DESCRIPTION
   a. Name of Waste: Drilling Mud/Soil (<50 ppm PCBs)
   b. Processing Generating Waste: Site investigation and remediation activities.

c. Color	d. Strong odor (describe)	e. Physical state @ 70°F	f. Layers	g. Free liquid range / h. PH: Range
Grey/brown		☐ Solid ☐ Liquid ☐ Gas ☒ Sludge ☐ Other	☐ Single Layer ☒ Multi-Layer	0 % to 75 / to 10

i. Liquid Flash Point: ☐ <73°F ☐ 73-99°F ☐ 100-139°F ☐ 140-199°F ☐ ≥ 200°F ☒ Not Applicable

j. Chemical Composition (List all constituents [including halogenated organics, debris, and UHC's] present in any concentration and submit representative analysis):

Constituents	Concentration Range	Constituents	Concentration Range
Inerts (drilling mud/soil/concrete debris)	25-100%		
Other Debris (Plastic liners/PPE)	0-75%		
Polychlorinated biphenyls in solid	<50 ppm		
Polychlorinated biphenyls in liquid	<50 ppm		

TOTAL COMPOSITION MUST EQUAL OR EXCEED 100%

k. ☐ Oxidizer ☐ Pyrophoric ☐ Explosive ☐ Radioactive ☐ Carcinogen ☐ Infectious ☐ Shock Sensitive ☐ Water Reactive

l. Does the waste represented by this profile contain any of the carcinogens which require OSHA Notification? (list in Section B.1.)........ ☐ YES ☒ NO

m. Does the waste represented by this profile contain dioxins? (list in B.1.j)........ ☐ YES ☒ NO

n. Does the waste represented by this profile contain asbestos?........ ☐ YES ☒ NO
   If yes........ ☐ friable ☐ non-friable

o. Does the waste represented by this profile contain benzene........ ☐ YES ☒ NO
   If yes, concentration ppm
   Is the waste subject to benzene waste operations NESHAP?........ ☐ YES ☒ NO

p. Is the waste subject to RCRA Subpart CC controls........ ☐ YES ☒ NO
   If yes, volatile organic concentration

q. Does the waste contain any Class I or Class II ozone-depleting substance?........ ☐ YES ☒ NO

r. Does the waste contain debris? (list in Section B.1.j)........ ☒ YES ☐ NO

2. Quantity of Waste
   Estimated Annual Volume 6,750 ☐ Tons ☐ Yards ☐ Drums ☒ Other (specify) Kg

3. Shipping Information
   a. Packaging:
      ☒ Bulk Solid; Type/Size: Roll-off box (23-yard box) ☐ Bulk Liquid, Type/Size
      ☒ Drum; Type/Size: 55 gal drums ☐ Other:
   b. Shipping Frequency: Units Varies – 0-5 Per: ☒ Month ☐ Quarter ☐ Year ☐ One Time ☐ Other
   c. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If no, skip d, e and f)........ ☐ YES ☒ NO

WM
WASTE MANAGEMENT, INC.

GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Service Agreement on File? ☒ YES ☐ NO

Profile Number: GMM 048

Renewal Date

☐ Hazardous ☒ Non-Hazardous ☐ TSCA

A. Waste Generator Information

1. Generator Name: General Motors Corporation – Bedford Facility
2. SIC Code: 3365 and 3363
3. Facility Street Address: 105 GM Drive
4. Phone: (812) 279-7404
5. Facility City: Bedford
6. State/Province: Indiana
7. Zip/Postal Code: 47421
8. Generator USEPA/FED ID #: IND006036099
9. County: Lawrence
10. State/Province ID#:
11. Customer Name: Waste Management National Accounts
12. Customer Phone: (866) 469-2783
13. Customer Contact: Kelly Morrissey
14. Customer Fax: (586) 573-3636
15. Billing Address: Waste Management - National Accounts, 12200 E. 13 Mile Rd., Warren, MI 48088 ☐ Same as above

B. Waste Stream Information

1. DESCRIPTION
   a. Name of Waste: Drilling Mud/Soil (<50 ppm PCBs)
   b. Processing Generating Waste: Site investigation and remediation activities.

c. Color	d. Strong odor	e. Physical state @ 70°F	f. Layers	g. Free liquid range
Grey/brown	(describe)	☐ Solid ☐ Liquid ☐ Gas ☒ Sludge ☐ Other	☐ Single Layer ☒ Multi-Layer	0 % to 75
				h. PH: Range to 10

Liquid Flash Point: ☐ <73°F ☐ 73-99°F ☐ 100-139°F ☐ 140-199°F ☐ ≥ 200°F ☒ Not Applicable

Chemical Composition (List all constituents [including halogenated organics, debris, and UHC's] present in any concentration and submit representative analysis):

Constituents	Concentration Range	Constituents	Concentration Range
Inerts (drilling mud/soil/concrete debris)	25-100%		
Other Debris (Plastic liners/PPE)	0-75%		
Polychlorinated biphenyls in solid	<50 ppm		
Polychlorinated biphenyls in liquid	<50 ppm		

TOTAL COMPOSITION MUST EQUAL OR EXCEED 100%

k. ☐ Oxidizer ☐ Pyrophoric ☐ Explosive ☐ Radioactive ☐ Carcinogen ☐ Infectious ☐ Shock Sensitive ☐ Water Reactive

l. Does the waste represented by this profile contain any of the carcinogens which require OSHA Notification? (list in Section B.1.) ☐ YES ☒ NO

m. Does the waste represented by this profile contain dioxins? (list in B.1.j) ☐ YES ☒ NO

n. Does the waste represented by this profile contain asbestos? ☐ YES ☒ NO
   If yes ☐ friable ☐ non-friable

o. Does the waste represented by this profile contain benzene ☐ YES ☒ NO
   If yes, concentration ppm
   Is the waste subject to benzene waste operations NESHAP? ☐ YES ☒ NO

p. Is the waste subject to RCRA Subpart CC controls ☐ YES ☒ NO
   If yes, volatile organic concentration

q. Does the waste contain any Class I or Class II ozone-depleting substance? ☐ YES ☒ NO

r. Does the waste contain debris? (list in Section B.1.j) ☒ YES ☐ NO

2. Quantity of Waste
   Estimated Annual Volume 8,750 ☐ Tons ☐ Yards ☐ Drums ☒ Other (specify) Kg

3. Shipping Information
   a. Packaging:
      ☒ Bulk Solid; Type/Size: Roll-off box (23-yard box) ☐ Bulk Liquid, Type/Size
      ☒ Drum; Type/Size: 55 gal drums ☐ Other:
   b. Shipping Frequency: Units Varies – 0-5 Per: ☒ Month ☐ Quarter ☐ Year ☐ One Time ☐ Other
   c. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If no, skip d, e and f) ☐ YES ☒ NO

SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Conestoga Rovers & Assoc., Inc
GM-BEDFORD
Project Number: 13968

Date Reported: 2/08/02

Lot #: A2A260105

Client Sample ID: S-012502-KMV-514
Sample #: 001 Date Sampled: 01/25/02 10:15 Date Received: 01/26/02 Matrix: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Trace Inductively Coupled Plasma (ICP) Metals					Reviewed
Arsenic	7.3	1.2	mg/kg	SW846 6010B	
Lead	28.2	0.37	mg/kg	SW846 6010B	
Selenium	0.66	0.62	mg/kg	SW846 6010B	
Thallium	0.77 B	1.2	mg/kg	SW846 6010B	
Inductively Coupled Plasma (ICP) Metals					Reviewed
Silver	ND	1.2	mg/kg	SW846 6010B	
Aluminum	9280	24.9	mg/kg	SW846 6010B	
Barium	77.7	24.9	mg/kg	SW846 6010B	
Beryllium	0.64	0.62	mg/kg	SW846 6010B	
Cadmium	0.10 B	0.62	mg/kg	SW846 6010B	
Cobalt	17.2	6.2	mg/kg	SW846 6010B	
Chromium	21.9	1.2	mg/kg	SW846 6010B	
Copper	27.5	3.1	mg/kg	SW846 6010B	
Iron	16100	12.5	mg/kg	SW846 6010B	
Manganese	457	1.9	mg/kg	SW846 6010B	
Nickel	43.4	5.0	mg/kg	SW846 6010B	
Antimony	ND	7.5	mg/kg	SW846 6010B	
Vanadium	24.9	6.2	mg/kg	SW846 6010B	
Zinc	45.7	2.5	mg/kg	SW846 6010B	
Mercury in Solid Waste (Manual Cold-Vapor)					Reviewed
Mercury	0.059 B	0.12	mg/kg	SW846 7471A	

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
PCBs by SW-846 8082					Reviewed
Aroclor 1016	ND	4100	ug/kg	SW846 8082	
Aroclor 1221	ND	4100	ug/kg	SW846 8082	
Aroclor 1232	ND	4100	ug/kg	SW846 8082	
Aroclor 1242	ND	4100	ug/kg	SW846 8082	
Aroclor 1248	14000	4100	ug/kg	SW846 8082	
Aroclor 1254	ND	4100	ug/kg	SW846 8082	
Aroclor 1260	1100 J	4100	ug/kg	SW846 8082	

(Continued on next page)

SEVERN TRENT LABORATORIES, INC.
PRELIMINARY DATA SUMMARY

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Conestoga Rovers & Assoc., Inc
GM-BEDFORD
Project Number: 13968

Date Reported: 2/08/02

Lot #: A2A260105

Client Sample ID: S-012502-KMV-514
Sample #: 001 Date Sampled: 01/25/02 10:15 Date Received: 01/26/02 Matrix: SOLID

Reviewed

PCBs by SW-846 8082

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Reviewed

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Volatile Organics by GC/MS				
Acetone	ND	22	ug/kg	SW846 8260B
Benzene	ND	5.5	ug/kg	SW846 8260B
Bromodichloromethane	ND	5.5	ug/kg	SW846 8260B
Bromoform	ND	5.5	ug/kg	SW846 8260B
Bromomethane	ND	5.5	ug/kg	SW846 8260B
2-Butanone	ND	22	ug/kg	SW846 8260B
Carbon disulfide	ND	5.5	ug/kg	SW846 8260B
Carbon tetrachloride	ND	5.5	ug/kg	SW846 8260B
Chlorobenzene	ND	5.5	ug/kg	SW846 8260B
Chloroethane	ND	5.5	ug/kg	SW846 8260B
Chloroform	ND	5.5	ug/kg	SW846 8260B
Chloromethane	ND	5.5	ug/kg	SW846 8260B
Cyclohexane	ND	11	ug/kg	SW846 8260B
Dibromochloromethane	ND	5.5	ug/kg	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	11	ug/kg	SW846 8260B
1,2-Dibromoethane	ND	5.5	ug/kg	SW846 8260B
1,2-Dichlorobenzene	ND	5.5	ug/kg	SW846 8260B
1,3-Dichlorobenzene	ND	5.5	ug/kg	SW846 8260B
1,4-Dichlorobenzene	ND	5.5	ug/kg	SW846 8260B
Dichlorodifluoromethane	ND	5.5	ug/kg	SW846 8260B
1,1-Dichloroethane	ND	5.5	ug/kg	SW846 8260B
1,2-Dichloroethane	ND	5.5	ug/kg	SW846 8260B
1,1-Dichloroethene	ND	5.5	ug/kg	SW846 8260B
cis-1,2-Dichloroethene	ND	2.8	ug/kg	SW846 8260B
trans-1,2-Dichloroethene	ND	2.8	ug/kg	SW846 8260B
1,2-Dichloropropane	ND	5.5	ug/kg	SW846 8260B
cis-1,3-Dichloropropene	ND	5.5	ug/kg	SW846 8260B
trans-1,3-Dichloropropene	ND	5.5	ug/kg	SW846 8260B
Ethylbenzene	ND	5.5	ug/kg	SW846 8260B
2-Hexanone	ND	22	ug/kg	SW846 8260B

(Continued on next page)

SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Conestoga Rovers & Assoc., Inc
GM-BEDFORD
Project Number: 13968

Lot #: A2A260105

Date Reported: 2/08/02

Client Sample ID: S-012502-KMV-514
Sample #: 001 Date Sampled: 01/25/02 10:15 Date Received: 01/26/02 Matrix: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Volatile Organics by GC/MS					Reviewed
Isopropylbenzene	ND	5.5	ug/kg	SW846 8260B	
Methyl acetate	**3.3 J**	**11**	**ug/kg**	**SW846 8260B**	
Methylene chloride	**4.3 J**	**5.5**	**ug/kg**	**SW846 8260B**	
Methylcyclohexane	ND	11	ug/kg	SW846 8260B	
4-Methyl-2-pentanone	ND	22	ug/kg	SW846 8260B	
Methyl tert-butyl ether	ND	22	ug/kg	SW846 8260B	
Styrene	ND	5.5	ug/kg	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	5.5	ug/kg	SW846 8260B	
Tetrachloroethene	ND	5.5	ug/kg	SW846 8260B	
Toluene	ND	5.5	ug/kg	SW846 8260B	
1,2,4-Trichloro-benzene	ND	5.5	ug/kg	SW846 8260B	
1,1,1-Trichloroethane	ND	5.5	ug/kg	SW846 8260B	
1,1,2-Trichloroethane	ND	5.5	ug/kg	SW846 8260B	
Trichloroethene	ND	5.5	ug/kg	SW846 8260B	
Trichlorofluoromethane	ND	5.5	ug/kg	SW846 8260B	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.5	ug/kg	SW846 8260B	
Vinyl chloride	ND	5.5	ug/kg	SW846 8260B	
Xylenes (total)	ND	5.5	ug/kg	SW846 8260B	

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Semivolatile Organic Compounds by GC/MS					Reviewed
Acenaphthene	ND	410	ug/kg	SW846 8270C	
Acenaphthylene	ND	410	ug/kg	SW846 8270C	
Acetophenone	ND	410	ug/kg	SW846 8270C	
Anthracene	ND	410	ug/kg	SW846 8270C	
Atrazine	ND	410	ug/kg	SW846 8270C	
Benzo(a)anthracene	ND	410	ug/kg	SW846 8270C	
Benzo(a)pyrene	ND	410	ug/kg	SW846 8270C	
Benzo(b)fluoranthene	**74 J**	**410**	**ug/kg**	**SW846 8270C**	
Benzo(ghi)perylene	ND	410	ug/kg	SW846 8270C	
Benzo(k)fluoranthene	ND	410	ug/kg	SW846 8270C	
Benzaldehyde	ND	410	ug/kg	SW846 8270C	

(Continued on next page)

SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Conestoga Rovers & Assoc., Inc
GM-BEDFORD
Project Number: 13968

Lot #: A2A260105

Date Reported: 2/08/02

Client Sample ID: S-012502-KMV-514
Sample #: 001 Date Sampled: 01/25/02 10:15 Date Received: 01/26/02 Matrix: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Semivolatile Organic Compounds by GC/MS					Reviewed
1,1'-Biphenyl	ND	410	ug/kg	SW846 8270C	
bis(2-Chloroethoxy) methane	ND	410	ug/kg	SW846 8270C	
bis(2-Chloroethyl)-ether	ND	410	ug/kg	SW846 8270C	
bis(2-Ethylhexyl) phthalate	ND	410	ug/kg	SW846 8270C	
4-Bromophenyl phenyl ether	ND	410	ug/kg	SW846 8270C	
Butyl benzyl phthalate	ND	410	ug/kg	SW846 8270C	
Caprolactam	ND	410	ug/kg	SW846 8270C	
Carbazole	ND	410	ug/kg	SW846 8270C	
4-Chloroaniline	ND	410	ug/kg	SW846 8270C	
4-Chloro-3-methylphenol	ND	410	ug/kg	SW846 8270C	
2-Chloronaphthalene	ND	410	ug/kg	SW846 8270C	
2-Chlorophenol	ND	410	ug/kg	SW846 8270C	
4-Chlorophenyl phenyl ether	ND	410	ug/kg	SW846 8270C	
Chrysene	**65 J**	**410**	**ug/kg**	**SW846 8270C**	
Dibenz(a,h)anthracene	ND	410	ug/kg	SW846 8270C	
Dibenzofuran	ND	410	ug/kg	SW846 8270C	
3,3'-Dichlorobenzidine	ND	2000	ug/kg	SW846 8270C	
2,4-Dichlorophenol	ND	410	ug/kg	SW846 8270C	
Diethyl phthalate	ND	410	ug/kg	SW846 8270C	
2,4-Dimethylphenol	ND	410	ug/kg	SW846 8270C	
Dimethyl phthalate	ND	410	ug/kg	SW846 8270C	
Di-n-butyl phthalate	ND	410	ug/kg	SW846 8270C	
4,6-Dinitro-2-methylphenol	ND	2000	ug/kg	SW846 8270C	
2,4-Dinitrophenol	ND	2000	ug/kg	SW846 8270C	
2,4-Dinitrotoluene	ND	410	ug/kg	SW846 8270C	
2,6-Dinitrotoluene	ND	410	ug/kg	SW846 8270C	
Di-n-octyl phthalate	ND	410	ug/kg	SW846 8270C	
Fluoranthene	**140 J**	**410**	**ug/kg**	**SW846 8270C**	
Fluorene	ND	410	ug/kg	SW846 8270C	
Hexachlorobenzene	ND	410	ug/kg	SW846 8270C	
Hexachlorobutadiene	ND	410	ug/kg	SW846 8270C	

(Continued on next page)

SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Lot #: A2A260105

Conestoga Rovers & Assoc., Inc
GM-BEDFORD
Project Number: 13968

Date Reported: 2/08/02

Client Sample ID: S-012502-KMV-514
Sample #: 001 Date Sampled: 01/25/02 10:15 Date Received: 01/26/02 Matrix: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Semivolatile Organic Compounds by GC/MS					Reviewed
Hexachlorocyclopenta-diene	ND	2000	ug/kg	SW846 8270C	
Hexachloroethane	ND	410	ug/kg	SW846 8270C	
Indeno(1,2,3-cd)pyrene	ND	410	ug/kg	SW846 8270C	
Isophorone	ND	410	ug/kg	SW846 8270C	
2-Methylnaphthalene	ND	410	ug/kg	SW846 8270C	
2-Methylphenol	ND	410	ug/kg	SW846 8270C	
4-Methylphenol	ND	410	ug/kg	SW846 8270C	
Naphthalene	ND	410	ug/kg	SW846 8270C	
2-Nitroaniline	ND	2000	ug/kg	SW846 8270C	
3-Nitroaniline	ND	2000	ug/kg	SW846 8270C	
4-Nitroaniline	ND	2000	ug/kg	SW846 8270C	
Nitrobenzene	ND	410	ug/kg	SW846 8270C	
2-Nitrophenol	ND	410	ug/kg	SW846 8270C	
4-Nitrophenol	ND	2000	ug/kg	SW846 8270C	
N-Nitrosodi-n-propyl-amine	ND	410	ug/kg	SW846 8270C	
N-Nitrosodiphenylamine	ND	410	ug/kg	SW846 8270C	
2,2'-oxybis(1-Chloropropane)	ND	410	ug/kg	SW846 8270C	
Pentachlorophenol	ND	410	ug/kg	SW846 8270C	
Phenanthrene	110 J	410	ug/kg	SW846 8270C	
Phenol	ND	410	ug/kg	SW846 8270C	
Pyrene	100 J	410	ug/kg	SW846 8270C	
2,4,5-Trichloro-phenol	ND	410	ug/kg	SW846 8270C	
2,4,6-Trichloro-phenol	ND	410	ug/kg	SW846 8270C	

Results and reporting limits have been adjusted for dry weight.
J Estimated result. Result is less than RL.

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Inorganic Analysis					Reviewed
Amenable Cyanide	ND	0.62	mg/kg	SW846 9012	
Cyanide, Total	ND	0.62	mg/kg	SW846 9012A	
Total Organic Carbon	8000	620	mg/kg	MSA WALKLEY-BLACK	
Total Residue as Percent Solids	80.2	10.0	%	MCAWW 160.3 MOD	

(Continued on next page)

SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Lot #: A2A260105

Conestoga Rovers & Assoc., Inc
GM-BEDFORD
Project Number: 13968

Date Reported: 2/08/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	

Client Sample ID: S-012502-KMV-514
Sample #: 001 Date Sampled: 01/25/02 10:15 Date Received: 01/26/02 Matrix: SOLID

Total Residue as Percent Solids					Reviewed

Results and reporting limits have been adjusted for dry weight.

Client Sample ID: S-012502-KMV-515
Sample #: 002 Date Sampled: 01/25/02 10:20 Date Received: 01/26/02 Matrix: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Trace Inductively Coupled Plasma (ICP) Metals					Reviewed
Arsenic	10.4	1.3	mg/kg	SW846 6010B	
Lead	22.4	0.38	mg/kg	SW846 6010B	
Selenium	1.3	0.64	mg/kg	SW846 6010B	
Thallium	ND	1.3	mg/kg	SW846 6010B	
Inductively Coupled Plasma (ICP) Metals					Reviewed
Silver	ND	1.3	mg/kg	SW846 6010B	
Aluminum	13000	25.5	mg/kg	SW846 6010B	
Barium	77.6	25.5	mg/kg	SW846 6010B	
Beryllium	0.64	0.64	mg/kg	SW846 6010B	
Cadmium	0.084 B	0.64	mg/kg	SW846 6010B	
Cobalt	11.6	6.4	mg/kg	SW846 6010B	
Chromium	21.6	1.3	mg/kg	SW846 6010B	
Copper	42.1	3.2	mg/kg	SW846 6010B	
Iron	24200	12.7	mg/kg	SW846 6010B	
Manganese	325	1.9	mg/kg	SW846 6010B	
Nickel	23.2	5.1	mg/kg	SW846 6010B	
Antimony	ND	7.6	mg/kg	SW846 6010B	
Vanadium	33.0	6.4	mg/kg	SW846 6010B	
Zinc	66.6	2.5	mg/kg	SW846 6010B	
Mercury in Solid Waste (Manual Cold-Vapor)					Reviewed
Mercury	0.076 B	0.13	mg/kg	SW846 7471A	

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

(Continued on next page)

SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Conestoga Rovers & Assoc., Inc
GM-BEDFORD
Project Number: 13968

Lot #: A2A260105

Date Reported: 2/08/02

Client Sample ID: S-012502-KMV-515
Sample #: 002 Date Sampled: 01/25/02 10:20 Date Received: 01/26/02 Matrix: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
PCBs by SW-846 8082					Reviewed
Aroclor 1016	ND	4200	ug/kg	SW846 8082	
Aroclor 1221	ND	4200	ug/kg	SW846 8082	
Aroclor 1232	ND	4200	ug/kg	SW846 8082	
Aroclor 1242	ND	4200	ug/kg	SW846 8082	
Aroclor 1248	12000	4200	ug/kg	SW846 8082	
Aroclor 1254	ND	4200	ug/kg	SW846 8082	
Aroclor 1260	ND	4200	ug/kg	SW846 8082	

Results and reporting limits have been adjusted for dry weight.

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Volatile Organics by GC/MS					Reviewed
Acetone	ND	22	ug/kg	SW846 8260B	
Benzene	ND	5.4	ug/kg	SW846 8260B	
Bromodichloromethane	ND	5.4	ug/kg	SW846 8260B	
Bromoform	ND	5.4	ug/kg	SW846 8260B	
Bromomethane	ND	5.4	ug/kg	SW846 8260B	
2-Butanone	ND	22	ug/kg	SW846 8260B	
Carbon disulfide	ND	5.4	ug/kg	SW846 8260B	
Carbon tetrachloride	ND	5.4	ug/kg	SW846 8260B	
Chlorobenzene	ND	5.4	ug/kg	SW846 8260B	
Chloroethane	ND	5.4	ug/kg	SW846 8260B	
Chloroform	ND	5.4	ug/kg	SW846 8260B	
Chloromethane	ND	5.4	ug/kg	SW846 8260B	
Cyclohexane	ND	11	ug/kg	SW846 8260B	
Dibromochloromethane	ND	5.4	ug/kg	SW846 8260B	
1,2-Dibromo-3-chloro-propane	ND	11	ug/kg	SW846 8260B	
1,2-Dibromoethane	ND	5.4	ug/kg	SW846 8260B	
1,2-Dichlorobenzene	ND	5.4	ug/kg	SW846 8260B	
1,3-Dichlorobenzene	ND	5.4	ug/kg	SW846 8260B	
1,4-Dichlorobenzene	ND	5.4	ug/kg	SW846 8260B	
Dichlorodifluoromethane	ND	5.4	ug/kg	SW846 8260B	
1,1-Dichloroethane	ND	5.4	ug/kg	SW846 8260B	
1,2-Dichloroethane	ND	5.4	ug/kg	SW846 8260B	
1,1-Dichloroethene	ND	5.4	ug/kg	SW846 8260B	

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SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Conestoga Rovers & Assoc., Inc
GM-BEDFORD
Project Number: 13968

Lot #: A2A260105 | **Date Reported:** 2/08/02

Client Sample ID: S-012502-KMV-515
Sample #: 002 Date Sampled: 01/25/02 10:20 Date Received: 01/26/02 Matrix: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Volatile Organics by GC/MS					Reviewed
cis-1,2-Dichloroethene	ND	2.7	ug/kg	SW846 8260B	
trans-1,2-Dichloroethene	ND	2.7	ug/kg	SW846 8260B	
1,2-Dichloropropane	ND	5.4	ug/kg	SW846 8260B	
cis-1,3-Dichloropropene	ND	5.4	ug/kg	SW846 8260B	
trans-1,3-Dichloropropene	ND	5.4	ug/kg	SW846 8260B	
Ethylbenzene	ND	5.4	ug/kg	SW846 8260B	
2-Hexanone	ND	22	ug/kg	SW846 8260B	
Isopropylbenzene	ND	5.4	ug/kg	SW846 8260B	
Methyl acetate	**5.0 J**	**11**	**ug/kg**	**SW846 8260B**	
Methylene chloride	**3.2 J**	**5.4**	**ug/kg**	**SW846 8260B**	
Methylcyclohexane	ND	11	ug/kg	SW846 8260B	
4-Methyl-2-pentanone	ND	22	ug/kg	SW846 8260B	
Methyl tert-butyl ether	ND	22	ug/kg	SW846 8260B	
Styrene	ND	5.4	ug/kg	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	5.4	ug/kg	SW846 8260B	
Tetrachloroethene	ND	5.4	ug/kg	SW846 8260B	
Toluene	ND	5.4	ug/kg	SW846 8260B	
1,2,4-Trichloro-benzene	ND	5.4	ug/kg	SW846 8260B	
1,1,1-Trichloroethane	ND	5.4	ug/kg	SW846 8260B	
1,1,2-Trichloroethane	ND	5.4	ug/kg	SW846 8260B	
Trichloroethene	ND	5.4	ug/kg	SW846 8260B	
Trichlorofluoromethane	ND	5.4	ug/kg	SW846 8260B	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.4	ug/kg	SW846 8260B	
Vinyl chloride	ND	5.4	ug/kg	SW846 8260B	
Xylenes (total)	ND	5.4	ug/kg	SW846 8260B	

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Semivolatile Organic Compounds by GC/MS					Reviewed
Acenaphthene	ND	420	ug/kg	SW846 8270C	
Acenaphthylene	ND	420	ug/kg	SW846 8270C	
Acetophenone	ND	420	ug/kg	SW846 8270C	
Anthracene	ND	420	ug/kg	SW846 8270C	

(Continued on next page)

SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Conestoga Rovers & Assoc., Inc
GM-BEDFORD
Project Number: 13968

Lot #: A2A260105 **Date Reported:** 2/08/02

Client Sample ID: S-012502-KMV-515
Sample #: 002 Date Sampled: 01/25/02 10:20 Date Received: 01/26/02 Matrix: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Semivolatile Organic Compounds by GC/MS				Reviewed
Atrazine	ND	420	ug/kg	SW846 8270C
Benzo(a)anthracene	ND	420	ug/kg	SW846 8270C
Benzo(a)pyrene	ND	420	ug/kg	SW846 8270C
Benzo(b)fluoranthene	ND	420	ug/kg	SW846 8270C
Benzo(ghi)perylene	ND	420	ug/kg	SW846 8270C
Benzo(k)fluoranthene	ND	420	ug/kg	SW846 8270C
Benzaldehyde	ND	420	ug/kg	SW846 8270C
1,1'-Biphenyl	ND	420	ug/kg	SW846 8270C
bis(2-Chloroethoxy) methane	ND	420	ug/kg	SW846 8270C
bis(2-Chloroethyl)-ether	ND	420	ug/kg	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	420	ug/kg	SW846 8270C
4-Bromophenyl phenyl ether	ND	420	ug/kg	SW846 8270C
Butyl benzyl phthalate	ND	420	ug/kg	SW846 8270C
Caprolactam	ND	420	ug/kg	SW846 8270C
Carbazole	ND	420	ug/kg	SW846 8270C
4-Chloroaniline	ND	420	ug/kg	SW846 8270C
4-Chloro-3-methylphenol	ND	420	ug/kg	SW846 8270C
2-Chloronaphthalene	ND	420	ug/kg	SW846 8270C
2-Chlorophenol	ND	420	ug/kg	SW846 8270C
4-Chlorophenyl phenyl ether	ND	420	ug/kg	SW846 8270C
Chrysene	ND	420	ug/kg	SW846 8270C
Dibenz(a,h)anthracene	ND	420	ug/kg	SW846 8270C
Dibenzofuran	ND	420	ug/kg	SW846 8270C
3,3'-Dichlorobenzidine	ND	2000	ug/kg	SW846 8270C
2,4-Dichlorophenol	ND	420	ug/kg	SW846 8270C
Diethyl phthalate	ND	420	ug/kg	SW846 8270C
2,4-Dimethylphenol	ND	420	ug/kg	SW846 8270C
Dimethyl phthalate	ND	420	ug/kg	SW846 8270C
Di-n-butyl phthalate	ND	420	ug/kg	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	2000	ug/kg	SW846 8270C
2,4-Dinitrophenol	ND	2000	ug/kg	SW846 8270C

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SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Conestoga Rovers & Assoc., Inc
GM-BEDFORD
Project Number: 13968

Lot #: A2A260105

Date Reported: 2/08/02

Client Sample ID: S-012502-KMV-515
Sample #: 002 Date Sampled: 01/25/02 10:20 Date Received: 01/26/02 Matrix: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Semivolatile Organic Compounds by GC/MS					Reviewed
2,4-Dinitrotoluene	ND	420	ug/kg	SW846 8270C	
2,6-Dinitrotoluene	ND	420	ug/kg	SW846 8270C	
Di-n-octyl phthalate	ND	420	ug/kg	SW846 8270C	
Fluoranthene	ND	420	ug/kg	SW846 8270C	
Fluorene	ND	420	ug/kg	SW846 8270C	
Hexachlorobenzene	ND	420	ug/kg	SW846 8270C	
Hexachlorobutadiene	ND	420	ug/kg	SW846 8270C	
Hexachlorocyclopenta-diene	ND	2000	ug/kg	SW846 8270C	
Hexachloroethane	ND	420	ug/kg	SW846 8270C	
Indeno(1,2,3-cd)pyrene	ND	420	ug/kg	SW846 8270C	
Isophorone	ND	420	ug/kg	SW846 8270C	
2-Methylnaphthalene	ND	420	ug/kg	SW846 8270C	
2-Methylphenol	ND	420	ug/kg	SW846 8270C	
4-Methylphenol	ND	420	ug/kg	SW846 8270C	
Naphthalene	ND	420	ug/kg	SW846 8270C	
2-Nitroaniline	ND	2000	ug/kg	SW846 8270C	
3-Nitroaniline	ND	2000	ug/kg	SW846 8270C	
4-Nitroaniline	ND	2000	ug/kg	SW846 8270C	
Nitrobenzene	ND	420	ug/kg	SW846 8270C	
2-Nitrophenol	ND	420	ug/kg	SW846 8270C	
4-Nitrophenol	ND	2000	ug/kg	SW846 8270C	
N-Nitrosodi-n-propyl-amine	ND	420	ug/kg	SW846 8270C	
N-Nitrosodiphenylamine	ND	420	ug/kg	SW846 8270C	
2,2'-oxybis(1-Chloropropane)	ND	420	ug/kg	SW846 8270C	
Pentachlorophenol	ND	420	ug/kg	SW846 8270C	
Phenanthrene	ND	420	ug/kg	SW846 8270C	
Phenol	ND	420	ug/kg	SW846 8270C	
Pyrene	ND	420	ug/kg	SW846 8270C	
2,4,5-Trichloro-phenol	ND	420	ug/kg	SW846 8270C	
2,4,6-Trichloro-phenol	ND	420	ug/kg	SW846 8270C	

Results and reporting limits have been adjusted for dry weight.

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SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Conestoga Rovers & Assoc., Inc
GM-BEDFORD
Project Number: 13968

Lot #: A2A260105

Date Reported: 2/08/02

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Client Sample ID: S-012502-KMV-515					
Sample #: 002 Date Sampled: 01/25/02 10:20 Date Received: 01/26/02 Matrix: SOLID					
Inorganic Analysis					Reviewed
Amenable Cyanide	ND	0.64	mg/kg	SW846 9012	
Cyanide, Total	ND	0.64	mg/kg	SW846 9012A	
Total Organic Carbon	5700	640	mg/kg	MSA WALKLEY-BLACK	
Total Residue as Percent Solids	78.4	10.0	%	MCAWW 160.3 MOD	

Results and reporting limits have been adjusted for dry weight.

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Client Sample ID: S-012502-KMV-516					
Sample #: 003 Date Sampled: 01/25/02 10:35 Date Received: 01/26/02 Matrix: SOLID					
Trace Inductively Coupled Plasma (ICP) Metals					Reviewed
Arsenic	13.6	1.3	mg/kg	SW846 6010B	
Lead	21.1	0.40	mg/kg	SW846 6010B	
Selenium	1.2	0.67	mg/kg	SW846 6010B	
Thallium	1.1 B	1.3	mg/kg	SW846 6010B	
Inductively Coupled Plasma (ICP) Metals					Reviewed
Silver	ND	1.3	mg/kg	SW846 6010B	
Aluminum	12200	26.7	mg/kg	SW846 6010B	
Barium	137	26.7	mg/kg	SW846 6010B	
Beryllium	0.96	0.67	mg/kg	SW846 6010B	
Cadmium	0.12 B	0.67	mg/kg	SW846 6010B	
Cobalt	12.5	6.7	mg/kg	SW846 6010B	
Chromium	18.8	1.3	mg/kg	SW846 6010B	
Copper	11.8	3.3	mg/kg	SW846 6010B	
Iron	28200	13.3	mg/kg	SW846 6010B	
Manganese	1260	2.0	mg/kg	SW846 6010B	
Nickel	24.5	5.3	mg/kg	SW846 6010B	
Antimony	ND	8.0	mg/kg	SW846 6010B	
Vanadium	31.8	6.7	mg/kg	SW846 6010B	
Zinc	68.3	2.7	mg/kg	SW846 6010B	
Mercury in Solid Waste (Manual Cold-Vapor)					Revie
Mercury	0.057 B	0.13	mg/kg	SW846 7471A	

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SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Lot #: A2A260105   GM-BEDFORD   Date Reported: 2/08/02

Project Number: 13968

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Client Sample ID: S-012502-KMV-516					
Sample #: 003 Date Sampled: 01/25/02 10:35 Date Received: 01/26/02 Matrix: SOLID					
Mercury in Solid Waste (Manual Cold-Vapor)					Reviewed

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
PCBs by SW-846 8082					Reviewed
Aroclor 1016	ND	44	ug/kg	SW846 8082	
Aroclor 1221	ND	44	ug/kg	SW846 8082	
Aroclor 1232	ND	44	ug/kg	SW846 8082	
Aroclor 1242	ND	44	ug/kg	SW846 8082	
Aroclor 1248	30 J	44	ug/kg	SW846 8082	
Aroclor 1254	ND	44	ug/kg	SW846 8082	
Aroclor 1260	ND	44	ug/kg	SW846 8082	

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Volatile Organics by GC/MS					Reviewed
Acetone	10 J	27	ug/kg	SW846 8260B	
Benzene	ND	6.7	ug/kg	SW846 8260B	
Bromodichloromethane	ND	6.7	ug/kg	SW846 8260B	
Bromoform	ND	6.7	ug/kg	SW846 8260B	
Bromomethane	ND	6.7	ug/kg	SW846 8260B	
2-Butanone	ND	27	ug/kg	SW846 8260B	
Carbon disulfide	ND	6.7	ug/kg	SW846 8260B	
Carbon tetrachloride	ND	6.7	ug/kg	SW846 8260B	
Chlorobenzene	ND	6.7	ug/kg	SW846 8260B	
Chloroethane	ND	6.7	ug/kg	SW846 8260B	
Chloroform	ND	6.7	ug/kg	SW846 8260B	
Chloromethane	ND	6.7	ug/kg	SW846 8260B	
Cyclohexane	ND	13	ug/kg	SW846 8260B	
Dibromochloromethane	ND	6.7	ug/kg	SW846 8260B	
1,2-Dibromo-3-chloro-propane	ND	13	ug/kg	SW846 8260B	
1,2-Dibromoethane	ND	6.7	ug/kg	SW846 8260B	
1,2-Dichlorobenzene	ND	6.7	ug/kg	SW846 8260B	

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SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Conestoga Rovers & Assoc., Inc
GM-BEDFORD
Project Number: 13968

Lot #: A2A260105

Date Reported: 2/08/02

Client Sample ID: S-012502-KMV-516
Sample #: 003 Date Sampled: 01/25/02 10:35 Date Received: 01/26/02 Matrix: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Volatile Organics by GC/MS					Reviewed
1,3-Dichlorobenzene	ND	6.7	ug/kg	SW846 8260B	
1,4-Dichlorobenzene	ND	6.7	ug/kg	SW846 8260B	
Dichlorodifluoromethane	ND	6.7	ug/kg	SW846 8260B	
1,1-Dichloroethane	ND	6.7	ug/kg	SW846 8260B	
1,2-Dichloroethane	ND	6.7	ug/kg	SW846 8260B	
1,1-Dichloroethene	ND	6.7	ug/kg	SW846 8260B	
cis-1,2-Dichloroethene	ND	3.3	ug/kg	SW846 8260B	
trans-1,2-Dichloroethene	ND	3.3	ug/kg	SW846 8260B	
1,2-Dichloropropane	ND	6.7	ug/kg	SW846 8260B	
cis-1,3-Dichloropropene	ND	6.7	ug/kg	SW846 8260B	
trans-1,3-Dichloropropene	ND	6.7	ug/kg	SW846 8260B	
Ethylbenzene	ND	6.7	ug/kg	SW846 8260B	
2-Hexanone	ND	27	ug/kg	SW846 8260B	
Isopropylbenzene	ND	6.7	ug/kg	SW846 8260B	
Methyl acetate	ND	13	ug/kg	SW846 8260B	
Methylene chloride	**3.9 J**	**6.7**	**ug/kg**	**SW846 8260B**	
Methylcyclohexane	ND	13	ug/kg	SW846 8260B	
4-Methyl-2-pentanone	ND	27	ug/kg	SW846 8260B	
Methyl tert-butyl ether	ND	27	ug/kg	SW846 8260B	
Styrene	ND	6.7	ug/kg	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	6.7	ug/kg	SW846 8260B	
Tetrachloroethene	ND	6.7	ug/kg	SW846 8260B	
Toluene	ND	6.7	ug/kg	SW846 8260B	
1,2,4-Trichloro-benzene	ND	6.7	ug/kg	SW846 8260B	
1,1,1-Trichloroethane	ND	6.7	ug/kg	SW846 8260B	
1,1,2-Trichloroethane	ND	6.7	ug/kg	SW846 8260B	
Trichloroethene	ND	6.7	ug/kg	SW846 8260B	
Trichlorofluoromethane	ND	6.7	ug/kg	SW846 8260B	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	6.7	ug/kg	SW846 8260B	
Vinyl chloride	ND	6.7	ug/kg	SW846 8260B	
Xylenes (total)	ND	6.7	ug/kg	SW846 8260B	

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

(Continued on next page)

SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Conestoga Rovers & Assoc., Inc — PAGE 14

GM-BEDFORD

Lot #: A2A260105 — Date Reported: 2/08/02

Project Number: 13968

Client Sample ID: S-012502-KMV-516

Sample #: 003 Date Sampled: 01/25/02 10:35 Date Received: 01/26/02 Matrix: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	Reviewed
Semivolatile Organic Compounds by GC/MS					
Acenaphthene	ND	440	ug/kg	SW846 8270C	
Acenaphthylene	ND	440	ug/kg	SW846 8270C	
Acetophenone	ND	440	ug/kg	SW846 8270C	
Anthracene	ND	440	ug/kg	SW846 8270C	
Atrazine	ND	440	ug/kg	SW846 8270C	
Benzo(a)anthracene	ND	440	ug/kg	SW846 8270C	
Benzo(a)pyrene	ND	440	ug/kg	SW846 8270C	
Benzo(b)fluoranthene	ND	440	ug/kg	SW846 8270C	
Benzo(ghi)perylene	ND	440	ug/kg	SW846 8270C	
Benzo(k)fluoranthene	ND	440	ug/kg	SW846 8270C	
Benzaldehyde	ND	440	ug/kg	SW846 8270C	
1,1'-Biphenyl	ND	440	ug/kg	SW846 8270C	
bis(2-Chloroethoxy) methane	ND	440	ug/kg	SW846 8270C	
bis(2-Chloroethyl)-ether	ND	440	ug/kg	SW846 8270C	
bis(2-Ethylhexyl) phthalate	ND	440	ug/kg	SW846 8270C	
4-Bromophenyl phenyl ether	ND	440	ug/kg	SW846 8270C	
Butyl benzyl phthalate	ND	440	ug/kg	SW846 8270C	
Caprolactam	ND	440	ug/kg	SW846 8270C	
Carbazole	ND	440	ug/kg	SW846 8270C	
4-Chloroaniline	ND	440	ug/kg	SW846 8270C	
4-Chloro-3-methylphenol	ND	440	ug/kg	SW846 8270C	
2-Chloronaphthalene	ND	440	ug/kg	SW846 8270C	
2-Chlorophenol	ND	440	ug/kg	SW846 8270C	
4-Chlorophenyl phenyl ether	ND	440	ug/kg	SW846 8270C	
Chrysene	ND	440	ug/kg	SW846 8270C	
Dibenz(a,h)anthracene	ND	440	ug/kg	SW846 8270C	
Dibenzofuran	ND	440	ug/kg	SW846 8270C	
3,3'-Dichlorobenzidine	ND	2100	ug/kg	SW846 8270C	
2,4-Dichlorophenol	ND	440	ug/kg	SW846 8270C	
Diethyl phthalate	ND	440	ug/kg	SW846 8270C	
2,4-Dimethylphenol	ND	440	ug/kg	SW846 8270C	

(Continued on next page)

SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Conestoga Rovers & Assoc., Inc
GM-BEDFORD
Project Number: 13968

Lot #: A2A260105

Date Reported: 2/08/02

Client Sample ID: S-012502-KMV-516
Sample #: 003 Date Sampled: 01/25/02 10:35 Date Received: 01/26/02 Matrix: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Semivolatile Organic Compounds by GC/MS					Reviewed
Dimethyl phthalate	ND	440	ug/kg	SW846 8270C	
Di-n-butyl phthalate	ND	440	ug/kg	SW846 8270C	
4,6-Dinitro-2-methylphenol	ND	2100	ug/kg	SW846 8270C	
2,4-Dinitrophenol	ND	2100	ug/kg	SW846 8270C	
2,4-Dinitrotoluene	ND	440	ug/kg	SW846 8270C	
2,6-Dinitrotoluene	ND	440	ug/kg	SW846 8270C	
Di-n-octyl phthalate	ND	440	ug/kg	SW846 8270C	
Fluoranthene	ND	440	ug/kg	SW846 8270C	
Fluorene	ND	440	ug/kg	SW846 8270C	
Hexachlorobenzene	ND	440	ug/kg	SW846 8270C	
Hexachlorobutadiene	ND	440	ug/kg	SW846 8270C	
Hexachlorocyclopentadiene	ND	2100	ug/kg	SW846 8270C	
Hexachloroethane	ND	440	ug/kg	SW846 8270C	
Indeno(1,2,3-cd)pyrene	ND	440	ug/kg	SW846 8270C	
Isophorone	ND	440	ug/kg	SW846 8270C	
2-Methylnaphthalene	ND	440	ug/kg	SW846 8270C	
2-Methylphenol	ND	440	ug/kg	SW846 8270C	
4-Methylphenol	ND	440	ug/kg	SW846 8270C	
Naphthalene	ND	440	ug/kg	SW846 8270C	
2-Nitroaniline	ND	2100	ug/kg	SW846 8270C	
3-Nitroaniline	ND	2100	ug/kg	SW846 8270C	
4-Nitroaniline	ND	2100	ug/kg	SW846 8270C	
Nitrobenzene	ND	440	ug/kg	SW846 8270C	
2-Nitrophenol	ND	440	ug/kg	SW846 8270C	
4-Nitrophenol	ND	2100	ug/kg	SW846 8270C	
N-Nitrosodi-n-propylamine	ND	440	ug/kg	SW846 8270C	
N-Nitrosodiphenylamine	ND	440	ug/kg	SW846 8270C	
2,2'-oxybis(1-Chloropropane)	ND	440	ug/kg	SW846 8270C	
Pentachlorophenol	ND	440	ug/kg	SW846 8270C	
Phenanthrene	ND	440	ug/kg	SW846 8270C	
Phenol	ND	440	ug/kg	SW846 8270C	
Pyrene	ND	440	ug/kg	SW846 8270C	
2,4,5-Trichlorophenol	ND	440	ug/kg	SW846 8270C	

(Continued on next page)

SEVERN TRENT LABORATORIES, INC.
PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Conestoga Rovers & Assoc., Inc
GM-BEDFORD
Project Number: 13968

Date Reported: 2/08/02

Lot #: A2A260105

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD

Client Sample ID: S-012502-KMV-516   Date Received: 01/26/02   Matrix: SOLID
Sample #: 003   Date Sampled: 01/25/02 10:35

Reviewed

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Semivolatile Organic Compounds by GC/MS				
2,4,6-Trichloro-phenol	ND	440	ug/kg	SW846 8270C

Results and reporting limits have been adjusted for dry weight.

Reviewed

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Inorganic Analysis				
Amenable Cyanide	ND	0.67	mg/kg	SW846 9012
Cyanide, Total	ND	0.67	mg/kg	SW846 9012A
Total Organic Carbon	4000	270	mg/kg	MSA WALKLEY-BLACK
Total Residue as Percent Solids	74.9	10.0	%	MCAWW 160.3 MOD

Results and reporting limits have been adjusted for dry weight.

Client Sample ID: TB-012502-KMV-001   Date Received: 01/26/02   Matrix: WATER
Sample #: 004   Date Sampled: 01/25/02 08:00

Reviewed

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
Volatile Organics by GC/MS				
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	10	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METALWORKING LUBRICANTS COMPANY

25 Silverdome Industrial Par
Pontiac, Michigan 4834
Telephone 248-332-3500
Telecopy 248-332-4959

March 19, 2002

Mr. Jeffrey M. Nichols
Conestoga-Rovers & Associates
8615 West Bryn Mawr Avenue
Chicago, IL 60631-3501

Dear Mr. Nichols:

Metalworking Lubricants is pleased to offer the following quotation for the disposal of your non-hazardous waste stream:

CW7867 (NH Waste Water/Solids)	$.06/Gross Gallon
Freight (Bedford, IN)	$235.00/Load
Min. Disposal Charge'	$250.00

See "Fuel Surcharge Letter" attached.

Seven (7) percent solids as recorded under ASTM D-96 will be allowed. There will be a charge of $.015 per gallon per each one (1) percentage point for all solids above 7%. For example, 9% solids will be an additional $.03 per gallon charge; 16% solids will be an additional $.135 per gallon charge.

Seller will be charged $50.00 per tankwagon lot for PCB analysis. For purposes of this agreement, seller's representations and warranties concerning PCB levels shall be determined in the extractable phase as per EPA test methods SW 846 Method 3510 procedure. Seller warrants and represents material contains no more than 5 PPM of PCB. Should the 5 PPM level be exceeded, MWL shall make all decisions regarding the proper handling, transportation, response and/or remedial action and seller will be held responsible for all costs incurred.

Seller is asked to supply M.S.D. sheets on oils which produce this waste or written representation on your confirming purchase order the composition of such producing oils are "unlabeled" as classified under OSHA 29 CFR 1910.1200. Seller warrants material is non-hazardous, non EPA toxic, and contains no crankcase. All B.S.&W. run by ASTM D-96; all results by MWL final. All shipments will be loaded in full 5500 gallon tankwagon lots. Loading the vehicle is seller's responsibility. One hour free loading; subsequent demurrage at $48/hour for regular tankwagon; $85/hour for vac truck. Shipping schedule to be managed and determined by MWL. Pricing may change on written notice. All transportation costs to be paid by Conestoga-Rovers. Should labeled materials be used after November 25, 1985, under 29 CFR 1910.1200, it will be seller's responsibility to notify MWL with particular hazardous M.S.D. sheets within ten (10) days. Contract may be cancelled by MWL on written notice. Drum pumping is $.06 per gross gallon additional charge. A one-time charge of $200.00 will be invoiced to cover a TCLP analysis upon commencement of the first shipment.

"TRADE-IN"

All material removed can be returned as hydrocarbon product generally for 30% less. Additionally, it may be recycled 5 times before it is lost. We welcome the opportunity to discuss this with you.

Sincerely,

METALWORKING LUBRICANTS COMPANY

Karl Stamman

Karl Stamman
Assistant Division Manager

KS:jf

Cc: Liz Faler

METALWORKING LUBRICANTS COMPANY

1509 S. Senate Ave.
Indianapolis, IN 46225
Telephone 317-269-2444
Telecopy 269-2443

CW # 7867

Salesperson Stamman

Date Received 3-14-02

Generator B.M.

BEDFORD, IN

Customer CRA

EPA ID#

EPA ID#

Contact Jeff Nichols Fax 812 277 8980

Contact

Description DECON TANKS

Expected Volume

Lab Analyst

Analysis:

Odor ok

Color Brown

pH 11

Oil 0 Water 88 Floating Solids 0 Bottom Solids 12

Flashpoint >200 Halides 0 Cyanide 0 Ammonia

Sulfate 0 Sulfite 0 Nitrate 10 Nitrite 10

Phenol Normality Neutralization Number

Sulfur Chlorine Viscosity

Reactivity @ pH 2 ok Reactivity @ pH 10 ok

Metals Login 13-7 PCB Login T30-210-1 PCB Results ND @ 1 ppm

Analytical Comments metals ok

Initial Processing Cost high

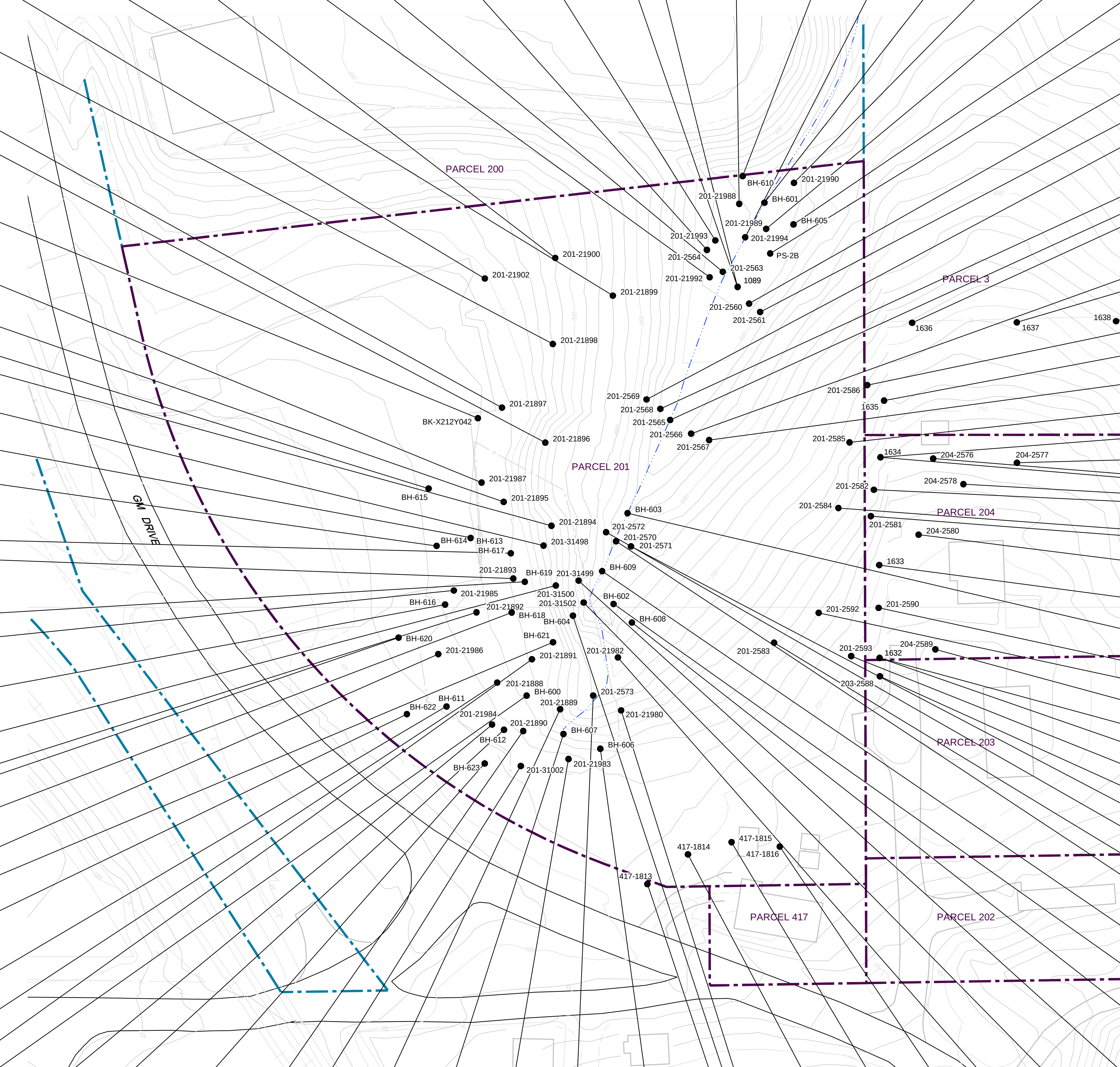
Detrimental Effects on Plant Solids

Oil Destination B310 B320 B310-F

Stream Acceptance YES By Date 3/15/02

APPENDIX D

PARCEL 201 AND 204 ANALYTICAL RESULTS SUMMARY DATABOX



Sample Location	Sample Date	Depth	Result (mg/kg)
201-21902	3/26/2007	(0-0.33) ft	0.205
201-21899	3/26/2007	(0-0.33) ft	0.172 J
201-21900	3/26/2007	(0-0.33) ft	0.087/0.011 J
201-21992	4/4/2007	(0-0.33) ft	0.05 J
201-2563	3/4/2005	(0-0.33) ft	0.012 J
201-2564	3/4/2005	(0-0.33) ft	0.119 J
201-21993	4/4/2007	(0-0.33) ft	0.626 J
201(GM)-1089	2/25/2002	(0-0.33) ft	1.92
1089	3/4/2005	(0-0.33) ft	0.37
201-21988	4/3/2007	(0-0.33) ft	0.8
BH-610	3/28/2007	(0-0.17) ft	0.383
		(1-1.17) ft	0.982
		(4-4.17) ft	0.446 J
201-21994	4/4/2007	(0-0.33) ft	0.378 J
BH-601	3/28/2007	(0-0.17) ft	0.23
		(1-1.17) ft	2.89
		(4-4.17) ft	0.016 J
201-21990	4/3/2007	(0-0.33) ft	0.156 J/0.425 J
201-21989	4/3/2007	(0-0.33) ft	1.31
BH-605	3/28/2007	(0-0.17) ft	2.21
		(1-1.17) ft	0.057
		(3-3.17) ft	0.015 J
		(6-6.17) ft	ND
PS-2B	3/22/2005	(0-2) ft	ND
201-2560	3/4/2005	(0-0.33) ft	0.024 J
201-2561	3/4/2005	(0-0.33) ft	0.013 J/0.011 J
201-2569	3/4/2005	(0-0.33) ft	0.14
201-2568	3/4/2005	(0-0.33) ft	0.43
201-2565	3/4/2005	(0-0.33) ft	1.014 J
003-202-203-204-1636	4/8/2002	(0-0.33) ft	0.12
201-2566	3/4/2005	(0-0.33) ft	0.046 J
003-202-203-204-1637	4/8/2002	(0-0.33) ft	ND
003-202-203-204-1638	4/8/2002	(0-0.33) ft	ND
201-2586	3/4/2005	(0-0.33) ft	0.079
003-202-203-204-1635	4/8/2002	(0-0.33) ft	0.9/0.91
201-2567	3/4/2005	(0-0.33) ft	0.027 J
201-2585	3/4/2005	(0-0.33) ft	0.024 J
202-203-204-1634	4/8/2002	(0-0.33) ft	4.2
204-2577	3/4/2005	(0-0.33) ft	ND
204-2576	3/4/2005	(0-0.33) ft	0.0093 J
1634	3/4/2005	(0-0.33) ft	0.058 J
201-2582	3/4/2005	(0-0.33) ft	0.043 J
204-2578	3/4/2005	(0-0.33) ft	ND/ND
201-2581	3/4/2005	(0-0.33) ft	0.045
201-2584	3/4/2005	(0-0.33) ft	0.017 J
204-2580	3/4/2005	(0-0.33) ft	0.037 J
202-203-204-1633	4/8/2002	(0-0.33) ft	0.041
BH-603	3/27/2007	(0-0.17) ft	1.392/0.985
		(1-1.17) ft	0.029 J
		(5-5.17) ft	0.016 J
201-2592	3/4/2005	(0-0.33) ft	0.021 J
201-2590	3/4/2005	(0-0.33) ft	4.4/4.4
1632	3/4/2005	(0-0.33) ft	0.79 J
204-2589	3/4/2005	(0-0.33) ft	0.014 J
202-203-204-1632	4/8/2002	(0-0.33) ft	3.4/2.9
201-2593	3/4/2005	(0-0.33) ft	20
203-2588	3/4/2005	(0-0.33) ft	0.025 J
201-2571	3/4/2005	(0-0.33) ft	0.03 J
201-2572	3/4/2005	(0-0.33) ft	0.039 J
201-2583	3/4/2005	(0-0.33) ft	ND
201-2570	3/4/2005	(0-0.33) ft	9.8
BH-609	3/27/2007	(0-0.17) ft	0.472
		(1-1.17) ft	0.479 J
		(4-4.17) ft	0.596 J
		(6-6.17) ft	1.671
BH-602	3/21/2007	(0-0.17) ft	0.73
		(1-1.17) ft	ND
		(4-4.17) ft	ND
BH-608	3/21/2007	(0-0.17) ft	0.063
		(1-1.17) ft	0.016 J
		(4-4.17) ft	ND
201-31499	12/13/2007	(0-0.33) ft	0.247 J
201-31502	12/13/2007	(0-0.33) ft	4.59
201-21982	4/3/2007	(0-0.33) ft	ND
417-1816	5/7/2002	(0-0.33) ft	ND
417-1815	5/7/2002	(0-0.33) ft	ND
417-1814	5/7/2002	(0-0.33) ft	ND
201-21980	4/3/2007	(0-0.33) ft	0.085 J/0.109 J
417-1813	5/7/2002	(0-0.33) ft	ND
BH-604	3/27/2007	(0-0.17) ft	87 J
		(1-1.17) ft	44.2 J
		(5-5.17) ft	42.4 J/20.6 J
		(8-8.17) ft	0.235 J
BH-606	3/26/2007	(0-0.17) ft	0.035 J
		(10-10.17) ft	ND
		(1-1.17) ft	ND
		(5-5.17) ft	ND
		(9-9.17) ft	0.011 J
201-2573	3/4/2005	(0-0.33) ft	1.9
201-21983	4/3/2007	(0-0.33) ft	0.01 J
BH-607	3/26/2007	(0-0.17) ft	6.54 J
		(1-1.17) ft	21.99 J
		(4-4.17) ft	1.067
		(8-8.17) ft	0.027 J
201-21889	3/23/2007	(0-0.33) ft	5.35 J
201-31002	4/5/2007	(0-0.33) ft	ND
201-21890	3/23/2007	(0-0.33) ft	15.85 J
BH-623	11/20/2007	(0-2) ft	0.033 J/0.038 J
		(21.75-22.5) ft	ND
		(6-8) ft	0.137
		(8-10.5) ft	0.104 J
BH-612	4/13/2007	(0-0.6) ft	36.1 J
		(1-2) ft	85.9 J
		(12-13) ft	0.103 J
		(21-22) ft	ND
201-21984	4/3/2007	(0-0.33) ft	36.3 J
BH-600	3/21/2007	(0-0.17) ft	188.8 J
		(10-10.17) ft	26.8
		(1-1.17) ft	13.68 J
		(5-5.17) ft	4.63/9.7
201-21891	3/23/2007	(0-0.33) ft	26.6 J
201-21888	3/23/2007	(0-0.33) ft	23.5 J
BH-621	11/20/2007	(0-2) ft	251/170
		(14-16) ft	2.46 J
		(16-18) ft	0.796
		(20-21) ft	0.065 J
		(6-8) ft	3.38
BH-622	11/20/2007	(0-2) ft	4.63
		(16-18) ft	0.014 J
		(21-22.5) ft	0.02 J
		(4-8) ft	0.014 J
BH-618	11/19/2007	(0-2) ft	116.1 J
		(12-12.5) ft	10.9
		(20-20.5) ft	ND
		(6-8) ft	0.614
201-21986	4/3/2007	(0-0.33) ft	115.1
BH-620	11/20/2007	(0-2) ft	0.72
		(18-19) ft	ND
		(6-8) ft	0.0088 J
		(8-12) ft	0.074 J
201-21892	3/26/2007	(0-0.33) ft	16.1
201-31500	12/13/2007	(0-0.33) ft	210/160
BH-616	11/19/2007	(0-2) ft	2.97
		(14-14.5) ft	ND
		(18.75-19) ft	0.018 J
		(6-8) ft	0.076
201-21985	4/3/2007	(0-0.33) ft	4.24
BH-619	11/20/2007	(0-2) ft	66.1/65 J
		(10-12) ft	75.5 J
		(12-14) ft	1.21
		(18-19) ft	ND
		(6-8) ft	15.8 J
201-21893	3/26/2007	(0-0.33) ft	18.5
BH-617	11/19/2007	(0-2) ft	692 J/1247 J
		(10-11) ft	9.18
		(14.5-14.8) ft	0.031 J
		(20-21.5) ft	0.0094 J
		(6-8) ft	2.25 J
BH-614	11/19/2007	(0-2) ft	4.81 J
		(16-16.5) ft	ND
		(3-4) ft	ND
		(6-8) ft	ND/ND
201-31498	12/13/2007	(0-0.33) ft	10.15
201-21894	3/26/2007	(0-0.33) ft	13.83 J
BH-615	11/19/2007	(0-2) ft	1.42
		(18.5-19) ft	ND
		(6-8) ft	ND
201-21895	3/26/2007	(0-0.33) ft	17.98
201-21987	4/3/2007	(0-0.33) ft	33.6 J
BK-X212Y042	1/23/2002	(0-2) ft	ND
201-21896	3/26/2007	(0-0.33) ft	0.457
201-21897	3/26/2007	(0-0.33) ft	0.308 J
201-21898	3/26/2007	(0-0.33) ft	1.27

Sample Location	Depth	4/13/2007 (mg/kg)	4/5/2007 (mg/kg)
BH-613	(0-0.33) ft	-	0.176 J
	(11-12) ft	0.081	-
	(1-2) ft	5.25 J	-
	(21-22) ft	ND	-
BH-611	(0-0.33) ft	-	14.77 J/19.76 J
	(10-11) ft	0.02 J	-
	(1-2) ft	51.3 J	-
	(20-22) ft	ND	-

0 20 50ft

LEGEND

EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
UTILITY POLE
EXISTING BUILDINGS
FENCE LINE
RAILROAD TRACKS
DIRT ROADS
ROADS / PAVED AREAS
APPROXIMATE PARCEL BOUNDARY
APPROXIMATE GM PROPERTY BOUNDARY
APPROXIMATE SURFACE WATER LOCATION
SURVEYED PARKING BOUNDARY
SAMPLE LOCATION

201-21982	Total PCBs 4/3/2007 mg/kg
0-0.33(ft)	ND

SAMPLE LOCATION IDENTIFIER
CHEMICAL NAME
SAMPLE DATE
RESULT UNIT
CONCENTRATION
SAMPLE DEPTH

RESULT ≥ 50 mg/kg PCBs
ND NON DETECT
J ESTIMATED VALUE
0.085 J/0.109 J PARENT SAMPLE RESULT/DUPLICATE SAMPLE RESULT

NOTE: GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

SCALE VERIFICATION

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

GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

ANALYTICAL RESULTS
PARCELS 201 AND 204

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001 AND CRA SURVEYS 2002 TO 2005

Project Manager: J.M.	Reviewed By: P.G.	Date: NOVEMBER 2007	
Scale: 1:50	Project Nº: 13968-00	Report Nº: 248	Drawing Nº: D

13968-00(248)GN-WA025 MAY 14/2008

APPENDIX E

AAQMP MODIFICATIONS LETTER

Worldwide Facilities Group
Remediation Team

January 9, 2007 Reference No. 013968

Mr. Peter Ramanauskas
Project Manager for IND 0060306099
Waste, Pesticide and Toxins Division
U.S. EPA Region 5
77 West Jackson Blvd. (DW-8J)
Chicago, IL 60604-3590

Dear Mr. Ramanauskas:

Re: GM Powertrain – Bedford Facility, IND 006036099
Revised Request for East Plant Area AAQMP Modifications
GM Powertrain Group, Bedford Indiana Facility
Bedford, Indiana

Based on air monitoring results over the last few months and comments received from U.S. EPA via e-mail dated December 22, 2006 on our December 7, 2006 proposed revisions to the AAQMP, this letter proposes modifications to the Ambient Air Quality Monitoring Plan (AAQMP) (CRA, 2003), the revised AAQMP dated November 23, 2004, and the AAQMP modifications for approved East Plant Area Interim Measures (IM); the Over 50 mg/kg PCB Soil Removal (CRA, 2006), the Vault Design Report (CRA, 2006), and the Draft Cover System (CRA, 2006) (the AAQMP supports work defined in the United States Environmental Protection Agency (U.S. EPA) approved East Plant Area IM). PCB air monitoring results have been below the action level set forth in the AAQMP through October and November of 2006, and these results were obtained during excavation of >50 mg/kg PCB soils in the East Plant Area. The >50 mg/kg PCB excavations are now completed and remaining work will involve <50 mg/kg soils, which should create even less issues for air monitoring. Currently we are monitoring at seven paired locations, at a significant monthly cost for both the rental and management of the equipment, as well as the quick turn around laboratory analysis.

The objective of the AAQMP is to monitor the airborne concentrations of contaminants, if any, at locations in proximity to potential human receptors associated with the implementation of East Plant Area IM activities. Air quality data is utilized to modify work practices and controls where issues are identified. This letter is focused on proposed modifications to the AAQMP as it relates to the East Plant Area IM. The existing air-sampling program and the basis for the proposed modifications to the air-sampling program presented in this letter are described below.

Proposed changes to the AAQMP will be implemented as soon as practicable following approval by U.S. EPA.

•2000 Centerpoint Pkwy •Mail Code 483-520-190 • Pontiac, MI 48341-3147 • FAX (248) 753-5829

Should you have any questions regarding this request, please do not hesitate to contact me at (248) 753-5799.

Yours truly,

General Motors Corporation

Cheryl R. Hiatt

Cheryl R. Hiatt
Project Manager

PG/cnb/81
Encl.

c.c.: Brad Stimple – U.S. EPA, OSC
Gerald O'Callaghan – IDEM
Ed Peterson – GM
Glenn Turchan - CRA
Jim McGuigan – CRA
Jeff Daniel – CRA
Katie Kamm – CRA
C.Y. Jeng – ENVIRON
Steve Song - ENVIRON

1.0 EXISTING AIR MONITORING PROGRAM

The Ambient Air Quality Monitoring Plan (AAQMP) provides air monitoring data to address the potential for the emission of levels of total suspended particulates (TSPs) and total polychlorinated biphenyls (PCBs) above action levels during soil excavation and material handling activities at the General Motors Corporation (GM) Powertrain, Bedford Indiana Facility (Facility). Air monitoring is currently conducted daily around the East Plant Area (Site) perimeter during excavation and material handling activities.

In accordance with the AAQMP, air monitoring is performed around the active work areas on a 24-hour basis. The air-monitoring program provides average concentrations in the ambient air for the selected compounds over each 24-hour period. Concentrations of TSPs and PCBs are determined by measuring the amount of TSPs/PCBs collected onto absorbent media, or filters, over the 24-hour period and measuring the volume of air collected over the same 24-hour period. Meteorological readings (i.e., temperature, humidity, and barometric pressure) are recorded daily from on-Site weather stations to correct and reduce (for reporting) the measured data to ambient conditions.

TSP/PCB samples are obtained from sampling locations positioned around active work areas. The current air monitoring station group set up at the perimeter of the East Plant Area (identified as Group 9) is comprised of seven pairs (one station for TSP sampling and one station for PCB sampling) plus one duplicate pair of stations for Quality Assurance/Quality Control (QA/QC). The existing locations of the monitoring stations comprising Group 9 are presented on Figure 1.1. These seven locations are re-located, as appropriate, as the active work area progresses.

1.1 TSP MONITORING PROGRAM

TSP sampling is completed at all seven stations in the East Plant Area on a daily basis during construction. Daily, one of the air monitoring stations in the group is established to represent the upwind location, based on average wind direction during the sampling event. The results of the upwind sample are compared to the downwind sample results to determine the concentration of dust that may be migrating downwind potentially attributable to on-Site construction activities.

The current ambient air criteria for a 24-hour sampling period are provided in Table E.3.2 of the AAQMP. The action level for TSPs is currently defined as 67% in excess of the upwind ambient air concentration, based on Indiana Department of Environmental Management (IDEM), Title 326, Article 6, Rule 4 of the Indiana Administrative Code.

The current high volume sampling method requires the monitoring station to run over a 24-hour period, at which time the media is removed and shipped to the analytical laboratory. The laboratory performs the analysis on a 24-hour turn-around time (TAT) and e-mails the preliminary TSP analytical results to the Site. Despite this accelerated schedule, the total elapsed time from the start of sample collection to data review is approximately three to four days.

Upon receipt, the TSP data is reviewed in relation to the weather data and work practices for the day the samples were collected to determine if modification to either the work practices or dust controls is warranted.

Results are periodically transmitted to U.S. EPA.

1.2 PCB MONITORING PROGRAM

Similarly to the TSP sample collection, PCB samples are collected daily at the seven monitoring stations in Group 9 and sent to the analytical laboratory for analysis on a 24-hour TAT basis. The total time from the start of sample collection to preliminary data (without validation) receipt is three to four days.

The current ambient air criteria for a 24-hour sampling period are provided in Table E.3.2 of the AAQMP (CRA, 2003). The action level for PCBs is based on National Institute for Occupational Safety and Health (NIOSH) level of 1 $\mu g/m^3$. This is the Permissible Exposure Limit (PEL). An evaluation of work area practice improvement (to reduce emissions) is initiated at a detected concentration in excess of 0.5 $\mu g/m^3$ PCBs.

Upon receipt, the PCB data is reviewed in relation to the weather data and work practices for the day the samples were collected to determine if modification to either the work practices or dust controls is warranted.

Results are routinely transmitted to U.S. EPA.

2.0 SUMMARY OF AIR MONITORING RESULTS

2.1 TSP MONITORING RESULTS

TSP air monitoring results collected for the duration of >50 mg/kg PCB material excavation and handling in the East Plant Area (May 19, 2006, to present) are presented in Table 2.1. These results were evaluated against the upwind concentration and the action level for TSP is expressed in these tables as Percent of Allowable, which is defined as 67% in excess of the upwind ambient air concentration.

As presented in Table 2.1, the majority of exceedances occurred at air monitoring Station 1B/1C.

2.2 PCB MONITORING RESULTS

Air monitoring results during construction activities of the Grading Areas and Vault liner prior to the movement of >50 mg/kg PCB soil had no PCB detections above the action limit (Table 2.2).

Based on the PCB air monitoring results collected between May 19, 2006, and November 15, 2006 (Table 2.3), there have been detections above the action level at the perimeter of >50 mg/kg PCB impacted soil excavation in the East Plant Area and during placement of the >50 mg/kg PCB soil into the Vault. These occurrences were transmitted to the U.S. EPA periodically as preliminary data became available and modifications to the work procedures were discussed with the U.S. EPA and implemented.

3.0 ASSESSMENT OF EXISTING DATA/CORRECTIVE ACTIONS

3.1 TSP RESULTS EVALUATION

3.1.1 ADDITIONAL DUST SUPPRESSION ACTIVITIES

Since the initial stages of the excavation and hauling activities at the Site, contractors have employed various additional and enhanced dust suppression techniques to minimize the amount of dust generated. These were actions taken in response to visual observations and TSP monitoring data. Additional dust suppression techniques being utilized include:

- monitoring weather conditions and forecasts (e.g., dry windy conditions, etc.);
- installing tire wash station for haul trucks leaving the staging pad area;
- replacing gravel entrances to work areas with larger size gravel;
- wetting on-Site haul roads;
- adjusting construction techniques;
- restricting vehicle and truck speed; and
- adjusting street sweeping activities for dry or wet weather.

There were considerably fewer exceedances in TSP results collected as a result of the utilization of additional dust suppression activities.

3.1.2 EVALUATION OF TSP CRITERIA

The current TSP criteria of 67% in excess of the upwind ambient air concentration does not provide a good representation of the actual mass of TSP being generated during the construction activities. For example, if the TSP concentration for the upwind station is low for that day, a small increase in TSP concentration in downwind stations will likely cause an exceedance. Conversely, if the TSP concentration in the upwind station is high, it will likely not cause any exceedance for the downwind stations. This creates a situation where you have lower particulate levels causing an exceedance on one day, where the same levels do not cause an exceedance on another day. As an illustration, data from fall 2006 is provided below and in Table 3.1.

On October 19, 2006, the upwind station is Station 1C with a relatively low TSP concentration of 0.0122 mg/m^3. As a result, a relatively low reading of 0.0308 mg/m^3 at Station 22B yielded an exceedance of 139%. In contrast, on September 19, 2006, the upwind station is Station 1C with a relatively high TSP concentration of 0.0882 mg/m^3 and as a result there were no exceedances from the downwind stations.

Although the current approach has been useful to guide the implementation of dust suppression techniques, project experience to date, and the limitations related to the impact of wind conditions on results and the timeframe required to obtain useable data warrant a revision to the ongoing AAQMP procedures.

3.1.3 REAL-TIME MONITORING VERSUS HIGH VOLUME SAMPLING

The current high volume sampling method requires a TAT of one day from the laboratory for the preliminary TSP results, and a total of three to four days from the date the sample collections is initiated. This TAT diminishes the relevance of this data in many instances, because as elevated dust levels are observed in the field, or measured, they are addressed and resolved immediately, regardless of the future receipt of TSP analytical results for that day.

Real-time air monitoring units (handheld or stationary) can provide real time, or averaged TSP concentration measurements, which will allow GM and the Project Team to address and resolve any elevated dust issues immediately.

3.2 PCB RESULTS EVALUATION

Previous Site experience has been that dust control practices were also effective for controlling PCBs in the air. Control practices at the onset of work in the East Plant Area included:

- monitoring weather conditions and forecasts (e.g., dry windy conditions, etc.);
- installing tire wash station for haul trucks leaving the staging pad area;
- replacing gravel entrances to work areas with larger size gravel;
- wetting on-Site haul roads;
- adjusting construction techniques;
- restricting vehicle and truck speed; and
- adjusting street sweeping activities for dry or wet weather.

Air sampling of the East Plant Area during placement of <50 mg/kg PCB material in the Grading Areas and construction of the vault liner (June 2005 through April 2006) did not have any results above the PCB action limit. As work in the East Plant Area with >50 mg/kg PCB material progressed, additional controls and soil management strategies were put in place:

- mulching exposed >50 mg/kg PCB areas including the Vault, excavations and stockpiles throughout the day when use of area is no longer required;
- tarping exposed areas that will not be used for extended periods;
- eliminating casting of material (which was a time saving method) toward the dozer and instead placing soil gently to reduce soil disturbance;
- repositioning of the vault dumping ramp to the southeast corner of the vault, further from receptor locations to the north;

- adjustments to the mulch 'recipe' and quantity of mulch applied; and
- 12-hour sampling tests to better understand the source of PCBs in the air.

It is believed that a portion of the PCB detected in the air may have been volatile PCBs due to the warm summer temperatures and the higher level of concentrations of >50 mg/kg PCBs found in the open excavations and stock piles of the East Plant Area. The detections of PCBs above the stop-work action limit (both work evaluation and stop work limits) have dropped to nil with the onset of cooler fall weather and reduction of soil removal and Vault placement activities (As presented in Table 2.3 from September 15, 2006 to present). It should be noted that the completion of >50 mg/kg PCB excavation and placement into the Vault is now substantially complete. Backfilling of >50 mg/kg PCB excavations and interim capping of the Vault is ongoing. The combination of these factors will serve to further reduce ambient air PCB concentrations.

4.0 PROPOSED MODIFICATION TO THE AAQMP

4.1 PROPOSED TSP MONITORING MODIFICATION

GM is proposing to replace the current high volume sampling method with real-time air monitoring for TSP at the perimeter of the Site for the remainder of the East Plant Area IM. This proposed modification is based on project experience, the dust suppression activities successfully employed to date, direct observation, real-time monitoring, and over two years of laboratory TSP monitoring results. It should also be noted that real-time monitoring is also currently being conducted within work areas by the contractors, as part of the contractors' Site health and safety programs.

The revised AAQMP will include:

- Daily real-time monitoring to be performed during any material handling activities which may potentially create airborne particulates. The real-time monitoring stations will be located between the work areas and nearest human receptors at the perimeter of the Site where Stations 1C, 14, 22B, 23, and 29, are currently found. The Contractor TSP "real-time" program will also remain in effect.
- The action level will be set at 67% above the background level. The cause of the fugitive dust will be investigated in case of any exceedance. To the extent the fugitive dust is a result of work activities, abatement actions will be taken to mitigate the potential release of TSP emissions.
- The revised approach presented above is consistent with the TSP data collected to date, the approach utilized at other project sites, and the construction activities being conducted as part of the IM and GM Powertrain Bedford Facility Removal Action (RA). Proposed TSP monitoring locations are presented on Figure 4.1.

4.2 PROPOSED PCB MONITORING MODIFICATION

A modification to the AAQMP consisting of reductions to the air monitoring for PCBs for the remainder of the East Plant Area IM is proposed based upon project experience to date. This proposed modification is based on the validated analytical results obtained from June 2005 to the present. Work practice modifications/controls and cooler temperatures have resulted in a significant decrease in detected concentrations. Also, experience in handling <50 mg/kg PCB material within the East Plant Area, and in Upstream and Downstream work areas, has demonstrated that when working with materials with lower PCB concentrations (e.g., <50 mg/kg) dust suppression techniques employed at the Site are effective at keeping PCB detections below the action level.

The revised AAQMP will include:

PCB air monitoring will be conducted at Stations 1C and 31 whenever actively disposing remaining >50 ppm material in the vault or otherwise disturbing contaminated soils in the vault until the interim/final cover is in place.

- In addition to the air monitoring noted above, Stations 1C, 22B, 23, 29, and 31 will be run at least 3 days per week when actively managing <50 ppm impacted soil materials. At least 3 samples per week will be analyzed for PCBs from the downwind monitor(s). Upon receipt of analytical data indicating a monitoring station has a detection above 1 $\mu g/m^3$ PCBs or the 0.5 $\mu g/m^3$ PCBs work area practice improvement level (action limits), we will evaluate the work area practices and make proper modifications to reduce emissions. Monitoring at the same location (or a new downwind location, if the wind direction has changed) will take place the day following receipt of the data in excess of the action limits to ensure reduction of airborne PCBs.
- Duplicate QA/QC stations will not be run. The laboratory QA/QC will remain unchanged.

Proposed PCB monitoring locations are presented on Figure 4.2.

5.0 REFERENCES

CRA, 2003, Upstream Parcel Removal Action Work Plan;

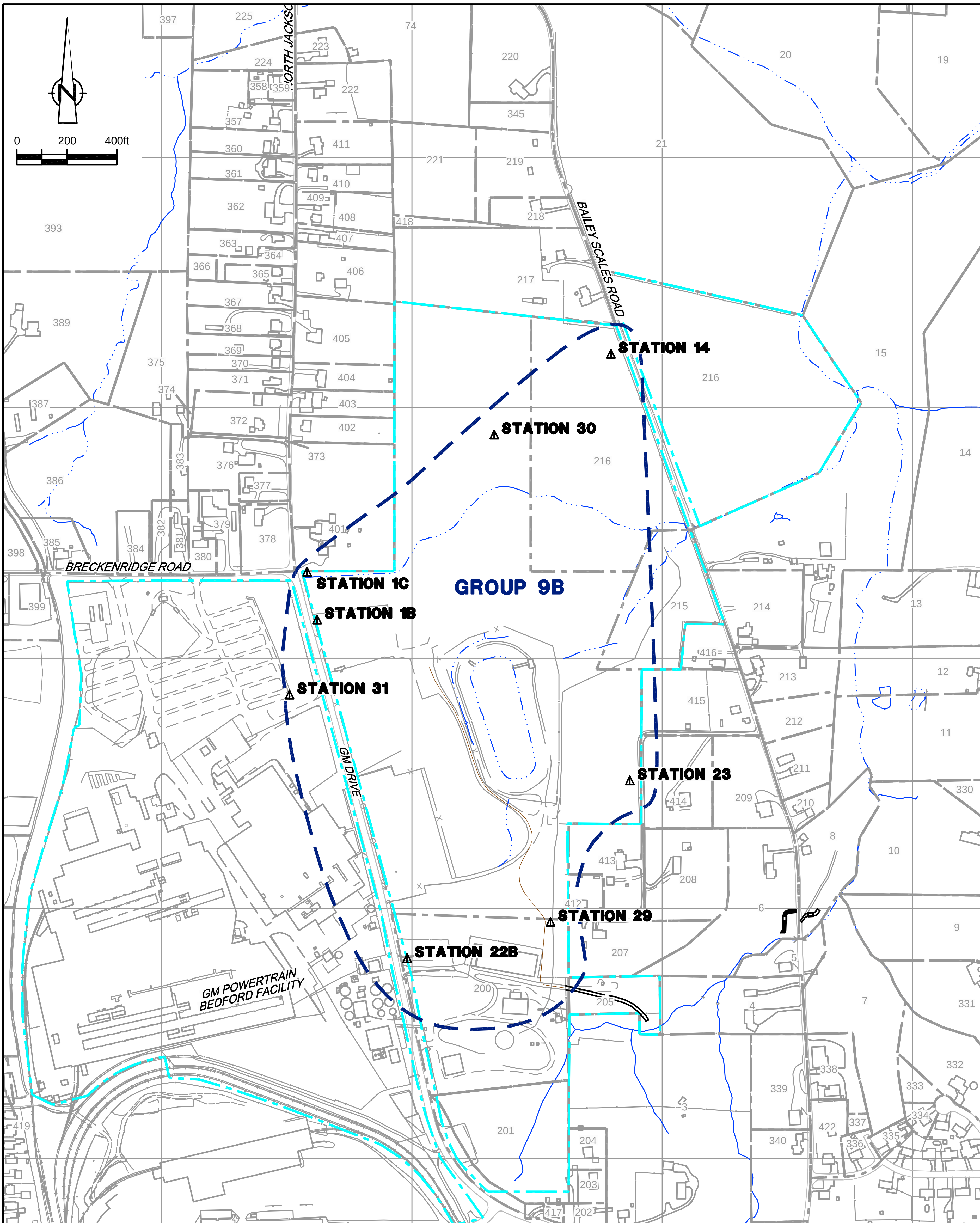
CRA, Final Proposed Modification to the AAQMP, letter to U.S. EPA, November 23, 2004;

CRA, Proposed Modification to the Ambient Air Quality Monitoring Plan, March 9, 2006;

CRA, East Plant Area Vault Design Report, June 16, 2006;

CRA, East Plant Area Over 50 mg/kg PCB Soil Removal, May 26, 2006; and

CRA, Draft East Plant Area Cover System, August 3, 2006.



SOURCE: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001.

NOTES: 1) PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. LOCATIONS MAY NOT ACCURATELY REPRESENT THE TRUE BOUNDARIES.

2) STATION 1C REPLACES STATION 1B, JUNE 2006.

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE SURFACE WATER LOCATION
- APPROXIMATE PARCEL BOUNDARY
- APPROXIMATE GM PROPERTY BOUNDARY
- STATION 3 AIR SAMPLING LOCATION
- AIR SAMPLING GROUP

figure 1.1

AIR MONITORING STATIONS - GROUP 9B
AAQMP MODIFICATIONS
GM POWERTRAIN BEDFORD FACILITY
Bedford, Indiana

CRA

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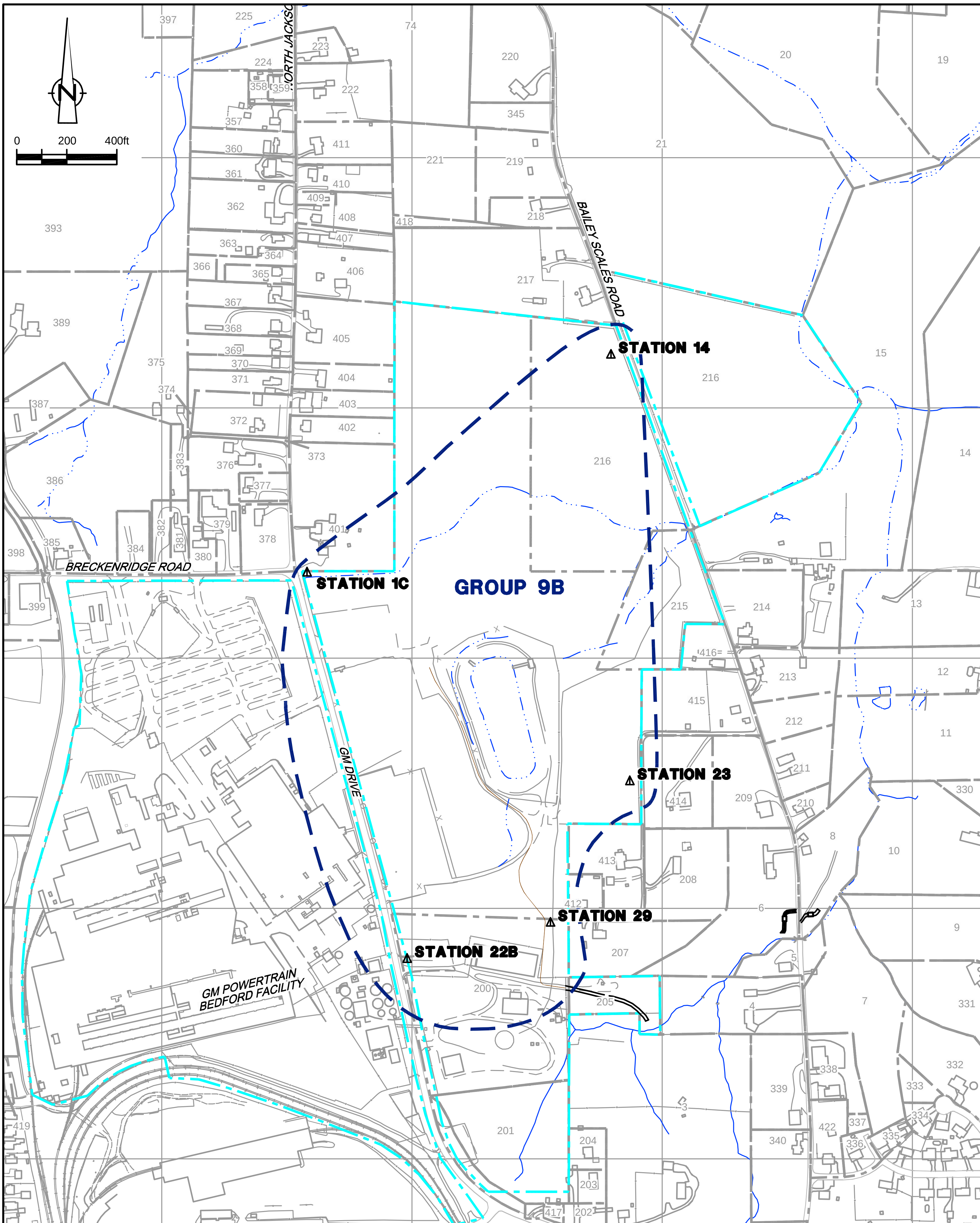

SOURCE: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001.

NOTES: 1) PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. LOCATIONS MAY NOT ACCURATELY REPRESENT THE TRUE BOUNDARIES.

2) STATION 1C REPLACES STATION 1B, JUNE 2006.

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE SURFACE WATER LOCATION
- APPROXIMATE PARCEL BOUNDARY
- APPROXIMATE GM PROPERTY BOUNDARY
- STATION 1C AIR SAMPLING LOCATION
- AIR SAMPLING GROUP

figure 4.1

PROPOSED TSP MONITORING LOCATION
AAQMP MODIFICATIONS
GM POWERTRAIN BEDFORD FACILITY
Bedford, Indiana

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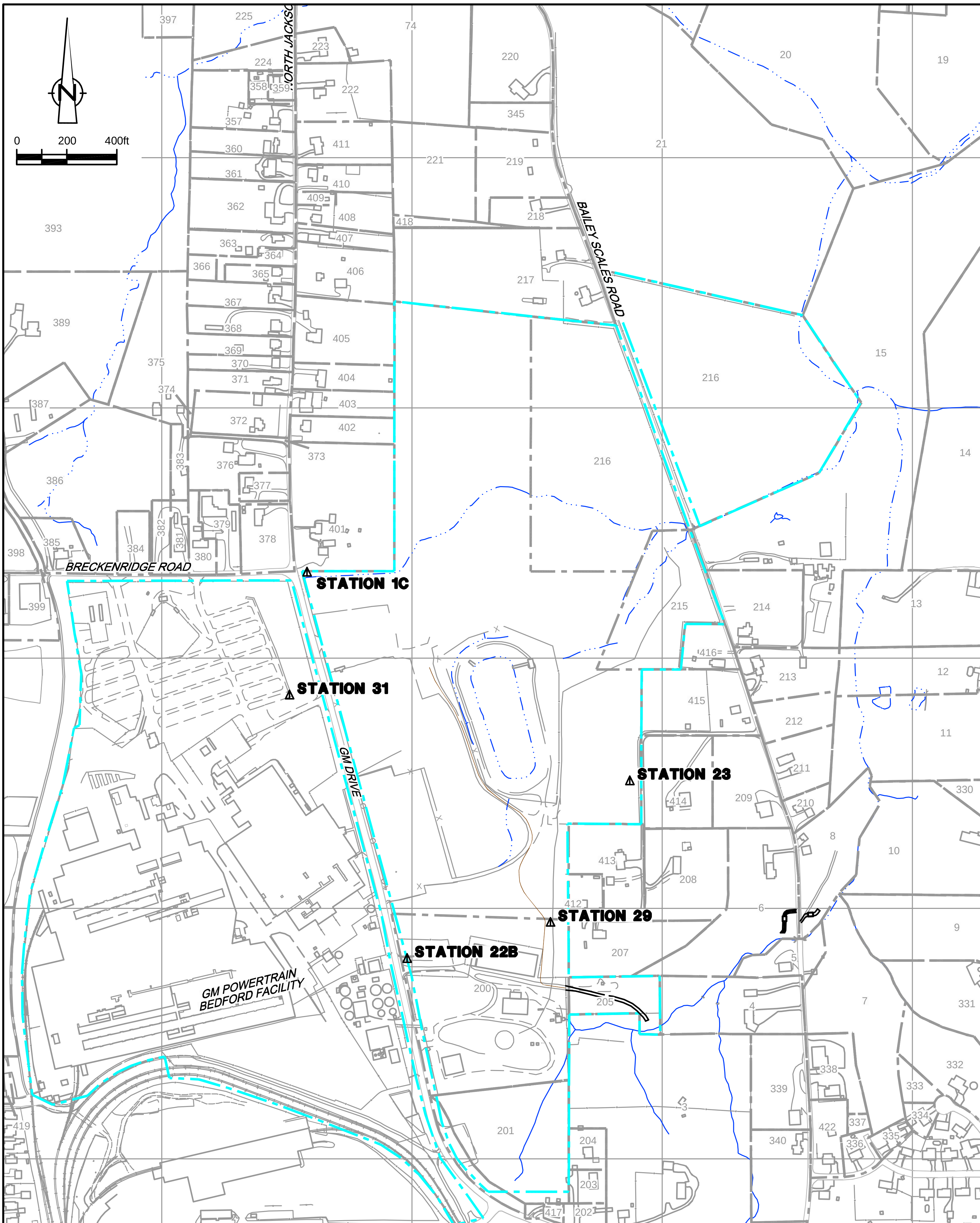

SOURCE: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001.

NOTES: 1) PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS . LOCATIONS MAY NOT ACCURATELY REPRESENT THE TRUE BOUNDARIES.

2) STATION 1C REPLACES STATION 1B, JUNE 2006.

LEGEND

- 610 — EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE SURFACE WATER LOCATION
- APPROXIMATE PARCEL BOUNDARY
- APPROXIMATE GM PROPERTY BOUNDARY
- STATION 1C — AIR SAMPLING LOCATION

figure 4.2

PROPOSED PCB MONITORING LOCATIONS
AAQMP MODIFICATIONS
GM POWERTRAIN BEDFORD FACILITY
Bedford, Indiana

CRA

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TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1B TSP-12*	*STATION 14 TSP-11 (TSP-5)*	*STATION 22B TSP-9*	*STATION 23 TSP-3*	*STATION 29 TSP-8*	*STATION 30 TSP-1*	*STATION 31 TSP-16*
5/19/2006							
Total Volume(m3)	954	NR (NR)	1437	954	1509	87	1428
Average Flow(m3/min)	0.58	NR (NR)	0.87	0.61	0.89	*	1.31
TSP Concentration(mg/m3)	0.0869	NR (NR)	0.0711	0.0611	0.0528	*	0.0401
Percent of Allowable(%)	--	NR (NR)	--	--	--	*	--
5/22/2006							
Total Volume(m3)	927	1256 (1268)	1339	776	1418	987	1812
Average Flow(m3/min)	0.61	0.9 (0.91)	0.89	0.56	0.9	0.73	1.2
TSP Concentration(mg/m3)	0.0548	0.0589 (0.0676)	0.0624	0.0684	0.0461	0.0428	0.0413
Percent of Allowable(%)	49	UPWIND (UPWIND)	55	61	41	38	37
5/23/2006							
Total Volume(m3)	935	1389 (1402)	1279	974	1295	1135	1863
Average Flow(m3/min)	0.68	0.92 (0.93)	0.93	0.66	0.96	0.76	1.34
TSP Concentration(mg/m3)	0.0718	0.0551 (0.0524)	0.0686 J	0.0496 J	0.0643 J	0.08	0.0691
Percent of Allowable(%)	67	51 (49)	64	46	UPWIND	75	64
5/24/2006							
Total Volume(m3)	1780	1237 (1334)	2110	960	1511	1034	1940
Average Flow(m3/min)	1.14	0.9 (0.97)	1.38	0.71	0.93	0.73	1.26
TSP Concentration(mg/m3)	0.1049	0.0721 (0.0643)	0.0499	0.0608	0.0719	0.0734	0.042
Percent of Allowable(%)	126	87 (77)	UPWIND	73	86	88	50
5/25/2006							
Total Volume(m3)	1410	1193 (1315)	1560	843	1230	968	416
Average Flow(m3/min)	1.1	0.87 (0.96)	1.29	0.62	0.94	0.71	*
TSP Concentration(mg/m3)	0.0799	0.0581 (0.0637)	0.0576	0.0706	0.0711	0.0799	*
Percent of Allowable(%)	83	60 (66)	UPWIND	73	74	83	*
5/30/2006							
Total Volume(m3)	1588	1380 (1454)	2084	851	1328	1017	1242
Average Flow(m3/min)	1.08	0.95 (1)	1.33	0.59	0.9	0.69	0.84
TSP Concentration(mg/m3)	0.0773	0.0638 (0.0587)	0.0436	0.0766	0.1047	0.0572	0.074
Percent of Allowable(%)	44	36 (34)	25	44	UPWIND	33	42
5/31/2006							
Total Volume(m3)	1615	1441 (1411)	1852	728	1370	1066	1191
Average Flow(m3/min)	1.12	0.97 (0.95)	1.37	0.5	0.94	0.72	0.82
TSP Concentration(mg/m3)	0.0695	0.0713 (0.0629)	0.0454	0.1059	0.1214	0.0655	0.0765
Percent of Allowable(%)	34	35 (31)	22	52	UPWIND	32	38
6/1/2006							
Total Volume(m3)	1596	1358 (1329)	1939	707	1199	1140	1280
Average Flow(m3/min)	1.11	0.97 (0.95)	1.36	0.5	0.82	0.81	0.9
TSP Concentration(mg/m3)	0.0493	0.0644 (0.0709)	0.0464	0.1184	0.1261	0.0611	0.0406
Percent of Allowable(%)	42	UPWIND (UPWIND)	39	100	107	52	34

TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1B TSP-12*	*STATION 14 TSP-11 (TSP-5)*	*STATION 22B TSP-9*	*STATION 23 TSP-3*	*STATION 29 TSP-8*	*STATION 30 TSP-1*	*STATION 31 TSP-16*
6/2/2006							
Total Volume(m3)	1647	1440 (1380)	1956	895	1284	1270	1350
Average Flow(m3/min)	1.11	0.98 (0.94)	1.34	0.61	0.84	0.86	0.91
TSP Concentration(mg/m3)	0.0326	0.0572 (0.0609)	0.0451	0.0555	0.0379	0.0404	0.0376
Percent of Allowable(%)	32	UPWIND (UPWIND)	44	55	37	40	37
6/5/2006							
Total Volume(m3)	1566	1362 (1405)	2018	1282	956	1089	1355
Average Flow(m3/min)	1.08	0.93 (0.96)	1.38	0.89	0.65	0.74	0.93
TSP Concentration(mg/m3)	0.0321	0.0566 (0.0547)	0.0538	0.0333	0.0521	0.0667	0.0637
Percent of Allowable(%)	35	UPWIND (UPWIND)	59	36	57	73	70
6/6/2006							
Total Volume(m3)	1617	1546 (1454)	1994	1006	1244	1192	1216
Average Flow(m3/min)	1.08	1.01 (0.95)	1.36	0.67	0.86	0.85	0.86
TSP Concentration(mg/m3)	0.1007	0.0752 (0.0803)	0.0699	0.0678	0.0714	0.0868	0.0799
Percent of Allowable(%)	84	63 (67)	59	57	UPWIND	73	67
6/7/2006							
Total Volume(m3)	1523	1334 (1293)	1916	830	1152	1249	467
Average Flow(m3/min)	1.11	0.96 (0.93)	1.35	0.61	0.78	0.82	*
TSP Concentration(mg/m3)	0.0486	0.041 (0.0444)	0.0501	0.0752	0.0408	0.0484	*
Percent of Allowable(%)	71	60 (65)	74	110	UPWIND	71	*
6/8/2006							
Total Volume(m3)	1302	1322 (1343)	1382	891	1363	513	1210
Average Flow(m3/min)	0.89	0.97 (0.98)	0.95	0.67	0.87	*	0.82
TSP Concentration(mg/m3)	0.047	0.0578 (0.0517)	0.0517	0.0569	0.0426	*	0.095
Percent of Allowable(%)	54	UPWIND (UPWIND)	60	66	49	*	110
6/9/2006							
Total Volume(m3)	1171	1373 (1279)	1293	1154	1224	1145	1288
Average Flow(m3/min)	0.84	0.97 (0.91)	0.93	0.83	0.86	0.81	0.92
TSP Concentration(mg/m3)	0.0681	0.0597 (0.069)	0.0681	0.0378	0.0391	0.0561	0.0638
Percent of Allowable(%)	59	UPWIND (UPWIND)	59	33	34	49	55
6/10/2006							
Total Volume(m3)	522	583 (572)	501	362	468	292	509
Average Flow(m3/min)	*	* (*)	*	*	*	*	*
TSP Concentration(mg/m3)	*	* (*)	*	*	*	*	*
Percent of Allowable(%)	*	* (*)	*	*	*	*	*
6/12/2006							
Total Volume(m3)	1337	1494 (1377)	1379	1168	1218	4	1254
Average Flow(m3/min)	0.81	1.02 (0.94)	0.89	0.67	0.71	*	0.81
TSP Concentration(mg/m3)	0.0462	0.0386 (0.0415)	0.0616	0.0566	0.0345	*	0.0949
Percent of Allowable(%)	67	UPWIND (UPWIND)	89	82	50	*	137

TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1B TSP-12*	*STATION 14 TSP-11 (TSP-5)*	*STATION 22B TSP-9*	*STATION 23 TSP-3*	*STATION 29 TSP-8*	*STATION 30 TSP-1*	*STATION 31 TSP-16*
6/13/2006							
Total Volume(m3)	1042	1397 (1426)	1278	919	981	957	1221
Average Flow(m3/min)	0.84	0.92 (0.94)	0.94	0.74	0.84	0.86	0.88
TSP Concentration(mg/m3)	0.0647	0.0278 (0.0426)	0.0738	0.0631	0.0382	0.0404	0.1496
Percent of Allowable(%)	91	UPWIND (UPWIND)	104	89	54	57	210
6/14/2006							
Total Volume(m3)	1110	1210 (1249)	1238	803	1352	1155	1157
Average Flow(m3/min)	0.84	0.89 (0.92)	0.92	0.6	0.92	0.82	0.86
TSP Concentration(mg/m3)	0.0841	0.0534 (0.0589)	0.1083	0.074	0.0564	0.0624	0.0978
Percent of Allowable(%)	85	UPWIND (UPWIND)	110	75	57	63	99
6/15/2006							
Total Volume(m3)	1313	1298 (1314)	1411	286	1348	1160	1184
Average Flow(m3/min)	0.89	0.9 (0.91)	0.92	*	0.92	0.81	0.81
TSP Concentration(mg/m3)	0.2136	0.0994 (0.1002)	0.079	*	0.0763	0.0734	0.1497
Percent of Allowable(%)	168	78 (79)	62	*	UPWIND	58	117
6/16/2006							
Total Volume(m3)	1175	1276 (1318)	1236	13	1318	1153	1139
Average Flow(m3/min)	0.84	0.9 (0.93)	0.92	*	0.92	0.81	0.81
TSP Concentration(mg/m3)	0.2638	0.0731 (0.0774)	0.0725	*	0.0519	0.0709	0.1169
Percent of Allowable(%)	304	84 (89)	84	*	UPWIND	82	135
6/17/2006							
Total Volume(m3)	1359	1431 (1430)	1490		1525	1286	1311
Average Flow(m3/min)	0.83	0.91 (0.91)	0.91		0.91	0.81	0.8
TSP Concentration(mg/m3)	0.177	0.0348 (0.0518)	0.0626		0.056	0.0868	0.0629
Percent of Allowable(%)	169	33 (50)	UPWIND		54	83	60
6/19/2006							
Total Volume(m3)	1114	1194 (1222)	1331	1256	1250	1097	1218
Average Flow(m3/min)	0.8	0.84 (0.86)	0.95	0.92	0.88	0.77	0.87
TSP Concentration(mg/m3)	0.123	0.0456 (0.0459)	0.0609	0.0498	0.055	0.0549	0.0491
Percent of Allowable(%)	121	45 (45)	UPWIND	49	54	54	48
6/20/2006							
Total Volume(m3)	NR	1283 (1293)	1621	1343	1323	1176	1182
Average Flow(m3/min)	NR	0.88 (0.89)	0.96	0.96	0.91	0.8	0.82
TSP Concentration(mg/m3)	NR	0.0536 (0.0561)	0.0835	0.0572	0.0661	0.0571	0.062
Percent of Allowable(%)	NR	38 (40)	UPWIND	41	47	41	44

TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	***STATION 1C*** ***TSP-12***	***STATION 14*** ***TSP-11 (TSP-5)***	***STATION 22B*** ***TSP-9***	***STATION 23*** ***TSP-3***	***STATION 29*** ***TSP-8***	***STATION 30*** ***TSP-1***	***STATION 31*** ***TSP-16***
6/21/2006							
Total Volume(m3)	742	1248 (1278)	1342	1340	1486	1158	1158
Average Flow(m3/min)	0.66	0.88 (0.9)	0.97	0.95	0.9	0.8	0.79
TSP Concentration(mg/m3)	0.1716	0.0772 (0.0864)	0.084	0.0726	0.123	0.0959	0.0129
Percent of Allowable(%)	122	55 (62)	UPWIND	52	88	68	9
6/22/2006							
Total Volume(m3)	1154	1335 (1278)	1435	1309	1376	1174	1120
Average Flow(m3/min)	0.81	0.93 (0.89)	0.96	0.93	0.91	0.81	0.78
TSP Concentration(mg/m3)	0.0939	0.0553 (0.0667)	0.0617	0.0731	0.062	0.0575	0.0646
Percent of Allowable(%)	91	54 (65)	UPWIND	71	60	56	63
6/23/2006							
Total Volume(m3)	1249	1395 (1392)	1151	586	1048	1260	1120
Average Flow(m3/min)	0.91	0.97 (0.97)	0.97	*	0.9	0.87	0.82
TSP Concentration(mg/m3)	0.0392	0.0338 (0.0409)	0.0602	*	0.0344	0.0209	0.0739
Percent of Allowable(%)	57	UPWIND (UPWIND)	88	*	50	31	108
6/24/2006							
Total Volume(m3)	1093	1272 (1362)	1361	0	1297	1238	1274
Average Flow(m3/min)	0.77	0.87 (0.93)	0.97	*	0.9	0.86	0.89
TSP Concentration(mg/m3)	0.0554	0.0616 (0.0599)	0.0699	*	0.0465	0.0426	0.0827
Percent of Allowable(%)	55	UPWIND (UPWIND)	70	*	46	43	83
6/26/2006							
Total Volume(m3)	1044	1243 (1256)	1302		1131	1223	1159
Average Flow(m3/min)	0.78	0.85 (0.86)	0.93		0.86	0.83	0.86
TSP Concentration(mg/m3)	0.0839	0.0507 (0.0515)	0.0624		0.0579	0.038	0.0728
Percent of Allowable(%)	87	52 (53)	65		UPWIND	39	75
6/27/2006							
Total Volume(m3)	1192	1332 (1332)	1350		1358	1226	1199
Average Flow(m3/min)	0.83	0.92 (0.92)	0.97		0.94	0.86	0.83
TSP Concentration(mg/m3)	0.1694	0.0572 (0.0589)	0.1087		0.0703	0.0484	0.0622
Percent of Allowable(%)	163	55 (57)	105		68	47	UPWIND
6/28/2006							
Total Volume(m3)	1189	1357 (1355)	1402	1110	1259	1265	1194
Average Flow(m3/min)	0.83	0.92 (0.92)	0.97	0.92	0.87	0.86	0.83
TSP Concentration(mg/m3)	0.1779	0.0474 (0.0496)	0.0904	0.0803	0.0901	0.045	0.0614
Percent of Allowable(%)	118	31 (33)	UPWIND	53	60	30	41
6/29/2006							
Total Volume(m3)	1191	1406 (1377)	1319	1283	1392	1258	1198
Average Flow(m3/min)	0.83	0.92 (0.9)	0.91	0.92	0.96	0.87	0.85
TSP Concentration(mg/m3)	0.1082	0.0546 (0.0606)	0.1029	0.0686	0.0545	0.0417	0.0908
Percent of Allowable(%)	107	UPWIND (UPWIND)	102	68	54	41	90

TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1C TSP-12*	*STATION 14 TSP-11 (TSP-5)*	*STATION 22B TSP-9*	*STATION 23 TSP-3*	*STATION 29 TSP-8*	*STATION 30 TSP-1*	*STATION 31 TSP-16*
6/30/2006							
Total Volume(m3)	1500	1332 (1363)	1541	1437	1581	1359	1405
Average Flow(m3/min)	0.88	0.9 (0.92)	0.91	0.92	0.9	0.87	0.83
TSP Concentration(mg/m3)	0.1177	0.0637 (0.0643)	0.0857	0.0588	0.0662	0.0699	0.0806
Percent of Allowable(%)	82	45 (45)	UPWIND	41	46	49	56
7/3/2006							
Total Volume(m3)	1293	1799 (1663)	1392	1721	1407	3	1314
Average Flow(m3/min)	0.8	0.97 (0.96)	0.87	1	0.85	*	0.82
TSP Concentration(mg/m3)	0.1259	0.0565 (0.0384)	0.0815	0.0679	0.0828	*	0.0744
Percent of Allowable(%)	93	42 (28)	UPWIND	50	61	*	55
7/5/2006							
Total Volume(m3)	919	1565 (1290)	1137	1507	1264	4	1106
Average Flow(m3/min)	0.72	1.08 (0.89)	0.88	1.06	0.91	*	0.85
TSP Concentration(mg/m3)	0.069	0.0231 (0.0505)	0.0898	0.05	0.0305	*	0.0841
Percent of Allowable(%)	82	UPWIND (UPWIND)	106	59	36	*	100
7/6/2006							
Total Volume(m3)	1241	1623 (1448)	1437	1554	1384	1248	1231
Average Flow(m3/min)	0.81	1.09 (0.97)	0.92	1.07	0.96	0.96	0.84
TSP Concentration(mg/m3)	0.0493	0.0404 (0.0484)	0.0869	0.0244	0.0516	0.027	0.1094
Percent of Allowable(%)	61	UPWIND (UPWIND)	108	30	64	33	135
7/7/2006							
Total Volume(m3)	1040	1550 (1294)	1252	1458	1341	1165	1154
Average Flow(m3/min)	0.8	1.09 (0.91)	0.92	1.02	0.97	0.82	0.89
TSP Concentration(mg/m3)	0.0312	0.0344 (0.0457)	0.16	0.0396	0.0257	0.0489	0.0764
Percent of Allowable(%)	41	UPWIND (UPWIND)	210	52	34	64	100
7/8/2006							
Total Volume(m3)	1256	1763 (1424)	1427	1391	1456	1228	1316
Average Flow(m3/min)	0.8	1.15 (0.93)	0.95	0.95	0.95	0.81	0.83
TSP Concentration(mg/m3)	0.1763 J	0.04 J (0.0581 J)	0.0672 J	0.0597 J	0.0442 J	0.0628 J	0.1065 J
Percent of Allowable(%)	239	54 (79)	91	81	UPWIND	85	144
7/10/2006							
Total Volume(m3)	997	1366 (1324)	1227	1174	1283	1098	1174
Average Flow(m3/min)	0.7	0.95 (0.92)	0.86	0.84	0.89	0.77	0.82
TSP Concentration(mg/m3)	0.1099	0.0592 (0.0514)	0.0769	0.0575	0.0627	0.0805	0.0721
Percent of Allowable(%)	86	46 (40)	UPWIND	45	49	63	56
7/17/2006							
Total Volume(m3)	1088	1401 (1312)	1237	1196	1269	17	1205
Average Flow(m3/min)	0.75	0.97 (0.91)	0.86	0.83	0.87	*	0.82
TSP Concentration(mg/m3)	0.0867	0.0594 (0.0607)	0.084	0.0735	0.0735	*	0.0841
Percent of Allowable(%)	62	42 (43)	UPWIND	52	52	*	60

TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1C* *TSP-12*	*STATION 14* *TSP-11 (TSP-5)*	*STATION 22B* *TSP-9*	*STATION 23* *TSP-3*	*STATION 29* *TSP-8*	*STATION 30* *TSP-1*	*STATION 31* *TSP-16*
7/18/2006							
Total Volume(m3)	1106	436 (457)	1130	1365	1292	792	1150
Average Flow(m3/min)	0.78	* (*)	0.8	0.98	0.9	0.78	0.8
TSP Concentration(mg/m3)	0.0023	* (*)	0.1603	0.076	0.0685	0.09	0.1131
Percent of Allowable(%)	4	* (*)	298	141	127	167	210
7/19/2006							
Total Volume(m3)	NR	1436 (NR)	1240	1389	1335	1174	1178
Average Flow(m3/min)	NR	0.97 (NR)	0.85	0.96	0.9	0.8	0.8
TSP Concentration(mg/m3)	NR	0.0841 (NR)	0.105	0.0896	0.0866	0.0958	0.153
Percent of Allowable(%)	NR	58 (NR)	73	62	UPWIND	66	106
7/20/2006							
Total Volume(m3)	1178	1194 (1291)	1267	1064	1442	1109	1134
Average Flow(m3/min)	0.8	0.86 (0.93)	0.83	0.79	0.92	0.8	0.78
TSP Concentration(mg/m3)	0.0789	0.0729 (0.0649)	0.0997	0.0914	0.0716	0.0814	0.0802
Percent of Allowable(%)	66	61 (54)	83	76	UPWIND	68	67
7/21/2006							
Total Volume(m3)	1124	1182 (1304)	1164		1238	1094	1259
Average Flow(m3/min)	0.83	0.86 (0.95)	0.86		0.9	0.8	0.93
TSP Concentration(mg/m3)	0.052	0.057 (0.0518)	0.0519		0.0536	0.0512	0.0237
Percent of Allowable(%)	60	UPWIND (UPWIND)	60		62	59	27
7/22/2006							
Total Volume(m3)	1662	1411 (1634)			1582	1408	1518
Average Flow(m3/min)	0.95	0.83 (0.96)			0.91	0.81	0.86
TSP Concentration(mg/m3)	0.0278	0.0322 (0.0204)			0.0273	0.0276	0.0295
Percent of Allowable(%)	82	UPWIND (UPWIND)			80	81	87
7/24/2006							
Total Volume(m3)	1125	1108 (1172)	1073		1314	1132	1138
Average Flow(m3/min)	0.84	0.87 (0.92)	0.79		0.95	0.92	0.85
TSP Concentration(mg/m3)	0.0421	0.0562 (0.0529)	0.077		0.0644	0.0107	0.0773
Percent of Allowable(%)	39	52 (49)	72		UPWIND	10	72
7/25/2006							
Total Volume(m3)	1289	1312 (1324)	1235	1067	1428	1268	1251
Average Flow(m3/min)	0.88	0.86 (0.95)	0.84	0.79	0.96	0.92	0.85
TSP Concentration(mg/m3)	0.0874	0.0723 (0.0725)	0.1161	0.0991	0.0884	0.0677	0.0845
Percent of Allowable(%)	45	37 (37)	UPWIND	51	46	35	44
7/26/2006							
Total Volume(m3)	1291	1300 (1383)	1241	1108	1452	1348	1228
Average Flow(m3/min)	0.87	0.88 (0.93)	0.82	0.78	0.94	0.91	0.82
TSP Concentration(mg/m3)	0.0787	0.0771 (0.0645)	0.0943	0.0702		0.1115	0.082
Percent of Allowable(%)	50	49 (41)	UPWIND	45		71	52

TABLE 2.1

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AAQMP MODIFICAITONS
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BEDFORD, INDIANA

Unit_ID	*STATION 1C TSP-12*	*STATION 14 TSP-11 (TSP-5)*	*STATION 22B TSP-9*	*STATION 23 TSP-3*	*STATION 29 TSP-8*	*STATION 30 TSP-1*	*STATION 31 TSP-16*
7/28/2006							
Total Volume(m3)	1057	1223 (1371)	495	1186	1063	1282	1177
Average Flow(m3/min)	0.75	0.84 (0.94)	0.35	0.83	0.74	0.89	0.83
TSP Concentration(mg/m3)	0.0702	0.0459 (0.0441)	0.0923	0.0617	0.0685	0.0542	0.039
Percent of Allowable(%)	46	30 (29)	UPWIND	40	44	35	25
7/29/2006							
Total Volume(m3)	1276	1226 (1477)	1187	1150	1144	1357	1143
Average Flow(m3/min)	0.88	0.84 (1.01)	0.81	0.81	0.77	0.94	0.78
TSP Concentration(mg/m3)	0.0614	0.0662 (0.0538)	0.093	0.0863	0.0853	0.0629	0.073
Percent of Allowable(%)	40	43 (35)	UPWIND	56	55	40	47
7/31/2006							
Total Volume(m3)	1218	1363 (1739)	1320	1195	1172	1271	1255
Average Flow(m3/min)	0.88	0.98 (1.25)	0.94	0.88	0.82	0.92	0.9
TSP Concentration(mg/m3)	0.0632	0.0836 (ND(0.0006))	0.0735	0.0837	0.0708	0.0488	0.059
Percent of Allowable(%)	53	71 ()	62	71	UPWIND	41	50
8/1/2006							
Total Volume(m3)	1342	1504 (1824)	1329	1189	1192	1307	1147
Average Flow(m3/min)	0.92	1.02 (1.24)	0.92	0.84	0.8	0.9	0.78
TSP Concentration(mg/m3)	0.0537	0.0592 (0.0471)	0.0895	0.0732	0.0956	0.0765	0.0802
Percent of Allowable(%)	36	40 (32)	UPWIND	49	64	51	54
8/2/2006							
Total Volume(m3)	1269	1501 (1812)	1393	1214	1039	1292	1177
Average Flow(m3/min)	0.88	1.02 (1.23)	0.94	0.84	0.71	0.9	0.81
TSP Concentration(mg/m3)	0.0749	0.0546 (0.0375)	0.0818	0.0774	0.0982	0.0766	0.0663
Percent of Allowable(%)	55	40 (27)	UPWIND	57	72	56	49
8/3/2006							
Total Volume(m3)	1143	1489 (1793)	1227	1375	1116	1117	1052
Average Flow(m3/min)	0.79	1.02 (1.23)	0.85	0.95	0.77	0.78	0.77
TSP Concentration(mg/m3)	0.0744	0.0564 (0.048)	0.1108	0.0916	0.1918	0.0734	0.0846
Percent of Allowable(%)	40	30 (26)	UPWIND	50	104	40	46
8/4/2006							
Total Volume(m3)	1269	1321 (1590)	1326	1243	1192	1167	1146
Average Flow(m3/min)	0.89	1.03 (1.24)	0.91	0.87	0.81	0.84	0.8
TSP Concentration(mg/m3)	0.0244	0.0341 J (0.0176 J)	0.0762	0.0378	0.0394	0.0171	0.0672
Percent of Allowable(%)	83	UPWIND (UPWIND)	259	129	134	58	229
8/5/2006							
Total Volume(m3)	1432	1632 (1950)	1595	1301	1180	1305	1262
Average Flow(m3/min)	0.88	1.03 (1.23)	0.96	0.83	0.7	0.82	0.77
TSP Concentration(mg/m3)	0.0377	0.0423 J (0.0231 J)	0.0571	0.0523	0.061	0.0743	0.1577
Percent of Allowable(%)	98	UPWIND (UPWIND)	148	136	158	193	409

TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
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BEDFORD, INDIANA

Unit_ID	*STATION 1C TSP-12*	*STATION 14 TSP-11 (TSP-5)*	*STATION 22B TSP-9*	*STATION 23 TSP-3*	*STATION 29 TSP-8*	*STATION 30 TSP-1*	*STATION 31 TSP-16*
8/7/2006							
Total Volume(m3)	1250	1430 (1747)	1353	1217	990	1045	1180
Average Flow(m3/min)	0.86	0.99 (1.21)	0.91	0.86	0.66	0.72	0.8
TSP Concentration(mg/m3)	0.064	0.0552 (0.0361)	0.0739	0.0871	0.1253	0.0612	0.072
Percent of Allowable(%)	106	UPWIND (UPWIND)	123	144	208	102	119
8/8/2006							
Total Volume(m3)	886	1213 (1429)	1074	773	770	908	1042
Average Flow(m3/min)	0.74	1.01 (1.19)	0.89	0.71	0.63	0.76	0.87
TSP Concentration(mg/m3)	0.0429	0.0322 (0.0301)	0.0615	0.0414	0.0429	0.0385	0.0345
Percent of Allowable(%)	85	UPWIND (UPWIND)	122	82	85	77	69
8/10/2006							
Total Volume(m3)	1126	1329 (1302)	1365	1175	899	1132	1089
Average Flow(m3/min)	0.8	0.96 (0.94)	1.03	0.86	0.67	0.82	0.81
TSP Concentration(mg/m3)	0.0533	0.0346 (0.0399)	0.0498	0.0451	0.0356	0.0362	0.0505
Percent of Allowable(%)	80	UPWIND (UPWIND)	75	68	53	54	76
8/11/2006							
Total Volume(m3)	1405	1377 (1392)	1456	1176	932	1178	1239
Average Flow(m3/min)	1.01	0.95 (0.96)	1.01	0.83	0.64	0.82	0.86
TSP Concentration(mg/m3)	0.0413	0.0552 (0.0467)	0.0446	0.0595	0.0515	0.034	0.0428
Percent of Allowable(%)	53	UPWIND (UPWIND)	57	76	66	44	55
8/12/2006							
Total Volume(m3)	1800	1634 (1699)	1690	769	1236	1401	1499
Average Flow(m3/min)	1.02	0.96 (1)	0.98	0.46	0.71	0.83	0.88
TSP Concentration(mg/m3)	0.0167	0.0386 J (0.0206 J)	0.0396	0.0598	0.021	0.0457	0.042
Percent of Allowable(%)	49	UPWIND (UPWIND)	115	174	61	133	122
8/14/2006							
Total Volume(m3)	1026	1184 (1197)	1355	1100	1075	1175	175
Average Flow(m3/min)	0.73	0.84 (0.85)	0.97	0.79	0.76	0.84	*
TSP Concentration(mg/m3)	0.0507	0.0524 (0.0618)	0.048	0.07	0.0558	0.0494	*
Percent of Allowable(%)	63	65 (77)	UPWIND	87	70	62	*
8/15/2006							
Total Volume(m3)	1010	1378 (1432)	1464	1139	1412	1255	325
Average Flow(m3/min)	0.71	0.96 (1)	1.02	0.81	0.98	0.88	*
TSP Concentration(mg/m3)	0.0307	0.0356 J (0.1068 J)	0.0546	0.0536	0.0191	0.0582	*
Percent of Allowable(%)	17	UPWIND (UPWIND)	31	30	11	33	*
8/16/2006							
Total Volume(m3)	874	1363 (1420)	1366	1142	1260	1251	1069
Average Flow(m3/min)	0.65	0.96 (1)	1.02	0.82	0.86	0.89	0.89
TSP Concentration(mg/m3)	0.0629	0.0455 J (0.0218 J)	0.0483	0.042	0.0317	0.1143	0.0393
Percent of Allowable(%)	173	UPWIND (UPWIND)	133	115	87	314	108

TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
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BEDFORD, INDIANA

Unit_ID	***STATION 1C*** ***TSP-12***	***STATION 14*** ***TSP-11 (TSP-5)***	***STATION 22B*** ***TSP-9***	***STATION 23*** ***TSP-3***	***STATION 29*** ***TSP-8***	***STATION 30*** ***TSP-1***	***STATION 31*** ***TSP-16***
8/17/2006							
Total Volume(m3)	467	1369 (1340)	711	1105	1221	1250	321
Average Flow(m3/min)	*	0.95 (0.93)	*	0.79	0.85	0.88	*
TSP Concentration(mg/m3)	*	0.0628 (0.0672)	*	0.0561	0.0434	0.2256	*
Percent of Allowable(%)	*	87 (93)	*	77	UPWIND	311	*
8/18/2006							
Total Volume(m3)	472	1334 (1307)	736	940	1287	1211	638
Average Flow(m3/min)	*	0.95 (0.93)	*	0.67	0.85	0.87	*
TSP Concentration(mg/m3)	*	0.0652 (0.065)	*	0.0617	0.0513	0.1387	*
Percent of Allowable(%)	*	76 (76)	*	72	UPWIND	162	*
8/19/2006							
Total Volume(m3)	377	1309 (1309)	671	1139	1013	1137	573
Average Flow(m3/min)	*	0.95 (0.95)	*	0.82	0.75	0.84	*
TSP Concentration(mg/m3)	*	0.0481 (0.0466)	*	0.0781	0.0731	0.0607	*
Percent of Allowable(%)	*	UPWIND (UPWIND)	*	100	94	78	*
8/21/2006							
Total Volume(m3)	756	1381 (1428)	1536	1165	1045	1209	1292
Average Flow(m3/min)	0.5	0.94 (0.97)	1	0.82	0.77	0.83	0.84
TSP Concentration(mg/m3)	0.0807	0.0587 (0.0511)	0.0658	0.0609	0.0498	0.1803	0.0906
Percent of Allowable(%)	95	UPWIND (UPWIND)	77	71	58	211	106
8/22/2006							
Total Volume(m3)	817	1249 (1304)	959	1144	1179	1226	1176
Average Flow(m3/min)	0.58	0.89 (0.93)	0.68	0.83	0.83	0.89	0.84
TSP Concentration(mg/m3)	0.0661	0.0633 (0.0713)	0.1397	0.0778	0.056	0.4307	0.0969
Percent of Allowable(%)	56	UPWIND (UPWIND)	117	65	47	362	81
8/23/2006							
Total Volume(m3)	859	1291 (1366)	1088	1077	965	1222	1271
Average Flow(m3/min)	0.57	0.88 (0.93)	0.76	0.74	0.67	0.85	0.92
TSP Concentration(mg/m3)	0.1234	0.0883 (0.0615)	0.1232	0.0854	0.1098	0.563	0.0732
Percent of Allowable(%)	120	UPWIND (UPWIND)	120	83	107	548	71
8/24/2006							
Total Volume(m3)	781	1269 (1312)	1064	1182	922	1240	1285
Average Flow(m3/min)	0.57	0.88 (0.91)	0.73	0.86	0.63	0.88	0.93
TSP Concentration(mg/m3)	0.1293	0.2025 (0.1974)	0.1081	0.1007	0.0954	1.1726	0.0607
Percent of Allowable(%)	81	127 (124)	68	63	UPWIND	736	38
8/25/2006							
Total Volume(m3)	710	1300 (1359)	1163	1192	840	1131	1221
Average Flow(m3/min)	0.5	0.87 (0.91)	0.81	0.81	0.58	0.77	0.85
TSP Concentration(mg/m3)	0.1366	0.1362 (0.1332)	0.08	0.0864	0.0952	0.3165	0.0975
Percent of Allowable(%)	86	86 (84)	50	54	UPWIND	199	61

TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1C TSP-12*	*STATION 14 TSP-11 (TSP-5)*	*STATION 22B TSP-9*	*STATION 23 TSP-3*	*STATION 29 TSP-8*	*STATION 30 TSP-1*	*STATION 31 TSP-16*
8/26/2006							
Total Volume(m3)	826	1475 (1526)	1324	1392	1053	1299	1465
Average Flow(m3/min)	0.47	0.88 (0.91)	0.75	0.84	0.59	0.78	0.83
TSP Concentration(mg/m3)	0.115	0.0827 (0.0826)	0.0702	0.0589	0.0693	0.2071	0.0526
Percent of Allowable(%)	99	71 (71)	61	51	UPWIND	179	45
8/29/2006							
Total Volume(m3)	898	1184 (1228)	1129	1097	742	1065	1198
Average Flow(m3/min)	0.64	0.84 (0.87)	0.8	0.8	0.52	0.76	0.86
TSP Concentration(mg/m3)	0.0468	0.0312 (0.0228)	0.0399	0.0693	0.0404	0.0122	0.0242
Percent of Allowable(%)	UPWIND	40 (29)	51	89	52	16	31
8/30/2006							
Total Volume(m3)	867	1259 (1317)	1179	1206	833	1147	1150
Average Flow(m3/min)	0.6	0.86 (0.9)	0.8	0.86	0.56	0.79	0.78
TSP Concentration(mg/m3)	0.0358	0.0477 (0.0532)	0.0696	0.0531	0.0348	0.0227	0.0557
Percent of Allowable(%)	40	UPWIND (UPWIND)	78	60	39	26	63
8/31/2006							
Total Volume(m3)	879	1286 (1328)	1217	1316	936	1118	1351
Average Flow(m3/min)	0.58	0.89 (0.92)	0.8	0.88	0.61	0.79	0.9
TSP Concentration(mg/m3)	0.0387	0.0638 (0.0595)	0.0863	0.0608	0.0449	0.0331	0.0326
Percent of Allowable(%)	39	UPWIND (UPWIND)	87	61	45	33	33
9/5/2006							
Total Volume(m3)	696	1243 (1257)	1119	1258	847	1146	1216
Average Flow(m3/min)	0.49	0.85 (0.86)	0.78	0.88	0.58	0.8	0.85
TSP Concentration(mg/m3)	0.0618	0.0418 (0.0414)	0.092	0.0612	0.0626	0.0279	0.0461
Percent of Allowable(%)	89	UPWIND (UPWIND)	133	89	91	40	67
9/6/2006							
Total Volume(m3)	714	1317 (1344)	1273	1067	801	1162	1158
Average Flow(m3/min)	0.49	0.91 (0.93)	0.87	0.75	0.54	0.8	0.79
TSP Concentration(mg/m3)	0.049	0.0342 (0.0387)	0.0542	0.0459	0.0699	0.031	0.0389
Percent of Allowable(%)	76	UPWIND (UPWIND)	84	71	108	48	60
9/7/2006							
Total Volume(m3)	1183	1286 (1285)	1094	1077	813	1123	1130
Average Flow(m3/min)	0.84	0.91 (0.91)	0.77	0.77	0.57	0.8	0.79
TSP Concentration(mg/m3)	0.0617	0.0505 (0.0475)	0.0868	0.052	0.075	0.0481	0.0894
Percent of Allowable(%)	49	40 (38)	69	42	UPWIND	38	71
9/8/2006							
Total Volume(m3)	1135	1375 (1375)	1124	1409	1186	1219	1113
Average Flow(m3/min)	0.76	0.91 (0.91)	0.75	0.96	0.78	0.82	0.76
TSP Concentration(mg/m3)	0.0705	0.0582 (0.064)	0.1059	0.0781	0.0329	0.0509	0.1177
Percent of Allowable(%)	128	106 (116)	193	142	UPWIND	93	214

TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1C TSP-12*	*STATION 14 TSP-11 (TSP-5)*	*STATION 22B TSP-9*	*STATION 23 TSP-3*	*STATION 29 TSP-8*	*STATION 30 TSP-1*	*STATION 31 TSP-16*
9/9/2006							
Total Volume(m3)	1187	1642 (1573)	1220	1599	1293	1422	1265
Average Flow(m3/min)	0.7	0.97 (0.93)	0.71	0.96	0.75	0.85	0.79
TSP Concentration(mg/m3)	0.0556	0.0445 (0.0598)	0.1	0.0588	0.0688	0.0506	0.0798
Percent of Allowable(%)	56	UPWIND (UPWIND)	100	59	69	51	80
9/11/2006							
Total Volume(m3)	931	1072 (1281)	995	1324	1060	1087	1122
Average Flow(m3/min)	0.65	0.76 (0.9)	0.7	0.94	0.74	0.77	0.79
TSP Concentration(mg/m3)	0.043	0.0401 (0.0367)	0.0492	0.0393	0.0358	0.0386	0.0437
Percent of Allowable(%)	72	67 (61)	82	66	UPWIND	65	73
9/14/2006							
Total Volume(m3)	1035	1201 (1201)	1040	1315	1119	1136	1218
Average Flow(m3/min)	0.73	0.83 (0.83)	0.72	0.92	0.77	0.8	0.85
TSP Concentration(mg/m3)	0.029	0.0233 (0.0316)	0.0481	0.0471	0.0268	0.0238	0.0361
Percent of Allowable(%)	55	UPWIND (UPWIND)	91	89	51	45	68
9/15/2006							
Total Volume(m3)	1582	1292 (1366)	1133	1431	1250	1207	1188
Average Flow(m3/min)	1	0.88 (0.93)	0.73	0.99	0.8	0.83	0.77
TSP Concentration(mg/m3)	0.0265	0.0356 (0.0388)	0.0565	0.037	0.0376	0.034	0.0648
Percent of Allowable(%)	41	UPWIND (UPWIND)	87	57	58	52	100
9/16/2006							
Total Volume(m3)	1523	902 (951)	1179	1517	1284	1293	1364
Average Flow(m3/min)	1	0.88 (0.93)	0.73	0.96	0.77	0.82	0.85
TSP Concentration(mg/m3)	0.0361	0.0421 (0.0389)	0.0492	0.0369	0.0366	0.0472	0.0315
Percent of Allowable(%)	59	69 (64)	80	60	UPWIND	77	52
9/18/2006							
Total Volume(m3)	856	1170 (1364)	958	1096	1208	1140	1114
Average Flow(m3/min)	0.62	0.98 (0.94)	0.69	0.93	0.85	0.77	0.77
TSP Concentration(mg/m3)	0.0479	0.0154 (0.0117)	0.0355	0.0411	0.0116	0.014	0.0189
Percent of Allowable(%)	81	26 (20)	UPWIND	69	20	24	32
9/19/2006							
Total Volume(m3)	1394	1329 (1315)	1063	1300	1150	1184	1207
Average Flow(m3/min)	0.98	0.96 (0.95)	0.74	0.9	0.78	0.85	0.84
TSP Concentration(mg/m3)	0.0882	0.0105 J (0.0259 J)	0.079	0.0685	0.0435	0.0211	0.0331
Percent of Allowable(%)	UPWIND	7 (18)	54	47	30	14	22
9/20/2006							
Total Volume(m3)	1246	1384 (1383)	1100	1144	1227	1288	1268
Average Flow(m3/min)	0.87	0.95 (0.95)	0.77	0.8	0.83	0.89	0.88
TSP Concentration(mg/m3)	0.0257	0.0202 (0.0145)	0.0582	0.0149	0.0171	0.0093	0.0386
Percent of Allowable(%)	UPWIND	47 (34)	136	35	40	22	90

TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1C TSP-12*	*STATION 14 TSP-11 (TSP-5)*	*STATION 22B TSP-9*	*STATION 23 TSP-3*	*STATION 29 TSP-8*	*STATION 30 TSP-1*	*STATION 31 TSP-16*
9/21/2006							
Total Volume(m3)	1142	1413 (1341)	1108	1055	1134	1181	1224
Average Flow(m3/min)	0.79	0.99 (0.94)	0.79	0.75	0.79	0.84	0.84
TSP Concentration(mg/m3)	0.0403	0.0354 (0.038)	0.0397	0.0237	0.0256	0.0415	0.0449
Percent of Allowable(%)	94	83 (89)	93	55	UPWIND	97	105
9/25/2006							
Total Volume(m3)	1116	1381 (1266)	1087	930	1117	1319	1279
Average Flow(m3/min)	0.78	0.97 (0.89)	0.77	0.68	0.78	0.93	0.91
TSP Concentration(mg/m3)	0.1057	0.0268 (0.034)	0.0736	0.0301	0.0439	0.0258	0.0461
Percent of Allowable(%)	144	37 (46)	100	41	UPWIND	35	63
9/26/2006							
Total Volume(m3)	1157	1386 (1276)	1178	964	1172	1298	1198
Average Flow(m3/min)	0.81	0.98 (0.9)	0.83	0.69	0.82	0.92	0.84
TSP Concentration(mg/m3)	0.083	0.0339 (0.0392)	0.0688	0.0207	0.0427	0.0401	0.0409
Percent of Allowable(%)	72	30 (34)	UPWIND	18	37	35	36
9/27/2006							
Total Volume(m3)	1274	1393 (1334)	1178	1033	1202	1286	1278
Average Flow(m3/min)	0.89	0.97 (0.93)	0.82	0.73	0.83	0.91	0.89
TSP Concentration(mg/m3)	0.062	0.0416 (0.048)	0.0942	0.0339	0.0632	0.0435	0.0266
Percent of Allowable(%)	39	26 (31)	UPWIND	22	40	28	17
9/28/2006							
Total Volume(m3)	1451	1456 (1364)	1227	1047	1189	1399	1305
Average Flow(m3/min)	0.97	0.97 (0.91)	0.83	0.7	0.81	0.94	0.87
TSP Concentration(mg/m3)	0.0296	0.0185 (0.0242)	0.0823	0.0334	0.0177	0.0129	0.0322
Percent of Allowable(%)	73	UPWIND (UPWIND)	204	83	44	32	80
9/29/2006							
Total Volume(m3)	959	1446 (1318)	1199	918	1232	1323	1171
Average Flow(m3/min)	0.68	1.02 (0.93)	0.85	0.66	0.86	0.94	0.84
TSP Concentration(mg/m3)	0.0719	0.0256 (0.0288)	0.0475	0.0251	0.0325	0.0325	0.029
Percent of Allowable(%)	91	32 (36)	UPWIND	32	41	41	37
9/30/2006							
Total Volume(m3)	1614	1617 (1539)	1345	1095	1343	1486	1444
Average Flow(m3/min)	1.02	1.01 (0.96)	0.83	0.7	0.81	0.93	0.9
TSP Concentration(mg/m3)	0.0316	0.0303 (0.0221)	0.0483	0.032	0.0454	0.033	0.0263
Percent of Allowable(%)	39	38 (27)	UPWIND	40	56	41	33
10/2/2006							
Total Volume(m3)	1380	1193 (1390)	1183	1407	1206	1176	1258
Average Flow(m3/min)	0.91	0.85 (0.99)	0.79	0.98	0.8	0.85	0.84
TSP Concentration(mg/m3)	0.058	0.0427 (0.046)	0.0676	0.0327	0.0539	0.0655	0.0437
Percent of Allowable(%)	51	38 (41)	UPWIND	29	48	58	39

TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1C TSP-12*	*STATION 14 TSP-11 (TSP-5)*	*STATION 22B TSP-9*	*STATION 23 TSP-3*	*STATION 29 TSP-8*	*STATION 30 TSP-1*	*STATION 31 TSP-16*
10/4/2006							
Total Volume(m3)	1257	1275 (1344)	1167	1144	1130	1179	1177
Average Flow(m3/min)	0.89	0.91 (0.96)	0.82	0.82	0.79	0.84	0.83
TSP Concentration(mg/m3)	0.0811	0.0541 (0.0506)	0.096	0.0682	0.0912	0.056	0.0527
Percent of Allowable(%)	51	34 (32)	UPWIND	43	57	35	33
10/5/2006							
Total Volume(m3)	1289	1578 (1561)	1238	1451	1452	1405	1375
Average Flow(m3/min)	0.9	1.06 (1.05)	0.85	1.01	0.97	0.96	0.95
TSP Concentration(mg/m3)	0.0147	0.0266 (0.0218)	0.0759	0.0262	0.0145	0.0128	0.0182
Percent of Allowable(%)	40	UPWIND (UPWIND)	208	72	40	35	50
10/6/2006							
Total Volume(m3)	1075	1499 (1361)	1837	1328	1144	1189	1304
Average Flow(m3/min)	0.76	1.1 (1)	1.33	0.98	0.82	0.88	0.93
TSP Concentration(mg/m3)	0.0372	0.02 (0.0309)	0.0523	0.0392	0.035	0.0219	0.0299
Percent of Allowable(%)	72	UPWIND (UPWIND)	101	76	68	42	58
10/7/2006							
Total Volume(m3)	1377	1819 (1748)	2279	1640	1483	1559	1595
Average Flow(m3/min)	0.78	1.05 (1.01)	1.31	0.95	0.84	0.9	0.91
TSP Concentration(mg/m3)	0.0414	0.0231 (0.0349)	0.0351	0.0402	0.0243	0.0276	0.0401
Percent of Allowable(%)	71	UPWIND (UPWIND)	60	69	42	47	69
10/9/2006							
Total Volume(m3)	967	1373 (1405)	1777	1312	1200	1122	1191
Average Flow(m3/min)	0.68	0.94 (0.96)	1.23	0.92	0.82	0.78	0.83
TSP Concentration(mg/m3)	0.1148	0.0393 (0.0484)	0.0557	0.0488	0.04	0.0597	0.0915
Percent of Allowable(%)	142	UPWIND (UPWIND)	69	60	49	74	113
10/10/2006							
Total Volume(m3)	1157	1476 (1490)	1901	1367	1221	1207	1217
Average Flow(m3/min)	0.79	0.99 (1)	1.28	0.94	0.81	0.82	0.82
TSP Concentration(mg/m3)	0.1288	0.0562 (0.0611)	0.0626	0.0549	0.0647	0.0953	0.1487
Percent of Allowable(%)	123	54 (58)	UPWIND	53	62	91	142
10/11/2006							
Total Volume(m3)	2573	1373 (1417)	1858	1447	1213	1219	1221
Average Flow(m3/min)	1.82	0.95 (0.98)	1.3	0.99	0.83	0.85	0.84
TSP Concentration(mg/m3)	0.0163	0.016 J (0.0289 J)	0.0301	0.0415	0.0528	0.0328	0.0262
Percent of Allowable(%)	32	32 (57)	UPWIND	83	105	65	52
10/12/2006							
Total Volume(m3)	1100	1114 (1378)	1914	1420	1240	1281	1341
Average Flow(m3/min)	0.79	0.76 (0.94)	1.33	1.02	0.85	0.88	0.95
TSP Concentration(mg/m3)	0.0855	0.0377 (0.0377)	0.0418	0.0444	0.0597	0.0414	0.035
Percent of Allowable(%)	122	54 (54)	UPWIND	64	86	59	50

TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1C TSP-12*	*STATION 14 TSP-11 (TSP-5)*	*STATION 22B TSP-9*	*STATION 23 TSP-3*	*STATION 29 TSP-8*	*STATION 30 TSP-1*	*STATION 31 TSP-16*
10/13/2006							
Total Volume(m3)	1155	1129 (1381)	1967	1655	1365	1285	1311
Average Flow(m3/min)	0.81	0.76 (0.93)	1.34	1.15	0.91	0.88	0.91
TSP Concentration(mg/m3)	0.0788	0.0523 (0.0319)	0.0447	0.035	0.0637	0.0475	0.0397
Percent of Allowable(%)	106	70 (43)	UPWIND	47	85	64	53
10/14/2006							
Total Volume(m3)	1000	1066 (1313)	1223	1207	NR	1227	616
Average Flow(m3/min)	0.69	0.77 (0.95)	0.86	0.86	NR	0.89	0.43
TSP Concentration(mg/m3)	0.085	0.0432 J (0.016 J)	0.0515	0.0646	NR	0.0367	0.0763
Percent of Allowable(%)	99	50 (19)	UPWIND	75	NR	43	89
10/16/2006							
Total Volume(m3)	997	988 (1327)	1190	1299	1083	1212	541
Average Flow(m3/min)	0.69	0.67 (0.9)	0.81	0.89	0.81	0.83	0.37
TSP Concentration(mg/m3)	0.0221	0.0152 (0.0151)	0.0202	0.0239	0.0139	0.019	0.0518
Percent of Allowable(%)	95	65 (65)	87	103	UPWIND	82	223
10/17/2006							
Total Volume(m3)	1024	892 (1276)	1179	1258	1178	1201	473
Average Flow(m3/min)	0.73	0.65 (0.93)	0.82	0.88	0.82	0.84	0.33
TSP Concentration(mg/m3)	0.0283	0.0314 J (0.0157 J)	0.0483	0.0342	0.0314	0.0241	0.0634
Percent of Allowable(%)	35	39 (19)	UPWIND	42	39	30	79
10/18/2006							
Total Volume(m3)	1442	999 (1325)	1224	1255	1299	1225	2007
Average Flow(m3/min)	0.99	0.68 (0.9)	0.83	0.87	0.88	0.84	1.36
TSP Concentration(mg/m3)	0.0347	0.043 (0.0506)	0.0539	0.0478	0.0293	0.0245	0.0284
Percent of Allowable(%)	71	88 (103)	110	98	UPWIND	50	58
10/19/2006							
Total Volume(m3)	1276	1081 (1306)	1234	1257	1164	1220	1922
Average Flow(m3/min)	0.91	0.76 (0.92)	0.87	0.9	0.82	0.88	1.39
TSP Concentration(mg/m3)	0.0133	0.013 (0.0107)	0.0308	0.0772	0.0189	0.0066	0.013
Percent of Allowable(%)	UPWIND	59 (48)	139	348	85	30	59
10/20/2006							
Total Volume(m3)	1523	1051 (1449)	1260	1342	1268	1496	597
Average Flow(m3/min)	1.03	0.69 (0.95)	0.86	0.9	0.84	0.94	0.41
TSP Concentration(mg/m3)	0.0525	0.0533 J (0.0317 J)	0.0548	0.0432	0.0331	0.0154	0.0787
Percent of Allowable(%)	95	96 (57)	99	78	UPWIND	28	142
10/21/2006							
Total Volume(m3)	1648	1074 (1461)	1308	1457	1300	1310	2261
Average Flow(m3/min)	1.02	0.69 (0.94)	0.82	0.95	0.83	0.89	1.42
TSP Concentration(mg/m3)	0.0231	0.0419 J (0.0226 J)	0.026	0.0213	0.0231	0.0153	0.0164
Percent of Allowable(%)	60	109 (59)	67	55	UPWIND	40	43

TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
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BEDFORD, INDIANA

Unit_ID	*STATION 1C TSP-12*	*STATION 14 TSP-11 (TSP-5)*	*STATION 22B TSP-9*	*STATION 23 TSP-3*	*STATION 29 TSP-8*	*STATION 30 TSP-1*	*STATION 31 TSP-16*
10/23/2006							
Total Volume(m3)	1347	1032 (1358)	1944	1329	1293	1230	2029
Average Flow(m3/min)	0.94	0.7 (0.92)	1.34	0.92	0.88	0.84	1.41
TSP Concentration(mg/m3)	0.0505	0.0281 (0.0258)	0.0448	0.0813	0.0526	0.0244	0.0217
Percent of Allowable(%)	UPWIND	33 (31)	53	96	62	29	26
10/24/2006							
Total Volume(m3)	1504	1121 (1322)	1963	1308	1294	1252	1997
Average Flow(m3/min)	1.07	0.78 (0.92)	1.37	0.93	0.9	0.88	1.41
TSP Concentration(mg/m3)	0.0485	0.0473 (0.0439)	0.0438	0.0497	0.0325	0.0184	0.031
Percent of Allowable(%)	UPWIND	58 (54)	54	61	40	23	38
10/25/2006							
Total Volume(m3)	1589	826 (1359)	1979	1344	1275	1297	1229
Average Flow(m3/min)	1.08	0.72 (0.93)	1.32	0.93	0.87	0.91	0.85
TSP Concentration(mg/m3)	0.056	0.0593 (0.0589)	0.0273	0.0417	0.0212	0.037	0.0773
Percent of Allowable(%)	158	167 (166)	77	118	UPWIND	105	218
10/26/2006							
Total Volume(m3)	1235	1029 (1364)	1890	1293	1316	1157	1179
Average Flow(m3/min)	0.88	0.71 (0.94)	1.35	0.92	0.91	0.79	0.83
TSP Concentration(mg/m3)	0.0162	0.0175 (0.0117)	0.0111	0.0209	0.0129	0.0121	0.0399
Percent of Allowable(%)	46	50 (34)	32	UPWIND	37	35	114
10/27/2006							
Total Volume(m3)	1556	NR (NR)	1870	1365	1089	1166	1195
Average Flow(m3/min)	1.08	NR (NR)	1.29	0.93	0.73	0.77	0.82
TSP Concentration(mg/m3)	ND(0.0006)	NR (NR)	0.0176	0.0418	NR	0.0137	0.0502
Percent of Allowable(%)	NR	NR (NR)	77	183	NR	UPWIND	219
10/28/2006							
Total Volume(m3)	981	841 (1301)	1211	1309	1124	1119	1204
Average Flow(m3/min)	0.66	0.6 (0.93)	0.82	0.91	0.76	0.81	0.81
TSP Concentration(mg/m3)	0.0683	0.0309 J (0.0085 J)	0.033	0.0474	0.0383	0.0223	0.0249
Percent of Allowable(%)	124	56 (15)	UPWIND	86	69	40	45
10/30/2006							
Total Volume(m3)	794	900 (1262)	1153	6	1040	860	1216
Average Flow(m3/min)	0.56	0.62 (0.87)	0.81	*	0.71	0.71	0.86
TSP Concentration(mg/m3)	0.1096	0.0833 (0.0507)	0.0338	*	0.0654	0.1419	0.0452
Percent of Allowable(%)	194	148 (90)	UPWIND	*	116	251	80
10/31/2006							
Total Volume(m3)	985	870 (1097)	1227	15	1137	0	1192
Average Flow(m3/min)	0.69	0.73 (0.92)	0.85	*	0.77	*	0.83
TSP Concentration(mg/m3)	0.0538	0.0264 (ND (0.0009))	0.0424	*	0.0255	*	0.0445
Percent of Allowable(%)	122	UPWIND (UPWIND)	96	*	58	*	101

TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1C TSP-12*	*STATION 14 TSP-11 (TSP-5)*	*STATION 22B TSP-9*	*STATION 23 TSP-3*	*STATION 29 TSP-8*	*STATION 30 TSP-1*	*STATION 31 TSP-16*
11/1/2006							
Total Volume(m3)	1048	1094 (1351)	1214	4	1196	0	1293
Average Flow(m3/min)	0.72	0.76 (0.94)	0.84	*	0.82	*	0.9
TSP Concentration(mg/m3)	0.0821	0.0201 (0.0355)	0.0857	*	0.0192	*	0.0565
Percent of Allowable(%)	UPWIND	15 (26)	63	*	14	*	41
11/2/2006							
Total Volume(m3)	1089	1154 (1410)	1210	11	1129	0	1352
Average Flow(m3/min)	0.77	0.8 (0.98)	0.85	*	0.78	*	0.95
TSP Concentration(mg/m3)	0.0716	0.0485 (0.0142)	0.0983	*	0.0735	*	0.0422
Percent of Allowable(%)	58	40 (12)	80	*	UPWIND	*	34
11/3/2006							
Total Volume(m3)	1072	669 (868)	1297	33	1299	0	1342
Average Flow(m3/min)	0.73	* (*)	0.85	*	0.84	*	0.91
TSP Concentration(mg/m3)	0.1054	* (*)	0.0933	*	0.0431	*	0.0544
Percent of Allowable(%)	146	* (*)	130	*	UPWIND	*	76
11/4/2006							
Total Volume(m3)	1196	1013 (1536)	1347	1468	1267	0	1429
Average Flow(m3/min)	0.73	0.73 (0.99)	0.84	1.09	0.78	*	0.89
TSP Concentration(mg/m3)	0.0385	0.0602 (0.0475)	0.046	0.0334	0.041	*	0.0301
Percent of Allowable(%)	56	88 (69)	67	49	UPWIND	*	44
11/6/2006							
Total Volume(m3)	1034	449 (1301)	953	1296	1122	1	1111
Average Flow(m3/min)	0.76	0.3 (0.87)	0.7	0.97	0.82	*	0.81
TSP Concentration(mg/m3)	0.028	0.0735 (0.0323)	0.0325	0.027	0.0481	*	0.063
Percent of Allowable(%)	35	92 (40)	40	34	UPWIND	*	78
11/7/2006							
Total Volume(m3)	884	323 (1378)	1221	1434	1267	30	1123
Average Flow(m3/min)	0.62	0.22 (0.94)	0.84	0.99	0.86	*	0.79
TSP Concentration(mg/m3)	0.0192	0.031 (0.0145)	0.0156	0.0502	0.0237	*	0.0169
Percent of Allowable(%)	79	UPWIND (UPWIND)	64	207	98	*	70
11/8/2006							
Total Volume(m3)	1007	327 (1239)	1179	1414	1295	2	604
Average Flow(m3/min)	0.71	0.24 (0.91)	0.8	0.98	0.86	*	0.39
TSP Concentration(mg/m3)	0.0536	0.1193 (0.0484)	0.1332	0.0474	0.0595	*	0.1026
Percent of Allowable(%)	24	54 (22)	UPWIND	21	27	*	46
11/9/2006							
Total Volume(m3)	877	321 (1416)	931	1366	1195	779	1054
Average Flow(m3/min)	0.61	0.21 (0.93)	0.66	0.98	0.83	0.65	0.78
TSP Concentration(mg/m3)	0.2178	0.2181 (0.077)	0.1547	0.0454	0.0728	0.086	0.0806
Percent of Allowable(%)	84	84 (30)	UPWIND	18	28	33	31

TABLE 2.1

EAST PLANT AREA TSP ANALYTICAL RESULTS SUMMARY
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1C* *TSP-12*	*STATION 14* *TSP-11 (TSP-5)*	*STATION 22B* *TSP-9*	*STATION 23* *TSP-3*	*STATION 29* *TSP-8*	*STATION 30* *TSP-1*	*STATION 31* *TSP-16*
11/10/2006							
Total Volume(m3)	1234	511 (1340)	1104	1188	1253	1157	1127
Average Flow(m3/min)	0.88	0.35 (0.92)	0.77	0.84	0.86	0.76	0.79
TSP Concentration(mg/m3)	0.0632	0.0294 (0.0396)	0.058	0.021	0.0519	0.0458	0.0417
Percent of Allowable(%)	65	30 (41)	UPWIND	22	54	47	43
11/11/2006							
Total Volume(m3)	1068	430 (1543)	1243	1471	1418	1408	1267
Average Flow(m3/min)	0.68	0.27 (0.97)	0.78	0.94	0.87	0.87	0.83
TSP Concentration(mg/m3)	0.0225	0.0326 (0.0175)	0.0306	0.07	0.0141	0.0107	0.0213
Percent of Allowable(%)	UPWIND	87 (47)	81	186	38	28	57
11/12/2006							
Total Volume(m3)	1143	614 (1343)	1029	1342	1532	949	1149
Average Flow(m3/min)	0.9	0.47 (1.03)	0.79	1.05	1.15	0.84	0.88
TSP Concentration(mg/m3)	0.0131	0.0212 (0.0067)	0.0301	0.0216	0.0137	0.0169	0.0235
Percent of Allowable(%)	36	59 (19)	83	UPWIND	38	47	65
11/13/2006							
Total Volume(m3)	922	421 (1191)	1146	1355	1380	1241	1313
Average Flow(m3/min)	0.64	0.29 (0.82)	0.79	0.95	0.93	0.84	0.91
TSP Concentration(mg/m3)	0.0564	0.0926 (0.0285)	0.0672	0.0266	0.0297	0.0363	0.0213
Percent of Allowable(%)	114	187 (57)	135	54	UPWIND	73	43
11/14/2006							
Total Volume(m3)	946	749 (1396)	1141	1327	1302	1193	1153
Average Flow(m3/min)	0.65	0.51 (0.95)	0.79	0.92	0.89	0.81	0.8
TSP Concentration(mg/m3)	0.0349	0.0401 (0.0279)	0.028	0.0294	0.0177	0.031	0.0399
Percent of Allowable(%)	71	82 (57)	57	UPWIND	36	63	81
11/15/2006							
Total Volume(m3)	901	584 (1305)	863	1237	1317	1013	1077
Average Flow(m3/min)	0.64	0.42 (0.94)	0.61	0.88	0.91	0.7	0.76
TSP Concentration(mg/m3)	0.0078	0.0325 (0.0199)	0.0394	0.021	0.0068	0.0118	0.013
Percent of Allowable(%)	23	UPWIND (UPWIND)	119	63	20	36	39

Notes:
* - Results not reported due to machine malfunction
NR - No result because machine was not setup
J - Estimated Result
Station 1C replaced Station 1B June 21, 2006.

TABLE 2.2

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2005 THROUGH APRIL 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

	STATION 1B	*STATION 14*	*STATION 22*	*STATION 23*
Unit_ID	*PUF-7*	*PUF-12(PUF-4)*	*PUF-3*	*PUF-2*
6/1/2005				
Total Volume(m3)	NR	319(235)	NR	NR
Total PCB Mass(ug)	NR	3.8(4.3)	NR	NR
PCB Concentration(ug/m3)	NR	0.0119(0.0183)	NR	NR
Percent of Allowable(%)	NR	1(2)	NR	NR
6/9/2005				
Total Volume(m3)	NR	328(228)	NR	NR
Total PCB Mass(ug)	NR	14(19)	NR	NR
PCB Concentration(ug/m3)	NR	0.0427(0.0833)	NR	NR
Percent of Allowable(%)	NR	4(8)	NR	NR
6/15/2005				
Total Volume(m3)	308	306(236)	35	253
Total PCB Mass(ug)	6.3	2.5(2.8)	*	5.4
PCB Concentration(ug/m3)	0.0205	0.0082(0.0119)	*	0.0213
Percent of Allowable(%)	2	1(1)	*	2
6/16/2005				
Total Volume(m3)	345	224(171)	57	207
Total PCB Mass(ug)	14	3.9(5.1)	*	3.9
PCB Concentration(ug/m3)	0.0406	0.0174(0.0298)	*	0.0188
Percent of Allowable(%)	4	2(3)	*	2
6/17/2005				
Total Volume(m3)	385	312(237)	143	365
Total PCB Mass(ug)	8.3	3.6(3.6)	2.3	7.1
PCB Concentration(ug/m3)	0.0216	0.0115(0.0152)	0.0161	0.0195
Percent of Allowable(%)	2	1(2)	2	2
6/20/2005				
Total Volume(m3)	343	318(249)	133	NR
Total PCB Mass(ug)	56	15(16)	10	NR
PCB Concentration(ug/m3)	0.1633	0.0472(0.0643)	0.0752	NR
Percent of Allowable(%)	16	5(6)	8	NR
6/21/2005				
Total Volume(m3)	376	277(316)	128	265
Total PCB Mass(ug)	12	7.2(7.3)	2.7	8.1
PCB Concentration(ug/m3)	0.0319	0.026(0.0231)	0.0211	0.0306 J
Percent of Allowable(%)	3	3(2)	2	3
6/22/2005				
Total Volume(m3)	361	311(354)	142	343
Total PCB Mass(ug)	93	14(14)	8.6	9.1
PCB Concentration(ug/m3)	0.2576	0.045(0.0395)	0.0606	0.0265
Percent of Allowable(%)	26	4(4)	6	3
6/29/2005				
Total Volume(m3)	411	325(NR)	140	325
Total PCB Mass(ug)	76	21(NR)	5.8	14
PCB Concentration(ug/m3)	0.1849	0.0646(NR)	0.0414	0.0431 J
Percent of Allowable(%)	18	6(NR)	4	4

TABLE 2.2

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2005 THROUGH APRIL 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

	STATION 1B	*STATION 14*	*STATION 22*	*STATION 23*
Unit_ID	*PUF-7*	*PUF-12(PUF-4)*	*PUF-3*	*PUF-2*
7/6/2005				
Total Volume(m3)	314	304(NR)	83	335
Total PCB Mass(ug)	38	7.7(NR)	1.9	7.2
PCB Concentration(ug/m3)	0.121	0.0253(NR)	0.0229	0.0215
Percent of Allowable(%)	12	3(NR)	2	2
7/13/2005				
Total Volume(m3)	379	300(342)	119	364
Total PCB Mass(ug)	33	2.8(3)	2.5	2.9
PCB Concentration(ug/m3)	0.0871 J	0.0093(0.0088)	0.021	0.008
Percent of Allowable(%)	9	1(1)	2	1
7/20/2005				
Total Volume(m3)	355	320(334)	132	82
Total PCB Mass(ug)	20	14(17)	3.1	*
PCB Concentration(ug/m3)	0.0563 J	0.0438(0.0509)	0.0235 J	*
Percent of Allowable(%)	6	4(5)	2	*
7/28/2005				
Total Volume(m3)	348	165(180)	129	350
Total PCB Mass(ug)	25	*(*)	2.5	7.1
PCB Concentration(ug/m3)	0.0718	*(*)	0.0194	0.0203
Percent of Allowable(%)	7	*(*)	2	2
8/3/2005				
Total Volume(m3)	365	319(348)	130	364
Total PCB Mass(ug)	37	19(22)	7.2	7.3
PCB Concentration(ug/m3)	0.1014	0.0596(0.0632)	0.0554	0.0201
Percent of Allowable(%)	10	6(6)	6	2
8/10/2005				
Total Volume(m3)	337	307(321)	126	346
Total PCB Mass(ug)	27	12(13)	10	7.9
PCB Concentration(ug/m3)	0.0801 J	0.0391(0.0405)	0.0794	0.0228
Percent of Allowable(%)	8	4(4)	8	2
8/17/2005				
Total Volume(m3)	343	0(1)	142	371
Total PCB Mass(ug)	93	*(*)	47	6.1
PCB Concentration(ug/m3)	0.2711	*(*)	0.331	0.0164 J
Percent of Allowable(%)	27	*(*)	33	2
8/24/2005				
Total Volume(m3)	NR	150(131)	148	372
Total PCB Mass(ug)	NR	*(*)	73	13
PCB Concentration(ug/m3)	NR	*(*)	0.4932	0.0349
Percent of Allowable(%)	NR	*(*)	49	3
9/1/2005				
Total Volume(m3)	NR	2(2)	157	381
Total PCB Mass(ug)	NR	*(*)	97	31
PCB Concentration(ug/m3)	NR	*(*)	0.6178	0.0814
Percent of Allowable(%)	NR	*(*)	62	8

TABLE 2.2

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2005 THROUGH APRIL 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1B* *PUF-7*	*STATION 14* *PUF-12(PUF-4)*	*STATION 22* *PUF-3*	*STATION 23* *PUF-2*
9/8/2005				
Total Volume(m3)	NR	238(216)	133	184
Total PCB Mass(ug)	NR	32(29)	47	*
PCB Concentration(ug/m3)	NR	0.1345(0.1343)	0.3534	*
Percent of Allowable(%)	NR	13(13)	35	*
9/14/2005				
Total Volume(m3)	NR	3(2)	128	364
Total PCB Mass(ug)	NR	*(*)	77	42
PCB Concentration(ug/m3)	NR	*(*)	0.6016	0.1154
Percent of Allowable(%)	NR	*(*)	60	12
10/12/2005				
Total Volume(m3)	NR	387(318)	146	362
Total PCB Mass(ug)	NR	21(22)	45	18
PCB Concentration(ug/m3)	NR	0.0543(0.0692)	0.3082	0.0497
Percent of Allowable(%)	NR	5(7)	31	5
10/26/2005				
Total Volume(m3)	NR	371(314)	120	358
Total PCB Mass(ug)	NR	8.9(8.5)	18	21
PCB Concentration(ug/m3)	NR	0.024(0.0271)	0.15 J	0.0587
Percent of Allowable(%)	NR	2(3)	15	6
11/2/2005				
Total Volume(m3)	292	323(308)	170	279
Total PCB Mass(ug)	68	17(15)	2.3	19
PCB Concentration(ug/m3)	0.2329	0.0526(0.0487)	0.0135	0.0681
Percent of Allowable(%)	23	5(5)	1	7
11/9/2005				
Total Volume(m3)	398	364(320)	159	349
Total PCB Mass(ug)	2	0.78(0.75)	10	74
PCB Concentration(ug/m3)	0.005	0.0021(0.0023)	0.0629	0.212
Percent of Allowable(%)	0	0(0)	6	21
11/30/2005				
Total Volume(m3)	407	332(293)	164	336
Total PCB Mass(ug)	11	2(2.2)	7.4	11
PCB Concentration(ug/m3)	0.027	0.006(0.0075)	0.0451	0.0327
Percent of Allowable(%)	3	1(1)	5	3
12/7/2005				
Total Volume(m3)	373	409(366)	135	425
Total PCB Mass(ug)	3.6	0.95(0.76)	3	8.1
PCB Concentration(ug/m3)	0.0097 J	0.0023 J(0.0021 J)	0.0222 J	0.0191 J
Percent of Allowable(%)	1	0(0)	2	2
12/21/2005				
Total Volume(m3)	425	450(434)	16	396
Total PCB Mass(ug)	5.1	2.7(2.6)	*	4.9
PCB Concentration(ug/m3)	0.012	0.006(0.006)	*	0.0124
Percent of Allowable(%)	1	1(1)	*	1

TABLE 2.2

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2005 THROUGH APRIL 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1B* *PUF-7*	*STATION 14* *PUF-12(PUF-4)*	*STATION 22* *PUF-3*	*STATION 23* *PUF-2*
1/4/2006				
Total Volume(m3)	NR (399)	397(411)	146	84
Total PCB Mass(ug)	NR (2.9)	0(0)	5.7	*
PCB Concentration(ug/m3)	NR (0.0073)	ND(0.0019)(ND(0.0018))	0.039	*
Percent of Allowable(%)	NR (1)	--(--)	4	*
1/12/2006				
Total Volume(m3)	NR (428)	481(531)	145	408
Total PCB Mass(ug)	NR (24)	5.5(5.3)	1.2	3.3
PCB Concentration(ug/m3)	NR (0.0561)	0.0114(0.01 J)	0.0083	0.0081
Percent of Allowable(%)	NR (6)	1(1)	1	1
1/18/2006				
Total Volume(m3)	NR (412)	368(420)	141	346
Total PCB Mass(ug)	NR (6.2)	1(0.98)	0.6	1.9
PCB Concentration(ug/m3)	NR (0.015)	0.0027(0.0023)	0.0043 J	0.0055
Percent of Allowable(%)	NR (2)	0(0)	0	1
1/25/2006				
Total Volume(m3)	NR (355)	448(418)	2	384
Total PCB Mass(ug)	NR (3)	2.4(2.9)	*	25
PCB Concentration(ug/m3)	NR (0.0085)	0.0054(0.0069)	*	0.0651
Percent of Allowable(%)	NR (1)	1(1)	*	7
2/1/2006				
Total Volume(m3)	NR (364)	469(466)	147	453
Total PCB Mass(ug)	NR (8.1)	12(13)	9.1	15
PCB Concentration(ug/m3)	NR (0.0223)	0.0256(0.0279)	0.0619	0.0331
Percent of Allowable(%)	NR (2)	3(3)	6	3
2/7/2006				
Total Volume(m3)	NR (357)	353(367)	19	327
Total PCB Mass(ug)	NR (1.2)	0.78(0.94)	*	22
PCB Concentration(ug/m3)	NR (0.0034)	0.0022(0.0026)	*	0.0673
Percent of Allowable(%)	NR (0)	0(0)	*	7
2/13/2006				
Total Volume(m3)	NR (414)	379(452)	142	391
Total PCB Mass(ug)	NR (1.6)	5.5(6.4)	0.91	3.8
PCB Concentration(ug/m3)	NR (0.0039 J)	0.0145(0.0142)	0.0064	0.0097 J
Percent of Allowable(%)	NR (0)	1(1)	1	1
2/20/2006				
Total Volume(m3)	NR (371)	421(NR)	125	415
Total PCB Mass(ug)	NR (2.2)	1.7(NR)	1.3	3.2
PCB Concentration(ug/m3)	NR (0.0059)	0.004(NR)	0.0104	0.0077
Percent of Allowable(%)	NR (1)	0(NR)	1	1
2/27/2006				
Total Volume(m3)	NR (369)	360(402)	113	376
Total PCB Mass(ug)	NR (7.8)	6.6(6.1)	6.4	8.4
PCB Concentration(ug/m3)	NR (0.0211)	0.0183(0.0152)	0.0566	0.0223
Percent of Allowable(%)	NR (2)	2(2)	6	2

TABLE 2.2

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2005 THROUGH APRIL 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

	STATION 1B	*STATION 14*	*STATION 22*	*STATION 23*
Unit_ID	*PUF-7*	*PUF-12(PUF-4)*	*PUF-3*	*PUF-2*
3/6/2006				
Total Volume(m3)	NR (330)	341(399)	117	358
Total PCB Mass(ug)	NR (3.4)	2(2.3)	9.5	7.4
PCB Concentration(ug/m3)	NR (0.0103)	0.0059(0.0058 J)	0.0812	0.0207 J
Percent of Allowable(%)	NR (1)	1(1)	8	2
3/15/2006				
Total Volume(m3)	NR (349)	395(381)	130	367
Total PCB Mass(ug)	NR (14)	4.7(4.7)	8.4	14
PCB Concentration(ug/m3)	NR (0.0401 J)	0.0119 J(0.0123 J)	0.0646 J	0.0381 J
Percent of Allowable(%)	NR (4)	1(1)	6	4
3/20/2006				
Total Volume(m3)	NR (5)	415(401)	119	387
Total PCB Mass(ug)	NR (*)	2.5(0)	12	0
PCB Concentration(ug/m3)	NR (*)	0.006(ND(0.0019))	0.1008	ND(0.0019)
Percent of Allowable(%)	NR (*)	1(--)	10	--
3/29/2006				
Total Volume(m3)	NR (306)	411(396)	129	354
Total PCB Mass(ug)	NR (18)	5(5.2)	7.8	5.9
PCB Concentration(ug/m3)	NR (0.0588)	0.0122(0.0131)	0.0605	0.0167
Percent of Allowable(%)	NR (6)	1(1)	6	2
4/10/2006				
Total Volume(m3)	NR (242)	406(349)	145	335
Total PCB Mass(ug)	NR (75)	4.6(4.3)	4	6
PCB Concentration(ug/m3)	NR (0.3099)	0.0113(0.0123)	0.0276	0.0179
Percent of Allowable(%)	NR (31)	1(1)	3	2
4/11/2006				
Total Volume(m3)	NR (282)	429(0)	125	373
Total PCB Mass(ug)	NR (34)	11(*)	2.7	4.2
PCB Concentration(ug/m3)	NR (0.1206)	0.0256(*)	0.0216	0.0113
Percent of Allowable(%)	NR (12)	3(*)	2	1
4/20/2006				
Total Volume(m3)	247 (NR)	NR(NR)	NR	NR
Total PCB Mass(ug)	34 (NR)	NR(NR)	NR	NR
PCB Concentration(ug/m3)	0.1377 (NR)	NR(NR)	NR	NR
Percent of Allowable(%)	14 (NR)	NR(NR)	NR	NR

Notes:
* - Results not reported due to machine malfunction
NR - No result because machine was not setup
J - Estimated Result

TABLE 2.3

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2006 THROUGH NOVEMBER 2006
AAQMP MODIFICATIONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1B* *PUF-16*	*STATION 14* *PUF-4(PUF-12)*	*STATION 22B* *PUF-3*	*STATION 23* *PUF-2*	*STATION 29* *PUF-5*	*STATION 30* *PUF-17*	*STATION 31* *PUF-6*
5/19/2006							
Total Volume(m3)	410	454(267)	148	422	474	39	327
Total PCB Mass (ug)	25	4.5(4.5)	22	24	25	*	11
PCB Concentration(ug/m3)	0.061	0.0099(0.0169)	0.1486	0.0569	0.0527	*	0.0336
Percent of Allowable(%)	6	1(2)	15	6	5	*	3
5/22/2006							
Total Volume(m3)	410	386(207)	135	346	425	365	308
Total PCB Mass (ug)	25	3.9(3.9)	34	15	13	4.6	47
PCB Concentration(ug/m3)	0.061	0.0101(0.0188)	0.2519	0.0434 J	0.0306	0.0126	0.1526
Percent of Allowable(%)	6	1(2)	25	4	3	1	15
5/23/2006							
Total Volume(m3)	343	433(188)	124	396	377	417	375
Total PCB Mass (ug)	71	6.3(5.8)	10	12	11	7.9	240
PCB Concentration(ug/m3)	0.207	0.0145(0.0309)	0.0806	0.0303	0.0292	0.0189	0.64
Percent of Allowable(%)	21	1(3)	8	3	3	2	64
5/24/2006							
Total Volume(m3)	421	340(204)	137	324	455	367	431
Total PCB Mass (ug)	370	9.2(9.7)	12	6.1	20	25	38
PCB Concentration(ug/m3)	0.8789	0.0271(0.0475)	0.0876	0.0188	0.044	0.0681	0.0882
Percent of Allowable(%)	88	3(5)	9	2	4	7	9
5/25/2006							
Total Volume(m3)	401	393(217)	108	288	364	394	96
Total PCB Mass (ug)	170	23(24)	5.9	9.9	27	43	*
PCB Concentration(ug/m3)	0.4239	0.0585(0.1106)	0.0546	0.0344	0.0742	0.1091	*
Percent of Allowable(%)	42	6(11)	5	3	7	11	*
5/30/2006							
Total Volume(m3)	440	419(231)	141	389	412	442	399
Total PCB Mass (ug)	380	14(15)	5.1	13	23	25	190
PCB Concentration(ug/m3)	0.8636	0.0334(0.0649)	0.0362	0.0334	0.0558	0.0566	0.4762
Percent of Allowable(%)	86	3(6)	4	3	6	6	48
5/31/2006							
Total Volume(m3)	418	427(236)	121	378	393	429	377
Total PCB Mass (ug)	130	7.5(8.1)	29	19	28	8.6	90
PCB Concentration(ug/m3)	0.311	0.0176(0.0343)	0.2397	0.0503	0.0712	0.02	0.2387
Percent of Allowable(%)	31	2(3)	24	5	7	2	24
6/1/2006							
Total Volume(m3)	431	402(222)	129	381	394	407	383
Total PCB Mass (ug)	110	9.7(8.8)	41	28	47	14	53
PCB Concentration(ug/m3)	0.2552	0.0241 J(0.0396)	0.3178	0.0735	0.1193	0.0344	0.1384
Percent of Allowable(%)	26	2(4)	32	7	12	3	14

TABLE 2.3

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2006 THROUGH NOVEMBER 2006
AAQMP MODIFICATIONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1B* *PUF-16*	*STATION 14* *PUF-4(PUF-12)*	*STATION 22B* *PUF-3*	*STATION 23* *PUF-2*	*STATION 29* *PUF-5*	*STATION 30* *PUF-17*	*STATION 31* *PUF-6*
6/2/2006							
Total Volume(m3)	444	396(423)	131	381	412	413	385
Total PCB Mass (ug)	47	11(11)	120	26	39	12	500
PCB Concentration(ug/m3)	0.1059	0.0278(0.026)	0.916	0.0682	0.0947	0.0291	1.2987
Percent of Allowable(%)	11	3(3)	92	7	9	3	130
6/5/2006							
Total Volume(m3)	435	436(422)	146	389	411	441	392
Total PCB Mass (ug)	38	9.1(9.3)	39	13	15	9.8	510
PCB Concentration(ug/m3)	0.0874	0.0209 J(0.022 J)	0.2671	0.0334	0.0365	0.0222	1.301
Percent of Allowable(%)	9	2(2)	27	3	4	2	130
6/6/2006							
Total Volume(m3)	434	426(441)	132	375	390	378	339
Total PCB Mass (ug)	750	19(20)	8.2	13	11	56	87
PCB Concentration(ug/m3)	1.7281	0.0446 J(0.0454 J)	0.0621	0.0347	0.0282	0.1481	0.2566
Percent of Allowable(%)	173	4(5)	6	3	3	15	26
6/7/2006							
Total Volume(m3)	411	0(339)	128	340	369	411	137
Total PCB Mass (ug)	460	*(12)	24	46	72	33	*
PCB Concentration(ug/m3)	1.1192	*(0.0354)	0.1875	0.1353	0.1951	0.0803	*
Percent of Allowable(%)	112	*(4)	19	14	20	8	*
6/8/2006							
Total Volume(m3)	411	379(385)	131	305	423	162	382
Total PCB Mass (ug)	110	18(14)	95	21	35	*	490
PCB Concentration(ug/m3)	0.2676	0.0475(0.0364)	0.7252	0.0689	0.0827	*	1.2827
Percent of Allowable(%)	27	5(4)	73	7	8	*	128
6/9/2006							
Total Volume(m3)	403	377(407)	125	319	383	407	363
Total PCB Mass (ug)	53	6.2(6)	99	10	8.4	7.2	280
PCB Concentration(ug/m3)	0.1315	0.0164(0.0147)	0.792	0.0313	0.0219	0.0177	0.7713
Percent of Allowable(%)	13	2(1)	79	3	2	2	77
6/10/2006							
Total Volume(m3)	166	378(403)	50	142	157	98	148
Total PCB Mass (ug)	*	0.67(2.6)	*	*	*	*	*
PCB Concentration(ug/m3)	*	0.0018 J(0.0065 J)	*	*	*	*	*
Percent of Allowable(%)	*	0(1)	*	*	*	*	*
6/12/2006							
Total Volume(m3)	508	NR(435)	139	435	480	1	417
Total PCB Mass (ug)	28	NR(3.3)	170	23	22	*	230
PCB Concentration(ug/m3)	0.0551	NR(0.0076)	1.223	0.0529	0.0458	*	0.5516
Percent of Allowable(%)	6	NR(1)	122	5	5	*	55

TABLE 2.3

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2006 THROUGH NOVEMBER 2006
AAQMP MODIFICATIONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit_ID	*STATION 1B* *PUF-16*	*STATION 14* *PUF-4(PUF-12)*	*STATION 22B* *PUF-3*	*STATION 23* *PUF-2*	*STATION 29* *PUF-5*	*STATION 30* *PUF-17*	*STATION 31* *PUF-6*
6/14/2006							
Total Volume(m3)	370	417(392)	107	321	350	394	348
Total PCB Mass (ug)	58	8.9(8.5)	250	47	210	13	430
PCB Concentration(ug/m3)	0.1568	0.0213(0.0217)	2.3364	0.1464	0.6	0.033	1.2356
Percent of Allowable(%)	16	2(2)	234	15	60	3	124
6/15/2006							
Total Volume(m3)	412	417(387)	122	137	351	400	379
Total PCB Mass (ug)	750	6(7.2)	13	*	12	12	630
PCB Concentration(ug/m3)	1.8204	0.0144(0.0186)	0.1066	*	0.0342	0.03	1.6623
Percent of Allowable(%)	182	1(2)	11	*	3	3	166
6/16/2006							
Total Volume(m3)	390	424(368)	121	3	315	398	365
Total PCB Mass (ug)	1300	13(12)	15	*	24	24	1200
PCB Concentration(ug/m3)	3.3333 J	0.0307 J(0.0326 J)	0.124 J	*	0.0762 J	0.0603 J	3.2877 J
Percent of Allowable(%)	333	3(3)	12	*	8	6	329
6/17/2006							
Total Volume(m3)	474	468(406)	131	394	402	444	360
Total PCB Mass (ug)	830	32(33)	6.5	11	19	140	76
PCB Concentration(ug/m3)	1.7511 J	0.0684 J(0.0813 J)	0.0496 J	0.0279 J	0.0473 J	0.3153 J	0.2111 J
Percent of Allowable(%)	175	7(8)	5	3	5	32	21
6/19/2006							
Total Volume(m3)	417	423(367)	126	327	340	413	363
Total PCB Mass (ug)	300	12(11)	21	40	28	33	200
PCB Concentration(ug/m3)	0.7194	0.0284(0.03)	0.1667	0.1223	0.0824	0.0799	0.551
Percent of Allowable(%)	72	3(3)	17	12	8	8	55
6/20/2006							
Total Volume(m3)		417(374)	135	363	349	411	360
Total PCB Mass (ug)		19(330)	34	14	68	78	130
PCB Concentration(ug/m3)		0.0456 J(0.8824 J)	0.2519	0.0386	0.1948	0.1898	0.3611
Percent of Allowable(%)		5(88)	25	4	19	19	36

TABLE 2.3

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2006 THROUGH NOVEMBER 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit ID	*STATION 1C* *PUF-16*	*STATION 14* *PUF-4(PUF-12)*	*STATION 22B* *PUF-18*	*STATION 23* *PUF-2*	*STATION 29* *PUF-5*	*STATION 30* *PUF-17*	*STATION 31* *PUF-6*
6/21/2006							
Total Volume(m3)	168	412(369)	344	369	396	390	352
Total PCB Mass(ug)	11	71(72)	7.6	30	24	89	6
PCB Concentration(ug/m3)	0.0655	0.1723(0.1951)	0.0221	0.0813	0.0606	0.2282	0.017
Percent of Allowable(%)	7	17(20)	2	8	6	23	2
6/22/2006							
Total Volume(m3)	214	428(371)	358	366	363	420	373
Total PCB Mass(ug)	56	9.5(9.7)	170	50	49	17	67
PCB Concentration(ug/m3)	0.2617	0.0222(0.0261)	0.4749	0.1366	0.135	0.0405	0.1796
Percent of Allowable(%)	26	2(3)	47	14	14	4	18
6/23/2006							
Total Volume(m3)	205	425(367)	296	157	314	405	338
Total PCB Mass(ug)	18	5.9(6)	310	*	27	9.2	190
PCB Concentration(ug/m3)	0.0878	0.0139(0.0163)	1.0473	*	0.086	0.0227	0.5621
Percent of Allowable(%)	9	1(2)	105	*	9	2	56
6/24/2006							
Total Volume(m3)	213	435(NR)	350	417	388	406	372
Total PCB Mass(ug)	18	6.7(NR)	320	8.2	32	11	370
PCB Concentration(ug/m3)	0.0845	0.0154(NR)	0.9143	0.0197	0.0825	0.0271	0.9946
Percent of Allowable(%)	8	2(NR)	91	2	8	3	99
6/26/2006							
Total Volume(m3)	200	424(432)	364		367	412	363
Total PCB Mass(ug)	65	7.9(8.3)	100		68	13	190
PCB Concentration(ug/m3)	0.325	0.0186(0.0192)	0.2747		0.1853	0.0316	0.5234
Percent of Allowable(%)	32	2(2)	27		19	3	52
6/27/2006							
Total Volume(m3)	215	397(426)	348		389	398	375
Total PCB Mass(ug)	18	7.4(7.1)	17		180	12	34
PCB Concentration(ug/m3)	0.0837	0.0186(0.0167)	0.0489		0.4627	0.0302	0.0907
Percent of Allowable(%)	8	2(2)	5		46	3	9
6/28/2006							
Total Volume(m3)	229	404(435)	361	316	390	411	360
Total PCB Mass(ug)	56	8.8(8.3)	200	100	65	17	130
PCB Concentration(ug/m3)	0.2445	0.0218(0.0191)	0.554	0.3165	0.1667	0.0414	0.3611
Percent of Allowable(%)	24	2(2)	55	32	17	4	36
6/29/2006							
Total Volume(m3)	215	421(451)	362	335	391	404	362
Total PCB Mass(ug)	52	7.3(7.5)	190	23	160	12	360
PCB Concentration(ug/m3)	0.2419	0.0173(0.0166)	0.5249	0.0687	0.4092	0.0297	0.9945
Percent of Allowable(%)	24	2(2)	52	7	41	3	99
6/30/2006							
Total Volume(m3)	512	407(437)	424	374	457	421	435
Total PCB Mass(ug)	240	11(11)	20	17	23	37	220
PCB Concentration(ug/m3)	0.4688	0.027(0.0252)	0.0472	0.0455	0.0503	0.0879	0.5057
Percent of Allowable(%)	47	3(3)	5	5	5	9	51
7/3/2006							
Total Volume(m3)	468	477(426)	384	412	446	1	416
Total PCB Mass(ug)	6.4	31(31)	10	65	51	*	4.7
PCB Concentration(ug/m3)	0.0137 J	0.065(0.0728)	0.026	0.1578	0.1143	*	0.0113
Percent of Allowable(%)	1	6(7)	3	16	11	*	1

TABLE 2.3

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2006 THROUGH NOVEMBER 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit ID	***STATION 1C*** ***PUF-16***	***STATION 14*** ***PUF-4(PUF-12)***	***STATION 22B*** ***PUF-18***	***STATION 23*** ***PUF-2***	***STATION 29*** ***PUF-5***	***STATION 30*** ***PUF-17***	***STATION 31*** ***PUF-6***
7/5/2006							
Total Volume(m3)	369	428(271)	336	369	389	0	363
Total PCB Mass(ug)	7.2	3.2(1.9)	430	15	14	*	27
PCB Concentration(ug/m3)	0.0195	0.0075(0.007)	1.2798	0.0407	0.036	*	0.0744
Percent of Allowable(%)	2	1(1)	128	4	4	*	7
7/6/2006							
Total Volume(m3)	475	431(208)	405	348	345	362	395
Total PCB Mass(ug)	10	3.9(2.4)	650	9.9	35	8.9	320
PCB Concentration(ug/m3)	0.0211	0.009(0.0115)	1.6049	0.0284	0.1014	0.0246	0.8101
Percent of Allowable(%)	2	1(1)	160	3	10	2	81
7/7/2006							
Total Volume(m3)	403	420(353)	340	376	373	298	337
Total PCB Mass(ug)	14	4.2(4.8)	420	11	60	8.3	480
PCB Concentration(ug/m3)	0.0347	0.01(0.0136)	1.2353	0.0293	0.1609	0.0279	1.4243
Percent of Allowable(%)	3	1(1)	124	3	16	3	142
7/8/2006							
Total Volume(m3)	470	437(467)	360	366	414	303	396
Total PCB Mass(ug)	120	6.1(5.3)	63	5.7	17	8.8	430
PCB Concentration(ug/m3)	0.2553 J	0.014 J(0.0113 J)	0.175 J	0.0156 J	0.0411 J	0.029 J	1.0859 J
Percent of Allowable(%)	26	1(1)	18	2	4	3	109
7/10/2006							
Total Volume(m3)	427	379(436)	356	335	389	385	372
Total PCB Mass(ug)	350	46(45)	8.8	40	32	130	170
PCB Concentration(ug/m3)	0.8197	0.1214(0.1032)	0.0247	0.1194	0.0823	0.3377	0.457
Percent of Allowable(%)	82	12(10)	2	12	8	34	46
7/17/2006							
Total Volume(m3)	421	401(430)	359	345	393	6	366
Total PCB Mass(ug)	380	24(22)	280	49	85	*	450
PCB Concentration(ug/m3)	0.9026	0.0599(0.0512)	0.7799	0.142	0.2163	*	1.2295
Percent of Allowable(%)	90	6(5)	78	14	22	*	123
7/18/2006							
Total Volume(m3)	409	379(407)	339	264	373	274	342
Total PCB Mass(ug)	56	11(8.9)	730	19	37	11	330
PCB Concentration(ug/m3)	0.1369	0.029(0.0219)	2.1534	0.072	0.0992	0.0401	0.9649
Percent of Allowable(%)	14	3(2)	215	7	10	4	96
7/19/2006							
Total Volume(m3)	435	392(421)	350	274	385	381	353
Total PCB Mass(ug)	550	12(10)	300	8.2	69	30	750
PCB Concentration(ug/m3)	1.2644	0.0306(0.0238)	0.8571	0.0299	0.1792	0.0787	2.1246
Percent of Allowable(%)	126	3(2)	86	3	18	8	212
7/20/2006							
Total Volume(m3)	425	371(399)	381	255	407	359	348
Total PCB Mass(ug)	220	19(18)	220	27	170	56	430
PCB Concentration(ug/m3)	0.5176	0.0512(0.0451)	0.5774	0.1059	0.4177	0.156	1.2356
Percent of Allowable(%)	52	5(5)	58	11	42	16	124
7/21/2006							
Total Volume(m3)	391	366(393)	338	277	371	355	324
Total PCB Mass(ug)	140	15(15)	270	71	570	59	170
PCB Concentration(ug/m3)	0.3581	0.041(0.0382)	0.7988	0.2563	1.5364	0.1662	0.5247
Percent of Allowable(%)	36	4(4)	80	26	154	17	52

TABLE 2.3

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2006 THROUGH NOVEMBER 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit ID	*STATION 1C* *PUF-16*	*STATION 14* *PUF-4(PUF-12)*	*STATION 22B* *PUF-18*	*STATION 23* *PUF-2*	*STATION 29* *PUF-5*	*STATION 30* *PUF-17*	*STATION 31* *PUF-6*
7/22/2006							
Total Volume(m3)	525	473(507)	448	357	469	451	405
Total PCB Mass(ug)	26	5.8(5.5)	670	55	530	11	75
PCB Concentration(ug/m3)	0.0495	0.0123(0.0108)	1.4955	0.1541	1.1301	0.0244	0.1852
Percent of Allowable(%)	5	1(1)	150	15	113	2	19
7/24/2006							
Total Volume(m3)	386	351(364)	352	262	372	331	347
Total PCB Mass(ug)	65	19(20)	93	120	240	31	660
PCB Concentration(ug/m3)	0.1684	0.0541(0.0549)	0.2642	0.458	0.6452	0.0937	1.902
Percent of Allowable(%)	17	5(5)	26	46	65	9	190
7/25/2006							
Total Volume(m3)	424	372(415)	382	256	400	358	352
Total PCB Mass(ug)	560	29(28)	21	91	160	180	83
PCB Concentration(ug/m3)	1.3208	0.078(0.0675)	0.055	0.3555	0.4	0.5028	0.2358
Percent of Allowable(%)	132	8(7)	6	36	40	50	24
7/26/2006							
Total Volume(m3)	445	422(421)	378	259	431	385	374
Total PCB Mass(ug)	42	180(180)	8.9	33	30	420	8.4
PCB Concentration(ug/m3)	0.0944	0.4265(0.4276)	0.0235 J	0.1274	0.0696	1.0909	0.0225 J
Percent of Allowable(%)	9	43(43)	2	13	7	109	2
7/28/2006							
Total Volume(m3)	421	418(431)	354	271	402	389	382
Total PCB Mass(ug)	59	50(48)	5.2	82	17	110	7.7
PCB Concentration(ug/m3)	0.1401	0.1196(0.1114)	0.0147	0.3026	0.0423	0.2828	0.0202
Percent of Allowable(%)	14	12(11)	1	30	4	28	2
7/29/2006							
Total Volume(m3)	435	417(433)	352	270	401	375	381
Total PCB Mass(ug)	210	24(24)	27	97	340	70	260
PCB Concentration(ug/m3)	0.4828	0.0576(0.0554)	0.0767	0.3593	0.8479	0.1867	0.6824
Percent of Allowable(%)	48	6(6)	8	36	85	19	68
7/31/2006							
Total Volume(m3)	373	384(412)	281	299	381	386	344
Total PCB Mass(ug)	520	44(36)	16	70	31	120	170
PCB Concentration(ug/m3)	1.3941 J	0.1146(0.0874)	0.0569	0.2341	0.0814	0.3109	0.4942
Percent of Allowable(%)	139	11(9)	6	23	8	31	49
8/1/2006							
Total Volume(m3)	452	421(450)	304	325	446	421	411
Total PCB Mass(ug)	360	61(53)	16	160	66	170	32
PCB Concentration(ug/m3)	0.7965	0.1449(0.1178)	0.0526	0.4923	0.148	0.4038	0.0779
Percent of Allowable(%)	80	14(12)	5	49	15	40	8
8/2/2006							
Total Volume(m3)	432	436(466)	310	347	423	402	392
Total PCB Mass(ug)	15	130(120)	7.9	160	36	290	6.6
PCB Concentration(ug/m3)	0.0347	0.2982(0.2575)	0.0255	0.4611	0.0851	0.7214	0.0168
Percent of Allowable(%)	3	30(26)	3	46	9	72	2
8/3/2006							
Total Volume(m3)	448	429(429)	288	332	409	443	368
Total PCB Mass(ug)	14	14(14)	250	190	460	32	5.9
PCB Concentration(ug/m3)	0.0312	0.0326(0.0326)	0.8681 J	0.5723	1.1247	0.0722	0.016
Percent of Allowable(%)	3	3(3)	87	57	112	7	2

TABLE 2.3

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2006 THROUGH NOVEMBER 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit ID	STATION 1C PUF-16	STATION 14 PUF-4(PUF-12)	STATION 22B PUF-18	STATION 23 PUF-2	STATION 29 PUF-5	STATION 30 PUF-17	STATION 31 PUF-6
8/4/2006							
Total Volume(m3)	427	387(430)	306	329	441	403	429
Total PCB Mass(ug)	20	8.2(9.3)	790	21	36	21	170
PCB Concentration(ug/m3)	0.0468	0.0212(0.0216)	2.5817 J	0.0638	0.0816	0.0521	0.3963
Percent of Allowable(%)	5	2(2)	258	6	8	5	40
8/5/2006							
Total Volume(m3)	505	458(489)	349	360	506	477	492
Total PCB Mass(ug)	37	46(22)	400	20	17	26	1000
PCB Concentration(ug/m3)	0.0733	0.1004 J(0.045 J)	1.1461	0.0556	0.0336	0.0545	2.0325
Percent of Allowable(%)	7	10(4)	115	6	3	5	203
8/7/2006							
Total Volume(m3)	436	462(462)	312	340	435	421	399
Total PCB Mass(ug)	24	9.9(9.3)	460	82	250	23	68
PCB Concentration(ug/m3)	0.055	0.0214(0.0201)	1.4744 J	0.2412	0.5747	0.0546	0.1704
Percent of Allowable(%)	6	2(2)	147	24	57	5	17
8/8/2006							
Total Volume(m3)	356	359(382)	266	261	366	334	323
Total PCB Mass(ug)	73	9.3(10)	300	25	110	19	430
PCB Concentration(ug/m3)	0.2051	0.0259(0.0262)	1.1278	0.0958	0.3005	0.0569	1.3313 J
Percent of Allowable(%)	21	3(3)	113	10	30	6	133
8/9/2006							
Total Volume(m3)	432	424(452)	389	365	432	395	409
Total PCB Mass(ug)	140	19(20)	190	34	130	59	380
PCB Concentration(ug/m3)	0.3241	0.0448(0.0442)	0.4884	0.0932	0.3009	0.1494	0.9291
Percent of Allowable(%)	32	4(4)	49	9	30	15	93
8/10/2006							
Total Volume(m3)	422	427(426)	344	327	375	373	349
Total PCB Mass(ug)	91	18(19)	180	26	120	36	110
PCB Concentration(ug/m3)	0.2156	0.0422(0.0446)	0.5233	0.0795	0.32	0.0965	0.3152
Percent of Allowable(%)	22	4(4)	52	8	32	10	32
8/11/2006							
Total Volume(m3)	431	446(460)	360	340	408	402	374
Total PCB Mass(ug)	19	5(5.5)	320	9.6	18	17	220
PCB Concentration(ug/m3)	0.0441	0.0112(0.012)	0.8889 J	0.0282	0.0441	0.0423	0.5882
Percent of Allowable(%)	4	1(1)	89	3	4	4	59
8/12/2006							
Total Volume(m3)	514	506(523)	448	401	504	472	408
Total PCB Mass(ug)	26	6.2(6.7)	390	11	42	24	220
PCB Concentration(ug/m3)	0.0506	0.0123(0.0128)	0.8705	0.0274	0.0833	0.0508	0.5392
Percent of Allowable(%)	5	1(1)	87	3	8	5	54
8/14/2006							
Total Volume(m3)	435	418(411)	363	334	409	391	52
Total PCB Mass(ug)	15	8.6(12)	170	82	200	29	*
PCB Concentration(ug/m3)	0.0345	0.0206(0.0292)	0.4683	0.2455	0.489	0.0742	*
Percent of Allowable(%)	3	2(3)	47	25	49	7	*
8/15/2006							
Total Volume(m3)	440	425(NR)	373	337	417	399	121
Total PCB Mass(ug)	14	8.1(NR)	390	20	42	32	*
PCB Concentration(ug/m3)	0.0318	0.0191(NR)	1.0456 J	0.0593	0.1007	0.0802	*
Percent of Allowable(%)	3	2(NR)	105	6	10	8	*

TABLE 2.3

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2006 THROUGH NOVEMBER 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit ID	STATION 1C PUF-16	STATION 14 PUF-4(PUF-12)	STATION 22B PUF-18	STATION 23 PUF-2	STATION 29 PUF-5	STATION 30 PUF-17	STATION 31 PUF-6
8/16/2006							
Total Volume(m3)	430	333(359)	348	334	424	393	288
Total PCB Mass(ug)	18	6.2(7)	280	15	36	31	6.4
PCB Concentration(ug/m3)	0.0419	0.0186(0.0195)	0.8046 J	0.0449	0.0849	0.0789	0.0222
Percent of Allowable(%)	4	2(2)	80	4	8	8	2
8/17/2006							
Total Volume(m3)	221	412(412)	186	335	416	397	72
Total PCB Mass(ug)	*	110(1.3)	*	15	14	57	*
PCB Concentration(ug/m3)	*	0.267 J(0.0032 J)	*	0.0448	0.0337	0.1436	*
Percent of Allowable(%)	*	27(0)	*	4	3	14	*
8/18/2006							
Total Volume(m3)	232	426(413)	199	336	439	389	208
Total PCB Mass(ug)	*	14(12)	*	31	85	25	*
PCB Concentration(ug/m3)	*	0.0329(0.0291)	*	0.0923	0.1936	0.0643	*
Percent of Allowable(%)	*	3(3)	*	9	19	6	*
8/19/2006							
Total Volume(m3)	196	383(396)	182	333	392	365	191
Total PCB Mass(ug)	*	8.8(9.3)	*	68	140	23	*
PCB Concentration(ug/m3)	*	0.023(0.0235)	*	0.2042	0.3571	0.063	*
Percent of Allowable(%)	*	2(2)	*	20	36	6	*
8/21/2006							
Total Volume(m3)	487	440(426)	384	369	435	423	430
Total PCB Mass(ug)	36	7.2(6.5)	280	13	29	23	110
PCB Concentration(ug/m3)	0.0739	0.0164(0.0153)	0.7292 J	0.0352	0.0667	0.0544	0.2558
Percent of Allowable(%)	7	2(2)	73	4	7	5	26
8/22/2006							
Total Volume(m3)	464	418(416)	380	358	426	399	378
Total PCB Mass(ug)	18	8.3(8.9)	270	20	38	25	140
PCB Concentration(ug/m3)	0.0388	0.0199(0.0214)	0.7105 J	0.0559	0.0892	0.0627	0.3704 J
Percent of Allowable(%)	4	2(2)	71	6	9	6	37
8/23/2006							
Total Volume(m3)	467	450(449)	386	364	417	417	373
Total PCB Mass(ug)	69	16(16)	170	14	46	30	240
PCB Concentration(ug/m3)	0.1478	0.0356(0.0356)	0.4404 J	0.0385	0.1103	0.0719	0.6434
Percent of Allowable(%)	15	4(4)	44	4	11	7	64
8/24/2006							
Total Volume(m3)	423	443(414)	378	330	424	380	359
Total PCB Mass(ug)	150	13(13)	110	6.3	20	34	210
PCB Concentration(ug/m3)	0.3546	0.0293(0.0314)	0.291 J	0.0191	0.0472	0.0895	0.585 J
Percent of Allowable(%)	35	3(3)	29	2	5	9	58
8/25/2006							
Total Volume(m3)	426	457(427)	358	353	405	396	374
Total PCB Mass(ug)	220	25(23)	48	16	18	62	250
PCB Concentration(ug/m3)	0.5164 J	0.0547(0.0539)	0.1341	0.0453	0.0444	0.1566	0.6684 J
Percent of Allowable(%)	52	5(5)	13	5	4	16	67
8/26/2006							
Total Volume(m3)	524	515(465)	442	397	499	433	441
Total PCB Mass(ug)	220	14(12)	46	35	72	96	66
PCB Concentration(ug/m3)	0.4198	0.0272(0.0258)	0.1041	0.0882	0.1443	0.2217	0.1497
Percent of Allowable(%)	42	3(3)	10	9	14	22	15

TABLE 2.3

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2006 THROUGH NOVEMBER 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit ID	*STATION 1C* *PUF-16*	*STATION 14* *PUF-4(PUF-12)*	*STATION 22B* *PUF-18*	*STATION 23* *PUF-2*	*STATION 29* *PUF-5*	*STATION 30* *PUF-17*	*STATION 31* *PUF-6*
8/29/2006							
Total Volume(m3)	418	432(419)	365	342	413	406	362
Total PCB Mass(ug)	12	3.9(3.8)	100	48	270	7.2	6.4
PCB Concentration(ug/m3)	0.0287	0.009(0.0091)	0.274	0.1404	0.6538	0.0177	0.0177
Percent of Allowable(%)	3	1(1)	27	14	65	2	2
8/30/2006							
Total Volume(m3)	450	448(404)	383	327	430	392	383
Total PCB Mass(ug)	29	3.4(3.4)	190	14	70	7.5	73
PCB Concentration(ug/m3)	0.0644	0.0076(0.0084)	0.4961	0.0428	0.1628	0.0191	0.1906
Percent of Allowable(%)	6	1(1)	50	4	16	2	19
8/31/2006							
Total Volume(m3)	467	449(376)	395	358	445	382	375
Total PCB Mass(ug)	5.2	1.6(0.6)	210	11	16	3.3	32
PCB Concentration(ug/m3)	0.0111	0.0036 J(0.0016 J)	0.5316	0.0307	0.036	0.0086	0.0853
Percent of Allowable(%)	1	0(0)	53	3	4	1	9
9/5/2006							
Total Volume(m3)	412	420(NR)	387	356	452	415	400
Total PCB Mass(ug)	11	4.1(NR)	300	17	84	15	12
PCB Concentration(ug/m3)	0.0267	0.0098(NR)	0.7752 J	0.0478	0.1858	0.0361	0.03
Percent of Allowable(%)	3	1(NR)	78	5	19	4	3
9/6/2006							
Total Volume(m3)	422	416(347)	410	358	430	406	381
Total PCB Mass(ug)	45	9.8(9.3)	210	19	96	26	300
PCB Concentration(ug/m3)	0.1066	0.0236(0.0268)	0.5122 J	0.0531	0.2233	0.064	0.7874 J
Percent of Allowable(%)	11	2(3)	51	5	22	6	79
9/7/2006							
Total Volume(m3)	450	406(397)	369	347	414	393	389
Total PCB Mass(ug)	110	9(8.8)	150	9.9	26	24	340
PCB Concentration(ug/m3)	0.2444	0.0222(0.0222)	0.4065 J	0.0285	0.0628	0.0611	0.874 J
Percent of Allowable(%)	24	2(2)	41	3	6	6	87
9/8/2006							
Total Volume(m3)	492	434(449)	404	367	456	430	395
Total PCB Mass(ug)	110	18(17)	210	12	45	36	570
PCB Concentration(ug/m3)	0.2236	0.0415(0.0379)	0.5198	0.0327	0.0987	0.0837	1.443 J
Percent of Allowable(%)	22	4(4)	52	3	10	8	144
9/9/2006							
Total Volume(m3)	543	468(502)	464	432	499	0	464
Total PCB Mass(ug)	110	17(15)	260	17	80	*	680
PCB Concentration(ug/m3)	0.2026	0.0363(0.0299 J)	0.5603	0.0394	0.1603	*	1.4655
Percent of Allowable(%)	20	4(3)	56	4	16	*	147
9/11/2006							
Total Volume(m3)	499	424(427)	391	367	415	423	386
Total PCB Mass(ug)	380	14(16)	37	8.2	27	42	210
PCB Concentration(ug/m3)	0.7615	0.033(0.0375)	0.0946	0.0223	0.0651	0.0993	0.544
Percent of Allowable(%)	76	3(4)	9	2	7	10	54
9/14/2006							
Total Volume(m3)	481	442(455)	392	399	466	442	414
Total PCB Mass(ug)	23	7.8(11)	200	41	120	38	83
PCB Concentration(ug/m3)	0.0478	0.0176(0.0242)	0.5102	0.1028	0.2575	0.086	0.2005
Percent of Allowable(%)	5	2(2)	51	10	26	9	20

TABLE 2.3

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2006 THROUGH NOVEMBER 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit ID	*STATION 1C PUF-16*	*STATION 14 PUF-4(PUF-12)*	*STATION 22B PUF-18*	*STATION 23 PUF-2*	*STATION 29 PUF-5*	*STATION 30 PUF-17*	*STATION 31 PUF-6*
9/15/2006							
Total Volume(m3)	538	435(404)	418	375	452	413	431
Total PCB Mass(ug)	120	8.8(8.7)	140	12	36	34	590
PCB Concentration(ug/m3)	0.223	0.0202(0.0215)	0.3349 J	0.032	0.0796	0.0823	1.3689 J
Percent of Allowable(%)	22	2(2)	33	3	8	8	137
9/16/2006							
Total Volume(m3)	487	454(485)	439	426	466	457	433
Total PCB Mass(ug)	340	10(11)	68	5.7	12	62	180
PCB Concentration(ug/m3)	0.6982	0.022(0.0227)	0.1549	0.0134	0.0258	0.1357	0.4157
Percent of Allowable(%)	70	2(2)	15	1	3	14	42
9/18/2006							
Total Volume(m3)	454	429(458)	388	354	383	358	401
Total PCB Mass(ug)	7.9	3(2.9)	13	27	54	4.7	2.8
PCB Concentration(ug/m3)	0.0174	0.007(0.0063)	0.0335	0.0763	0.141	0.0131	0.007
Percent of Allowable(%)	2	1(1)	3	8	14	1	1
9/19/2006							
Total Volume(m3)	469	429(442)	402	331	441	403	416
Total PCB Mass(ug)	4.4	1(1)	2.8	38	130	2.2	1.7
PCB Concentration(ug/m3)	0.0094	0.0023(0.0023)	0.007	0.1148	0.2948	0.0055	0.0041
Percent of Allowable(%)	1	0(0)	1	11	29	1	0
9/20/2006							
Total Volume(m3)	470	432(462)	414	343	458	433	403
Total PCB Mass(ug)	21	3.4(3.7)	74	16	50	12	66
PCB Concentration(ug/m3)	0.0447	0.0079(0.008)	0.1787	0.0466	0.1092	0.0277	0.1638
Percent of Allowable(%)	4	1(1)	18	5	11	3	16
9/21/2006							
Total Volume(m3)	477	424(436)	406	338	448	407	408
Total PCB Mass(ug)	180	2.3(2.2)	18	4.5	6.7	10	230
PCB Concentration(ug/m3)	0.3774	0.0054(0.005)	0.0443	0.0133	0.015	0.0246	0.5637
Percent of Allowable(%)	38	1(0)	4	1	2	2	56
9/25/2006							
Total Volume(m3)	472	424(437)	409	342	443	424	393
Total PCB Mass(ug)	16	8.8(9.2)	21	26	31	26	55
PCB Concentration(ug/m3)	0.0339	0.0208(0.0211)	0.0513	0.076	0.07	0.0613	0.1399
Percent of Allowable(%)	3	2(2)	5	8	7	6	14
9/26/2006							
Total Volume(m3)	485	419(434)	380	335	428	424	399
Total PCB Mass(ug)	180	15(15)	9.9	9.9	13	66	11
PCB Concentration(ug/m3)	0.3711	0.0358(0.0346)	0.0261	0.0296	0.0304	0.1557	0.0276
Percent of Allowable(%)	37	4(3)	3	3	3	16	3
9/27/2006							
Total Volume(m3)	441	425(411)	416	325	406	413	416
Total PCB Mass(ug)	14	28(26)	21	30	80	61	8.7
PCB Concentration(ug/m3)	0.0317	0.0659(0.0633)	0.0505	0.0923	0.197	0.1477	0.0209
Percent of Allowable(%)	3	7(6)	5	9	20	15	2
9/28/2006							
Total Volume(m3)	495	460(459)	427	343	454	442	419
Total PCB Mass(ug)	13	3.8(3.8)	41	26	76	11	28
PCB Concentration(ug/m3)	0.0263	0.0083(0.0083)	0.096	0.0758	0.1674	0.0249	0.0668
Percent of Allowable(%)	3	1(1)	10	8	17	2	7

TABLE 2.3

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2006 THROUGH NOVEMBER 2006
AAQMP MODIFICAITONS
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BEDFORD, INDIANA

Unit ID	*STATION 1C* *PUF-16*	*STATION 14* *PUF-4(PUF-12)*	*STATION 22B* *PUF-18*	*STATION 23* *PUF-2*	*STATION 29* *PUF-5*	*STATION 30* *PUF-17*	*STATION 31* *PUF-6*
9/29/2006							
Total Volume(m3)	465	420(433)	410	306	443	408	390
Total PCB Mass(ug)	72	18(17)	5	9.9	13	34	5.9
PCB Concentration(ug/m3)	0.1548	0.0429(0.0393)	0.0122	0.0324	0.0293	0.0833	0.0151
Percent of Allowable(%)	15	4(4)	1	3	3	8	2
9/30/2006							
Total Volume(m3)	538	475(490)	453	360	497	463	433
Total PCB Mass(ug)	11	17(18)	15	12	18	23	4.8
PCB Concentration(ug/m3)	0.0204	0.0358(0.0367)	0.0331	0.0333	0.0362	0.0497	0.0111
Percent of Allowable(%)	2	4(4)	3	3	4	5	1
10/2/2006							
Total Volume(m3)	500	403(431)	435	373	467	403	420
Total PCB Mass(ug)	140	25(23)	36	5.9	18	99	32
PCB Concentration(ug/m3)	0.28	0.062(0.0534)	0.0828	0.0158	0.0385	0.2457	0.0762
Percent of Allowable(%)	28	6(5)	8	2	4	25	8
10/4/2006							
Total Volume(m3)	436	418(432)	398	378	428	416	410
Total PCB Mass(ug)	12	26(24)	57	25	25	77	9.9
PCB Concentration(ug/m3)	0.0275	0.0622(0.0556)	0.1432	0.0661	0.0584	0.1851	0.0241
Percent of Allowable(%)	3	6(6)	14	7	6	19	2
10/5/2006							
Total Volume(m3)	443	456(456)	407	385	463	423	375
Total PCB Mass(ug)	2.6	1.4(1.6)	110	2.6	4.7	13	3.5
PCB Concentration(ug/m3)	0.0059	0.0031(0.0035)	0.2703	0.0068	0.0102	0.0307	0.0093
Percent of Allowable(%)	1	0(0)	27	1	1	3	1
10/6/2006							
Total Volume(m3)	422	418(417)	400	366	432	391	378
Total PCB Mass(ug)	10	2.9(3.1)	82	6.1	7.5	25	49
PCB Concentration(ug/m3)	0.0237	0.0069(0.0074)	0.205	0.0167	0.0174	0.0639	0.1296
Percent of Allowable(%)	2	1(1)	20	2	2	6	13
10/7/2006							
Total Volume(m3)	529	495(444)	487	431	530	484	454
Total PCB Mass(ug)	27	7.5(7.1)	76	8.3	36	34	160
PCB Concentration(ug/m3)	0.051	0.0152(0.016)	0.1561	0.0193	0.0679	0.0702	0.3524
Percent of Allowable(%)	5	2(2)	16	2	7	7	35
10/9/2006							
Total Volume(m3)	412	401(371)	418	370	437	416	387
Total PCB Mass(ug)	87	20(17)	73	20	50	49	300
PCB Concentration(ug/m3)	0.2112	0.0499(0.0458)	0.1746	0.0541	0.1144	0.1178	0.7752
Percent of Allowable(%)	21	5(5)	17	5	11	12	78
10/10/2006							
Total Volume(m3)	439	408(365)	415	363	436	398	370
Total PCB Mass(ug)	170	34(30)	15	7.8	13	99	24
PCB Concentration(ug/m3)	0.3872	0.0833(0.0822)	0.0361	0.0215	0.0298	0.2487	0.0649
Percent of Allowable(%)	39	8(8)	4	2	3	25	6
10/11/2006							
Total Volume(m3)	411	398(341)	400	350	424	386	364
Total PCB Mass(ug)	3.9	22(22)	2.9	23	39	29	1.3
PCB Concentration(ug/m3)	0.0095	0.0553(0.0645)	0.0072	0.0657	0.092	0.0751	0.0036
Percent of Allowable(%)	1	6(6)	1	7	9	8	0

TABLE 2.3

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2006 THROUGH NOVEMBER 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit ID	*STATION 1C* *PUF-16*	*STATION 14* *PUF-4(PUF-12)*	*STATION 22B* *PUF-18*	*STATION 23* *PUF-2*	*STATION 29* *PUF-5*	*STATION 30* *PUF-17*	*STATION 31* *PUF-6*
10/12/2006							
Total Volume(m3)	410	403(375)	345	361	437	410	285
Total PCB Mass(ug)	1.5	5(5.9)	2.6	13	9.5	11	0.8
PCB Concentration(ug/m3)	0.0037	0.0124(0.0157)	0.0075	0.036	0.0217	0.0268	0.0028
Percent of Allowable(%)	0	1(2)	1	4	2	3	0
10/13/2006							
Total Volume(m3)	455	410(366)	353	345	450	405	373
Total PCB Mass(ug)	1.5	4(4.1)	2.6	11	10	2.7	0.9
PCB Concentration(ug/m3)	0.0033	0.0098(0.0112)	0.0074	0.0319	0.0222	0.0067	0.0024
Percent of Allowable(%)	0	1(1)	1	3	2	1	0
10/14/2006							
Total Volume(m3)	449	381(340)	355	335	449	385	186
Total PCB Mass(ug)	11	3.5(3.6)	9.1	17	21	13	48
PCB Concentration(ug/m3)	0.0245	0.0092(0.0106)	0.0256	0.0507	0.0468	0.0338	0.2581
Percent of Allowable(%)	2	1(1)	3	5	5	3	26
10/16/2006							
Total Volume(m3)	447	404(347)	352	349	410	408	190
Total PCB Mass(ug)	110	12(11)	3.7	3.8	4.2	27	49
PCB Concentration(ug/m3)	0.2461	0.0297(0.0317)	0.0105	0.0109	0.0102	0.0662	0.2579
Percent of Allowable(%)	25	3(3)	1	1	1	7	26
10/17/2006							
Total Volume(m3)	421	411(341)	316	314	402	372	200
Total PCB Mass(ug)	45	7.5(7.8)	4.5	30	24	15	9.8
PCB Concentration(ug/m3)	0.1069	0.0182(0.0229)	0.0142	0.0955	0.0597	0.0403	0.049
Percent of Allowable(%)	11	2(2)	1	10	6	4	5
10/18/2006							
Total Volume(m3)	466	478(363)	355	331	413	393	207
Total PCB Mass(ug)	200	12(11)	16	26	58	28	98
PCB Concentration(ug/m3)	0.4292	0.0251(0.0303)	0.0451	0.0785	0.1404	0.0712	0.4734
Percent of Allowable(%)	43	3(3)	5	8	14	7	47
10/19/2006							
Total Volume(m3)	447	463(336)	352	321	411	387	184
Total PCB Mass(ug)	2.4	0.6(0)	13	11	46	1.3	1.4
PCB Concentration(ug/m3)	0.0054	0.0013(ND(0.0015))	0.0369	0.0343	0.1119	0.0034	0.0076
Percent of Allowable(%)	1	0(--)	4	3	11	0	1
10/20/2006							
Total Volume(m3)	476	495(375)	338	327	440	461	218
Total PCB Mass(ug)	37	5.4(5.1)	3.1	9.5	13	17	4
PCB Concentration(ug/m3)	0.0777	0.0109(0.0136)	0.0092	0.0291	0.0295	0.0369	0.0183
Percent of Allowable(%)	8	1(1)	1	3	3	4	2
10/21/2006							
Total Volume(m3)	511	505(399)	381	413	476	412	223
Total PCB Mass(ug)	91	7.2(7)	5.3	9.3	12	17	37
PCB Concentration(ug/m3)	0.1781	0.0143(0.0175)	0.0139	0.0225	0.0252	0.0413	0.1659
Percent of Allowable(%)	18	1(2)	1	2	3	4	17
10/23/2006							
Total Volume(m3)	466	495(393)	377	332	508	438	215
Total PCB Mass(ug)	1.5	0(0)	0.9	11	32	0.5	0
PCB Concentration(ug/m3)	0.0032	ND(0.001)(ND(0.0013))	0.0024	0.0331	0.063	0.0011	ND(0.0023)
Percent of Allowable(%)	0	--(--)	0	3	6	0	--

TABLE 2.3

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2006 THROUGH NOVEMBER 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit ID	*STATION 1C* *PUF-16*	*STATION 14* *PUF-4(PUF-12)*	*STATION 22B* *PUF-18*	*STATION 23* *PUF-2*	*STATION 29* *PUF-5*	*STATION 30* *PUF-17*	*STATION 31* *PUF-6*
10/24/2006							
Total Volume(m3)	463	478(379)	357	379	445	426	199
Total PCB Mass(ug)	8.6	6(6.4)	9.9	11	27	8.8	40
PCB Concentration(ug/m3)	0.0186	0.0126(0.0169)	0.0277	0.029	0.0607	0.0207	0.201
Percent of Allowable(%)	2	1(2)	3	3	6	2	20
10/25/2006							
Total Volume(m3)	498	473(372)	370	389	454	438	404
Total PCB Mass(ug)	74	15(17)	4.2	2.8	4.1	6.1	120
PCB Concentration(ug/m3)	0.1486	0.0317(0.0457)	0.0114	0.0072	0.009	0.0139	0.297
Percent of Allowable(%)	15	3(5)	1	1	1	1	30
10/26/2006							
Total Volume(m3)	450	455(370)	336	379	434	424	406
Total PCB Mass(ug)	99	7.2(8)	1.1	2.2	2.6	5.6	39
PCB Concentration(ug/m3)	0.22	0.0158(0.0216)	0.0033	0.0058	0.006	0.0132	0.0961
Percent of Allowable(%)	22	2(2)	0	1	1	1	10
10/27/2006							
Total Volume(m3)	460	466(335)	376	381	443	424	392
Total PCB Mass(ug)	13	4.4(4.3)	21	8.6	25	2.7	84
PCB Concentration(ug/m3)	0.0283	0.0094(0.0128)	0.0559	0.0226	0.0564	0.0064	0.2143
Percent of Allowable(%)	3	1(1)	6	2	6	1	21
10/28/2006							
Total Volume(m3)	475	288(358)	398	373	443	386	401
Total PCB Mass(ug)	2.3	1.2(1.2)	2.3	25	67	1.1	1.1
PCB Concentration(ug/m3)	0.0048	0.0042(0.0034)	0.0058	0.067	0.1512	0.0028	0.0027
Percent of Allowable(%)	0	0(0)	1	7	15	0	0
10/30/2006							
Total Volume(m3)	436	286(373)	370	1	425	371	383
Total PCB Mass(ug)	12	50(49)	2.6	*	7.7	61	3.2
PCB Concentration(ug/m3)	0.0275	0.1748(0.1314)	0.007	*	0.0181	0.1644	0.0084
Percent of Allowable(%)	3	17(13)	1	*	2	16	1
10/31/2006							
Total Volume(m3)	456	291(391)	375	4	442	126	386
Total PCB Mass(ug)	3.8	4(3.3)	16	*	32	*	4
PCB Concentration(ug/m3)	0.0083	0.0137(0.0084)	0.0427	*	0.0724	*	0.0104
Percent of Allowable(%)	1	1(1)	4	*	7	*	1
11/1/2006							
Total Volume(m3)	449	299(384)	419	0	379	43	403
Total PCB Mass(ug)	1.2	0.8(0.7)	5.9	*	24	*	0.6
PCB Concentration(ug/m3)	0.0027	0.0027(0.0018)	0.0141	*	0.0633	*	0.0015
Percent of Allowable(%)	0	0(0)	1	*	6	*	0
11/2/2006							
Total Volume(m3)	484	299(384)	412	2	376	423	398
Total PCB Mass(ug)	5.3	4.5(4.7)	9.3	*	27	5	16
PCB Concentration(ug/m3)	0.011	0.0151(0.0122)	0.0226	*	0.0718	0.0118	0.0402
Percent of Allowable(%)	1	2(1)	2	*	7	1	4
11/3/2006							
Total Volume(m3)	483	315(419)	441	11	402	466	427
Total PCB Mass(ug)	28	6.2(7.1)	4.6	*	14	9	38
PCB Concentration(ug/m3)	0.058	0.0197(0.0169)	0.0104	*	0.0348	0.0193	0.089
Percent of Allowable(%)	6	2(2)	1	*	3	2	9

TABLE 2.3

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2006 THROUGH NOVEMBER 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit ID	STATION 1C PUF-16	STATION 14 PUF-4(PUF-12)	STATION 22B PUF-18	STATION 23 PUF-2	STATION 29 PUF-5	STATION 30 PUF-17	STATION 31 PUF-6
11/4/2006							
Total Volume(m3)	524	307(444)	480	377	438	386	433
Total PCB Mass(ug)	89	7(6.7)	3	3	3.9	22	11
PCB Concentration(ug/m3)	0.1698	0.0228(0.0151)	0.0062	0.008	0.0089	0.057	0.0254
Percent of Allowable(%)	17	2(2)	1	1	1	6	3
11/6/2006							
Total Volume(m3)	449	298(416)	394	374	370	415	425
Total PCB Mass(ug)	96	8.5(9.6)	6.6	3.4	4	16	200
PCB Concentration(ug/m3)	0.2138	0.0285(0.0231)	0.0168	0.0091	0.0108	0.0386	0.4706
Percent of Allowable(%)	21	3(2)	2	1	1	4	47
11/7/2006							
Total Volume(m3)	470	290(405)	421	391	384	83	426
Total PCB Mass(ug)	68	5(5.5)	27	21	74	*	26
PCB Concentration(ug/m3)	0.1447	0.0172(0.0136)	0.0641	0.0537	0.1927	*	0.061
Percent of Allowable(%)	14	2(1)	6	5	19	*	6
11/8/2006							
Total Volume(m3)	468	269(389)	442	357	390	0	433
Total PCB Mass(ug)	78	15(16)	7.7	12	26	*	11
PCB Concentration(ug/m3)	0.1667	0.0558(0.0411)	0.0174	0.0336	0.0667	*	0.0254
Percent of Allowable(%)	17	6(4)	2	3	7	*	3
11/9/2006							
Total Volume(m3)	474	299(419)	424	362	389	323	391
Total PCB Mass(ug)	130	79(77)	29	39	66	64	180
PCB Concentration(ug/m3)	0.2743	0.2642(0.1838)	0.0684	0.1077	0.1697	0.1981	0.4604
Percent of Allowable(%)	27	26(18)	7	11	17	20	46
11/10/2006							
Total Volume(m3)	462	474(458)	428	397	378	426	414
Total PCB Mass(ug)	49	38(38)	3.3	10	16	74	8.3
PCB Concentration(ug/m3)	0.1061	0.0802(0.083)	0.0077	0.0252	0.0423	0.1737	0.02
Percent of Allowable(%)	11	8(8)	1	3	4	17	2
11/11/2006							
Total Volume(m3)	548	515(499)	478	405	518	452	459
Total PCB Mass(ug)	1.7	0.9(0.6)	5.3	13	46	1.3	4.9
PCB Concentration(ug/m3)	0.0031	0.0017(0.0012)	0.0111	0.0321	0.0888	0.0029	0.0107
Percent of Allowable(%)	0	0(0)	1	3	9	0	1
11/12/2006							
Total Volume(m3)	456	436(410)	382	353	426	338	391
Total PCB Mass(ug)	32	2.5(2.6)	12	1.9	2.6	3.6	110
PCB Concentration(ug/m3)	0.0702	0.0057(0.0063)	0.0314	0.0054	0.0061	0.0107	0.2813
Percent of Allowable(%)	7	1(1)	3	1	1	1	28
11/13/2006							
Total Volume(m3)	487	471(457)	450	328	474	442	431
Total PCB Mass(ug)	38	7.1(7.5)	15	7.4	18	11	54
PCB Concentration(ug/m3)	0.078	0.0151(0.0164)	0.0333	0.0226	0.038	0.0249	0.1253
Percent of Allowable(%)	8	2(2)	3	2	4	2	13
11/14/2006							
Total Volume(m3)	480	433(434)	433	316	453	411	431
Total PCB Mass(ug)	72	3.2(3.3)	12	2.3	2.5	8	190
PCB Concentration(ug/m3)	0.15	0.0074(0.0076)	0.0277	0.0073	0.0055	0.0195	0.4408
Percent of Allowable(%)	15	1(1)	3	1	1	2	44

TABLE 2.3

EAST PLANT AREA PCB ANALYTICAL RESULTS SUMMARY
MAY 2006 THROUGH NOVEMBER 2006
AAQMP MODIFICAITONS
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

Unit ID	*STATION 1C* *PUF-16*	*STATION 14* *PUF-4(PUF-12)*	*STATION 22B* *PUF-18*	*STATION 23* *PUF-2*	*STATION 29* *PUF-5*	*STATION 30* *PUF-17*	*STATION 31* *PUF-6*
11/15/2006							
Total Volume(m3)	437	244(196)	410	309	434	404	425
Total PCB Mass(ug)	5.7	*(*)	12	2	4.2	2.3	63
PCB Concentration(ug/m3)	0.013	*(*)	0.0293	0.0065	0.0097	0.0057	0.1482
Percent of Allowable(%)	1	*(*)	3	1	1	1	15
11/17/2006							
Total Volume(m3)	512	446(417)	463	340	481	476	423
Total PCB Mass(ug)	36	5.1(5.2)	16	5.4	21	11	79
PCB Concentration(ug/m3)	0.0703	0.0114(0.0125)	0.0346	0.0159	0.0437	0.0231	0.1868
Percent of Allowable(%)	7	1(1)	3	2	4	2	19
11/18/2006							
Total Volume(m3)	452	511(513)	440	389	487	505	450
Total PCB Mass(ug)	2.1	0.8(0.7)	6.2	26	49	1.7	2.8
PCB Concentration(ug/m3)	0.0046	0.0016(0.0014)	0.0141	0.0668	0.1006	0.0034	0.0062
Percent of Allowable(%)	0	0(0)	1	7	10	0	1
11/19/2006							
Total Volume(m3)	338	361(359)	328	244	359	364	328
Total PCB Mass(ug)	1	0(0.5)	4.8	12	23	0.8	0.7
PCB Concentration(ug/m3)	0.003	ND(0.0014)(0.0014)	0.0146	0.0492	0.0641	0.0022	0.0021
Percent of Allowable(%)	0	--(0)	1	5	6	0	0

Notes:
* - Results not reported due to machine malfunction
NR - No result because machine was not setup
ND - Non-Detect
J - Estimated Result
Station 1C replaced Station 1B June 21, 2006.

TABLE 3.1

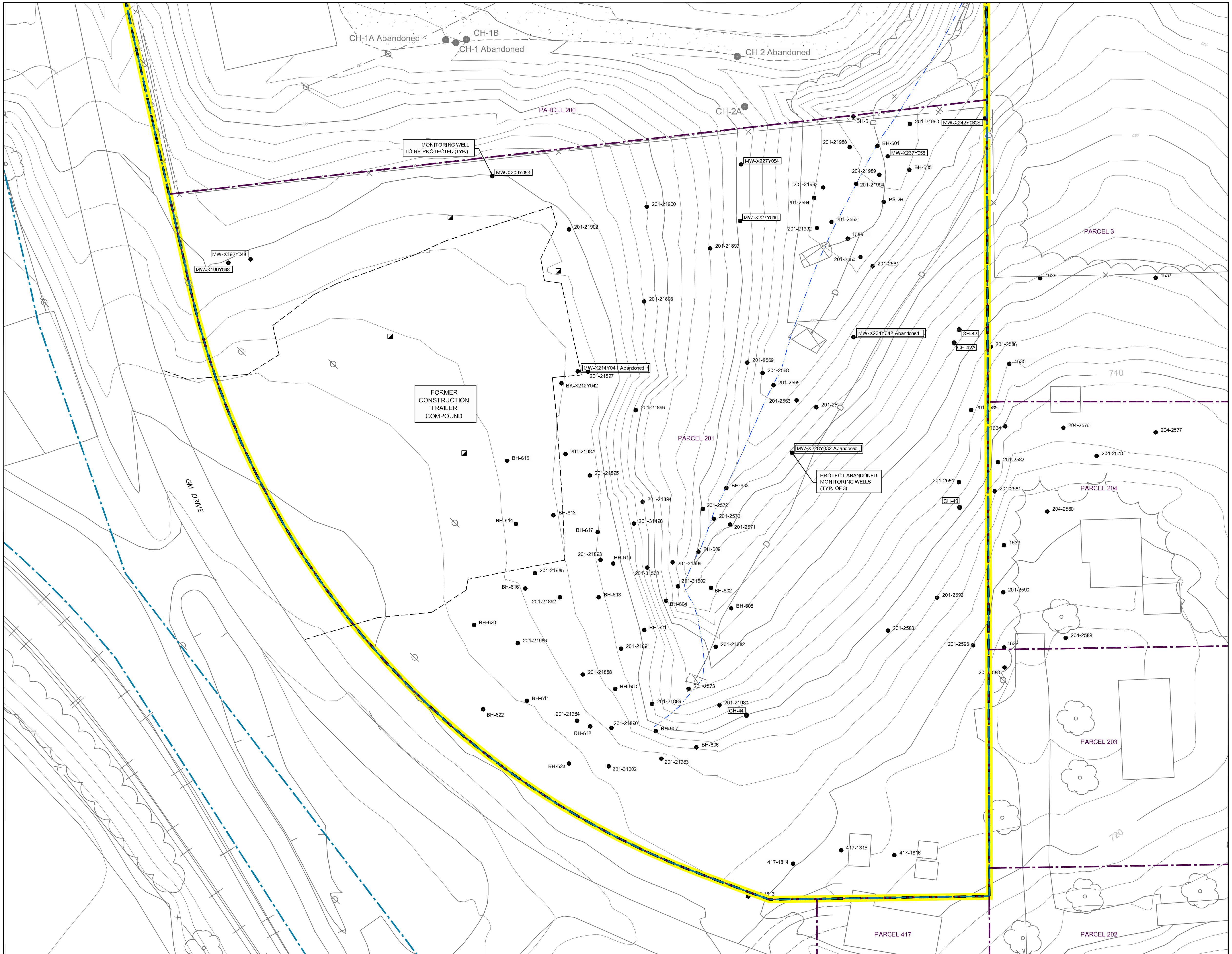
EXAMPLE VALIDATED TSP SAMPLE RESULTS
AAQMP MODIFICATIONS PROPOSAL - NOVEMBER 2006
GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

	STATION 1C	*STATION 14* (*duplicate result*)	*STATION 22B*	*STATION 23*	*STATION 29*	*STATION 30*	*STATION 31*
9/19/2006							
TSP Concentration(mg/m3)	0.0882	0.0105 J(0.0259 J)	0.079	0.0685	0.0435	0.0211	0.0331
Percent of Allowable(%)	UPWIND	7(18)	54	47	30	14	22
10/19/2006							
TSP Concentration(mg/m3)	0.0133	0.013(0.0107)	0.0308	0.0772	0.0189	0.0066	0.013
Percent of Allowable(%)	UPWIND	59(48)	139	348	85	30	59

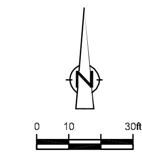
J - Estimated Result

APPENDIX F

PARCEL 201 EXCAVATION DESIGN FIGURES



Nº	Revision	Date	Initial



LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- POWER POLES
- SEPTIC TANK LOCATION
- ROADS / PAVED AREAS
- APPROXIMATE PARCEL BOUNDARY
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE SURFACE WATER LOCATION
- SURVEYED PARKING BOUNDARY
- BH-606 SAMPLE LOCATION
- MW-X227Y049 MONITORING WELL LOCATION (TO BE PROTECTED)
- MW-X214Y041 ABANDONED MONITORING WELL
- CH-42 EXISTING COREHOLE

NOTE: GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

SCALE VERIFICATION

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

Approved

DRAWING STATUS

Status	Date	Initial
ISSUED FOR CONSTRUCTION	MAY 16, 2008	C.R.H.
ISSUED FOR BID	APR. 18, 2008	C.R.H.
ISSUED FOR APPROVAL	MAR. 27, 2008	C.R.H.

GM POWERTRAIN BEDFORD FACILITY BEDFORD, INDIANA

PARCEL 201/204 - SOIL SOURCE REMOVAL

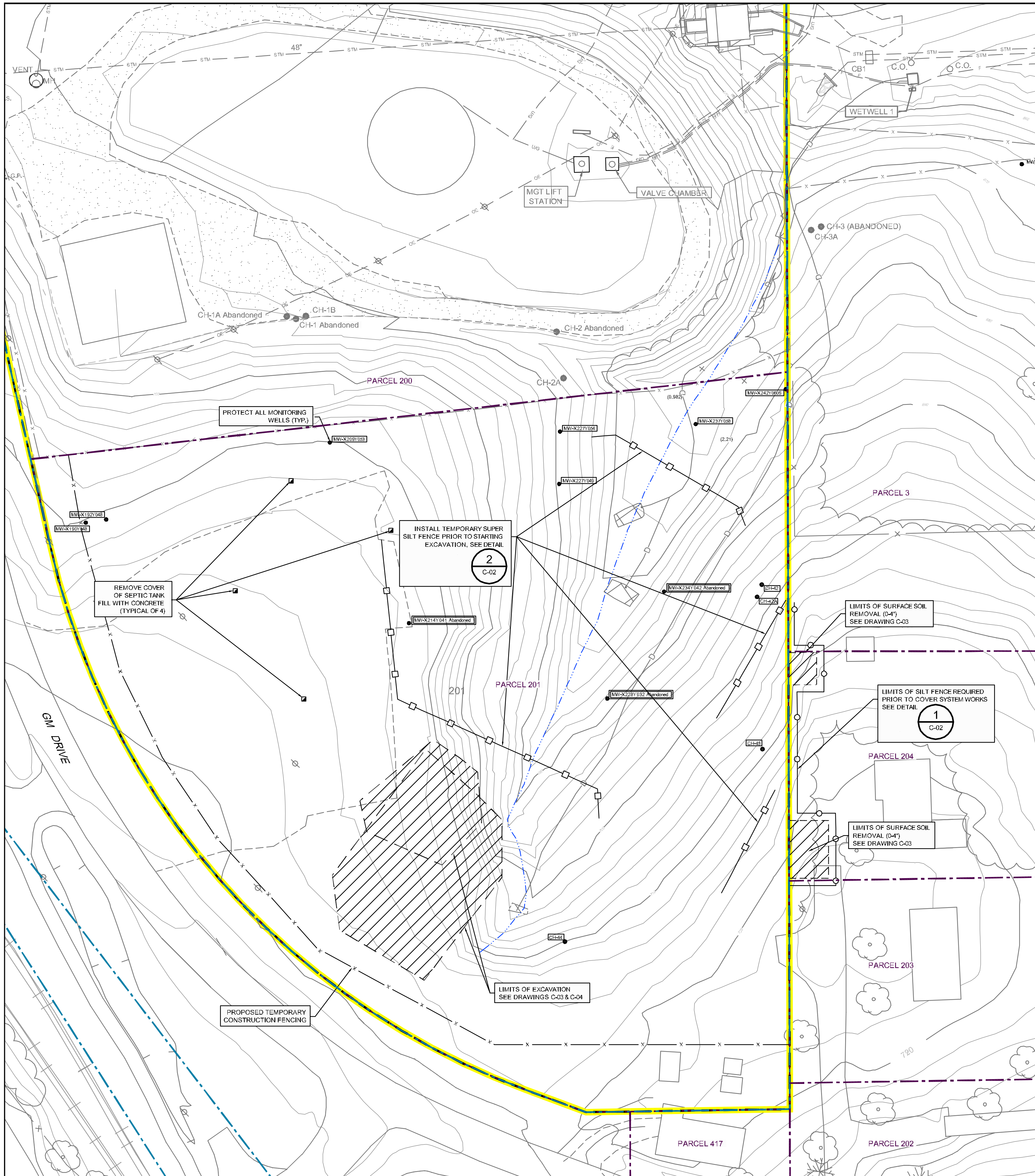
EXISTING CONDITIONS

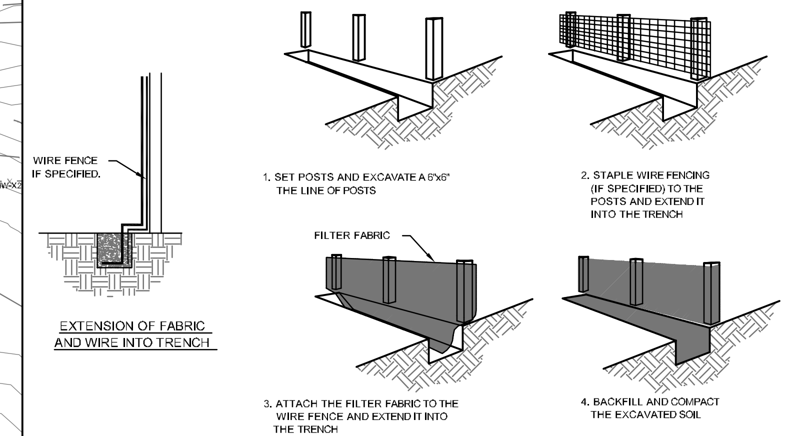
CONESTOGA-ROVERS & ASSOCIATES

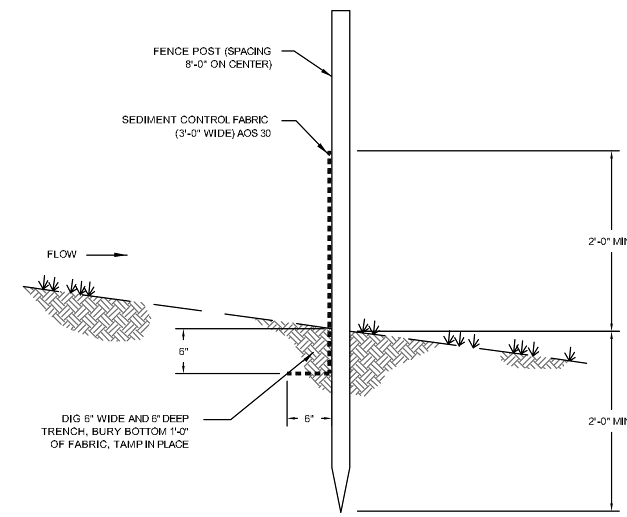
Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001 AND CRA SURVEYS 2002 TO 2005

Project Manager:	Reviewed By:	Date:	
J.M.	P.G.	FEBRUARY 2008	
Scale: 1" = 30'	Project Nº: 13968-00	Report Nº: 268	Drawing Nº: C-01

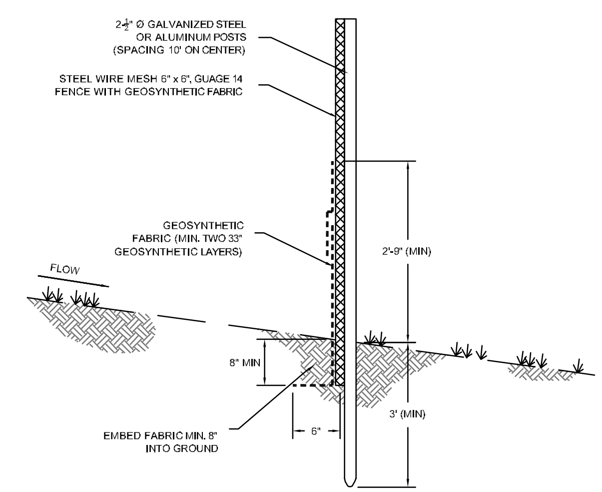
13968-00(268)CI-WA001 MAY 16/2008





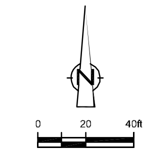


DETAIL 1 C-02 TYPICAL SILT FENCE
NTS



DETAIL 2 C-02 SUPER SILT FENCE
NTS

Nº	Revision	Date	Initial



LEGEND
- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- POWER POLES
- SEPTIC TANK LOCATION
- ROADS / PAVED AREAS
- APPROXIMATE PARCEL BOUNDARY
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE SURFACE WATER LOCATION
- SURVEYED PARKING BOUNDARY
- MW-X227Y049 MONITORING WELL LOCATION (TO BE PROTECTED)
- MW-X214Y041 ABANDONED MONITORING WELL
- CH-42 EXISTING COREHOLE
- LIMIT OF EXCAVATION
- PROPOSED SUPER SILT FENCE
- PROPOSED SILT FENCE
- PROPOSED TEMPORARY CONSTRUCTION FENCING
- EXCAVATION

NOTE: GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

SCALE VERIFICATION

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

Approved

DRAWING STATUS

Status	Date	Initial
ISSUED FOR CONSTRUCTION	MAY 15, 2008	C.R.H.
ISSUED FOR BID	APR. 18, 2008	C.R.H.
ISSUED FOR APPROVAL	MAR. 27, 2008	C.R.H.

GM POWERTRAIN BEDFORD FACILITY
BEDFORD, INDIANA

PARCEL 201/204 - SOIL SOURCE REMOVAL

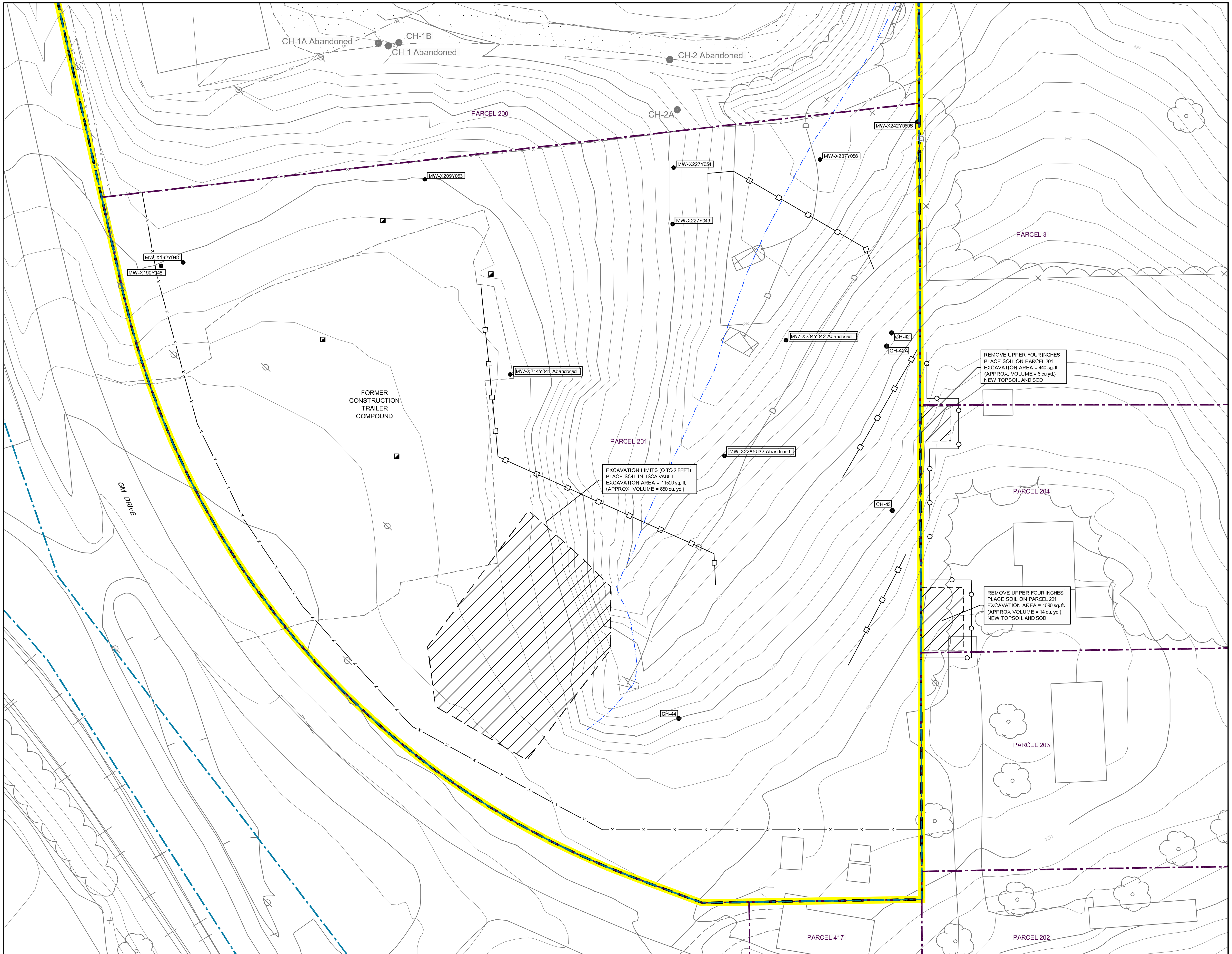
SITE PREPARATION
AND WORKS

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2005

Project Manager:	Reviewed By:	Date:	
J.M.	P.G.	FEBRUARY 2008	
Scale: 1" = 40'	Project Nº: 13968-00	Report Nº: 268	Drawing Nº: C-02

13968-00(268)CI-WA004 MAY 15/2008



Nº	Revision	Date	Initial

N

0 10 30ft

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- POWER POLES
- SEPTIC TANK LOCATION
- ROADS / PAVED AREAS
- APPROXIMATE PARCEL BOUNDARY
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE SURFACE WATER LOCATION
- SURVEYED PARKING BOUNDARY
- MW-X227Y049 MONITORING WELL LOCATION (TO BE PROTECTED)
- MW-X214Y041 ABANDONED MONITORING WELL
- CH-42 EXISTING COREHOLE
- LIMIT OF EXCAVATION
- PROPOSED TEMPORARY CONSTRUCTION FENCING
- PROPOSED SUPER SILT FENCE
- PROPOSED SILT FENCE
- EXCAVATION

NOTE: GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

SCALE VERIFICATION

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

Approved

DRAWING STATUS

Status	Date	Initial
ISSUED FOR CONSTRUCTION	MAY 16, 2008	C.R.H.
ISSUED FOR BID	APR. 18, 2008	C.R.H.
ISSUED FOR APPROVAL	MAR. 27, 2008	C.R.H.

GM POWERTRAIN BEDFORD FACILITY BEDFORD, INDIANA

PARCEL 201/204 - SOIL SOURCE REMOVAL

EXCAVATION AREA (0 TO 2 FEET)

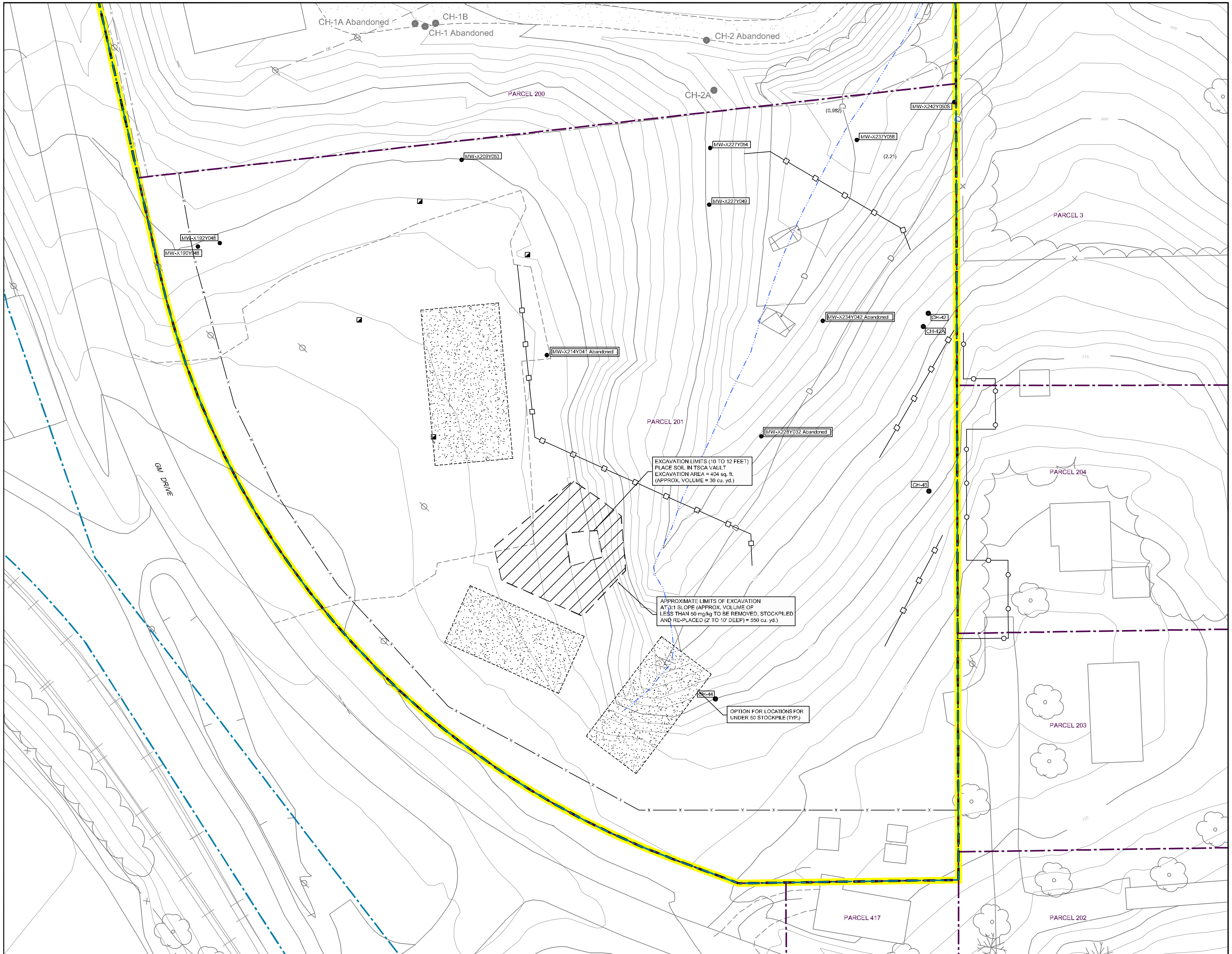
CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001 AND CRA SURVEYS 2002 TO 2005

Project Manager:	Reviewed By:	Date:	
J.M.	P.G.	FEBRUARY 2008	
Scale: 1" = 30'	Project Nº: 13968-00	Report Nº: 268	Drawing Nº: C-03

13968-00(268)CI-WA002 MAY 16/2008



№	Revision	Date	Initial

0 10 30ft

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- POWER POLES
- SEPTIC TANK LOCATION
- ROADS / PAVED AREAS
- APPROXIMATE PARCEL BOUNDARY
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE SURFACE WATER LOCATION
- SURVEYED PARKING BOUNDARY
- MW-X227Y049 MONITORING WELL LOCATION (TO BE PROTECTED)
- MW-X214Y041 ABANDONED MONITORING WELL
- CH-42 EXISTING COREHOLE
- LIMIT OF EXCAVATION
- PROPOSED TEMPORARY CONSTRUCTION FENCING
- PROPOSED STOCKPILING OPTIONS
- PROPOSED SUPER SILT FENCE
- PROPOSED SILT FENCE
- EXCAVATION

NOTE: GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

SCALE VERIFICATION

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

Approved

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GM POWERTRAIN BEDFORD FACILITY BEDFORD, INDIANA

PARCEL 201/204 - SOIL SOURCE REMOVAL

EXCAVATION AREA (10 TO 12 FEET)

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001 AND CRA SURVEYS 2002 TO 2005

Project Manager:	Reviewed By:	Date:	
J.M.	P.G.	FEBRUARY 2008	
Scale: 1" = 30'	Project №: 13968-00	Report №: 268	Drawing №: C-04

13968-00(268)CI-WA003 MAY 16/2008