

**REMEDIAL INVESTIGATION REPORT  
GM COMPONENTS HOLDINGS, LLC  
200 UPPER MOUNTAIN ROAD - BUILDING 10  
LOCKPORT, NEW YORK  
BCP SITE #C932140**

by

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## 1. INTRODUCTION

This report presents the results of the Remedial Investigation (RI) conducted at Building 10, GM Components Holdings (GMCH) Facility, located at 200 Upper Mountain Road, Lockport, New York. The work was performed under the New York State Department of Environmental Conservation (NYSDEC), Brownfield Cleanup Program (BCP). The GMCH BCP Agreement for the Building 10 Site (NYSDEC Site C932140) was executed on May 20, 2010. A Site Locus Plan is included as Figure 1 and a Site Plan is included as Figure 2.

Three separate BCP Sites are associated with the GMCH Facility, as follows.

- GM Components Holdings, LLC Building 7, site ID #C932138 (Building 7);
- GM Components Holdings, LLC Building 8, site ID #C932139 (Building 8); and
- GM Components Holdings, LLC Building 10, site ID #C932140 (Building 10).

This RI Report has been developed for the work associated with Building 10.

Interpretations presented within this report are based primarily on the investigations described herein. Pertinent data from the previous investigations (to be referred to as the “Previous Phase II Investigations”) generated prior to entering into the BCP have been included within this report. Previously completed reports include the following.

- “Field Investigation Report, West Lockport Complex, Lockport, NY” dated January 17, 2007. Prepared for Delphi Corporation by Environmental Resource Management.
- “Focused Environmental Assessment, Building 10, Lockport, New York” dated August 27, 2007. Prepared for Delphi Thermal by GZA GeoEnvironmental of New York.
- “Soil Vapor Extraction (SVE) Pilot Test Summary and SVE System Design Report, Northern Portion of Building 10, Lockport Complex, 200 Upper Mountain Road, Lockport, New York” dated November 2007. Prepared for Delphi Automotive by GZA GeoEnvironmental of New York.

### 1.1 Purpose

The objectives of this RI were to obtain site specific data on the nature and extent of potential soil, groundwater, soil vapor, and indoor air contamination and the degree to which the identified site conditions pose a threat to human health and the environment. The RI for the three BCP Sites at the GMCH Facility were conducted concurrently.

In addition to the investigation activities conducted as part of the Building 10 BCP Site, 35 additional monitoring wells were sampled as part of other on-going monitoring events or the other two (2) BCP investigations. These groundwater data were used in conjunction with the RI to assess facility-wide groundwater conditions.

The specific objectives of the RI were as follows:

- Further assess Site geology;
- Further assess hydrogeology;
- Evaluate extent of contamination;

- Evaluate contaminant transport mechanisms;
- Assess the potential source(s) of contamination and assess impact to soil, groundwater, and indoor air; and
- Identify potential pathways for human exposure as part of a qualitative risk assessment.

## **1.2 Site and Surrounding Area Description**

The GMCH Facility is located at 200 Upper Mountain Road in both the City and Town of Lockport, which is located in Niagara County, New York. The portion of the facility which includes Building 10 is located within the City of Lockport. The GMCH Facility is approximately 342 acres in size and is located in an area of mixed residential, agricultural, commercial, and industrial settings along Upper Mountain Road. Building 10 occupies approximately 10.6 of the 342 acres and is located in the southwestern portion of the GMCH Facility (see Figure 2). The Niagara Escarpment is located approximately one-half mile to the northeast of the GMCH Facility across Upper Mountain Road. A stone quarry and former steel facility are located approximately 1 mile south of the GMCH Facility. Residential properties are generally present along the east and north sides of Upper Mountain Road and to the west.

Within the GMCH Facility, Building 7 and Building 8 are dedicated to manufacturing and engineering. Building 9 is no longer used for manufacturing as the equipment has been removed and is currently used by maintenance for storage purposes. Building 10 has been converted to house new manufacturing operations staffed by non-GMCH personnel in the northern portion of the building; the southern portion is used by GMCH as a warehouse. Building 6 has been leased to Delphi Properties Management, LLC for vehicle component engineering and testing (see Figure 2).

The City and Town of Lockport is bordered by the Town of Newfane to the north, the Town of Hartland to the northeast, the Town of Royalton to the east, the Town of Pendleton to the south, and the Town of Cambria to the west.

## **1.3 Site History**

GMCH currently owns and operates an automotive component manufacturing facility along Upper Mountain Road in the City and Town of Lockport, New York. The facility was initially developed in 1937 on vacant agricultural land and orchards. The GMCH Facility was developed as part of the radiator manufacturing operation, formerly located in downtown Lockport. Manufacturing operations began at the facility along Upper Mountain Road in 1939.

Building 10 was constructed as a warehouse in two stages; the north end was completed in 1960 and the south end was completed in 1969. A portion of the building was used for manufacturing by GM/Delphi for a period of time. The north end of Building 10 has been converted to a facility housing new manufacturing operations staffed by non-GMCH personnel. GMCH continues to use the south end of the building as a warehouse.

General Motors Corporation (GMC) owned and operated the facility until it was conveyed to Delphi Automotive Systems, LLC (Delphi) in December 1998. In June 2009, GMC filed for Chapter 11 bankruptcy protection and it is now known as Motors Liquidation Company (MLC).

General Motors LLC (GM) was created to purchase certain assets of MLC. In October 2009, a GM subsidiary known as GMCH took title from Delphi the portion of the facility that includes Building 10.

## **1.4 Previous Investigations**

In 2006, a voluntary facility-wide investigation of soil and groundwater conditions at the facility was conducted. The first phase of that work was the development of a Current Conditions Summary (CCS) which was completed by Environmental Resource Management (ERM).

### **1.4.1 Previous Investigations Conducted by ERM**

After completion of the CCS, a field investigation, also completed by ERM, was initiated to assess soil and groundwater conditions at the 50 areas of interest (AOI), identified by the CCS (Previous Phase II Investigations). As part of the investigation, 144 soil borings were completed, and nine sediment and four surface soil samples were collected. Six monitoring wells were installed, but only five were sampled as one of the wells was dry. Over 400 soil and groundwater samples were collected from the 144 soil borings and analyzed for parameters which included volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs). The field investigation activities and results were described in the Field Investigation Report (FIR) that was submitted to the NYSDEC Region 9 office in January 2007, followed by the CCS submission in May 2007.

Two AOIs (AOI-36 and AOI-37) located within the footprint of the Building 10 BCP site were included in the field investigation and one exterior location (AOI-35) was west of Building 10. AOI-36 was a former painting operation in the western interior portion of the building. AOI-37 was an area where soil contamination was encountered during interior construction of a sump in 1999. AOI-35, identified as the Salvage Equipment Storage Area located west of Building 10, near Building 16, was also investigated as part of the Previous Phase II Investigation.

Boring 10-106 was completed at AOI-36 and borings 10-107-A and 10-107-B were completed within AOI-37 (see Previous Phase II Investigation figure in Appendix A). At each AOI, samples were analyzed for VOCs, SVOCs, PCBs, and metals. No constituents were detected at concentrations above NYSDEC Part 375 Commercial Soil Clean-up Objectives (CSCO) at AOI-36. At AOI-37, tetrachloroethylene (PCE) was detected at a concentration of 270 mg/kg in one sample, which exceeds its respective CSCO of 150 mg/kg.

Boring 10-105 was completed in the vicinity of AOI-35 and a sample from 0 to 2 feet bgs was tested for VOCs, SVOCs, PCBs, and metals. Cadmium was detected at a concentration of 22.3 ppm, which exceeds its respective Part 375 CSCO of 9.3 ppm. No other constituents of concern were noted at this AOI.

Data tables and figures from previous Building 10 investigations are included in Appendix A.

### **1.4.2 Previous Investigations Conducted by GZA**

Based on the findings described above, a Focused Environmental Assessment<sup>1</sup> (FEA) was conducted by GZA. The purpose of the FEA was to determine if the previously identified contamination at AOI-37 required remediation. The FEA was conducted in general accordance with a NYSDEC reviewed work plan in June 2007. The FEA included the completion of 12

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<sup>1</sup> "Focused Environmental Assessment, Building 10, Lockport, New York" dated August 27, 2007. Prepared for Delphi Automotive by GZA.

soil probes (SP-1 through SP-12), installation of one groundwater monitoring well (Bldg 10 MW-1), and a vapor intrusion (VI) assessment of the northern portion of the building. The FEA identified elevated concentrations of PCE in the soil samples tested; several VOCs were detected above their respective groundwater criteria in the groundwater sample from Bldg 10 MW-1. Additionally, a VI concern was identified based on the results of the indoor and sub-slab air samples collected (see Appendix A for tables and figures from the FEA).

Additional investigations were conducted in July 2007 to further delineate the VOC-impacted soil beneath Building 10, focusing on PCE soil contamination greater than the NYSDEC Part 375 Industrial SCO of 300 ppm. The additional investigations consisted of nine (9) soil probes (SP-13 through SP-21) and identified an approximate 14,000 square foot area where PCE concentrations were detected at a concentration greater than 300 ppm (see Appendix A for tables and figures from additional investigations).

In October 2007, GZA performed a Soil Vapor Extraction (SVE) System Pilot Study to develop the design criteria of the SVE system to be used to treat soil with PCE concentrations greater than 300 ppm. Field activities associated with the pilot study included the installation of two, 4-inch diameter PVC SVE extraction wells, installation of eight (8) vacuum monitoring points via soil probe, mobilization and set up of a mobile extraction system to perform two days of pilot testing to collect vacuum and flow rate readings, organic vapor measurements, and analytical air sampling. The two pilot test extraction wells were installed within the 14,000 sq ft area. Based on the findings of the additional soil investigation and SVE pilot study, a SVE Pilot Test Summary and SVE System Design Report<sup>2</sup> was prepared and submitted to NYSDEC for review.

In March 2009, a SVE and sub-slab depressurization system (SSDS) installation was completed and began operation inside Building 10. The SVE/SSDS Installation Document<sup>3</sup> was submitted to NYSDEC for review in July 2009. The SVE System consists of seventeen (17), 4-inch diameter vertical extraction wells installed to depths ranging from 5 to 7 feet below the building slab. The extraction wells were installed on approximate 30 foot centers within the 14,000 sq ft area. Three trenches were utilized to pipe the 17 extraction wells to the SVE shed housing the rotary blower. Within each trench, 2-inch diameter PVC screened piping was installed horizontally within the full length of each of the three trenches. This piping is also connected to the blower and is acting as a SSDS, extracting potential vapors that may accumulate beneath the concrete slab (see Appendix A for SVE/SSDS layout drawing).

Two (2) annual reports<sup>4,5</sup> documenting the operation and monitoring of the SVE/SSDS have been prepared and submitted to NYSDEC since the start-up of the SVE/SSDS. The SVE/SSDS is currently in operation.

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2 "Soil Vapor Extraction (SVE) Pilot Test Summary and SVE System Design Report, Delphi Automotive, Northern Portion of Building 10, Lockport Complex, 200 Upper Mountain Road, Lockport, New York" dated November 2007. GZA File No.: 21.0056364.00

3 "SVE/SSD System Installation Document, Delphi Automotive, Lockport, New York" dated July 2009. GZA File No.: 21.0056445.00

4 "GM Component Holdings, LLC, 200 Upper Mountain Road, Lockport, New York, Building 10 2009 SVE/SSD Operation & Monitoring Report", dated May 2010. Prepared for NYSDEC by GZA.

5 "GM Component Holdings, LLC, 200 Upper Mountain Road, Lockport, New York, Building 10 2010 SVE/SSD Operation & Monitoring Report", dated June 2011. Prepared for NYSDEC by GZA.



Data tables from previous Building 10 investigations are included in Appendix A.

### **1.4.3 Record of Decision – Delphi Harrison Site**

A New York State Inactive Hazardous Waste Disposal Site, known as the Delphi Harrison Thermal Systems Site (Delphi Harrison Site, Site # 932113), is located in the eastern portion of the GMCH facility, east of the Building 8 BCP Site (the limits of the disposal site are shown on Figure 10). Delphi Harrison Thermal Systems, a division of Delphi Automotive Systems LLC, (Delphi) entered into an Order on Consent with the NYSDEC to investigate the approximate 22.7 acre Delphi Harrison Site. This Order on Consent required Delphi to investigate the nature and extent of residual contamination associated with the former aboveground TCE storage tank that was located at the southeast corner of Building 8. The tank was decommissioned in 1994.

In October 1994, an underground water line ruptured in the vicinity off of the former TCE storage tank and workers noted a solvent odor during the excavations to repair the ruptured line. NYSDEC was notified of the release at that time and assigned the incident Spill Number 9410972.

As part of the spill response, soils impacted with TCE were excavated from a 27 by 22 foot area down to the top of bedrock, about 7.5 feet. All of the soil could not be removed due to the irregular nature of the bedrock surface. The excavated soil was properly disposed off-site and the excavation was backfilled with clean material. In 1999, NYSDEC listed the Site as a Class 3 site in the Inactive Hazardous Waste Disposal Site Registry in New York State. A Class 3 site is defined as a site where hazardous waste does not present a significant threat to the public health or the environment and action may be deferred.

NYSDEC and Delphi entered into a Consent Order (# B9-0553-99-06) on July 31, 2001 that obligated Delphi to implement a Remedial Investigation and Feasibility Study (RI/FS) at the Delphi Harrison Site. The RI was completed in April 2002 and the FS was completed in December 2003.

After completion of the remedial investigation program, NYSDEC issued a Record of Decision (ROD) (March 2005) for the Site in which it selected a remedy with the following components:

- monitored natural attenuation (MNA) with groundwater monitoring to ensure the continued effectiveness of the remedy;
- development of a contingency plan for groundwater control/treatment if natural attenuation processes can no longer be demonstrated or if significant off-site groundwater contamination is observed;
- development of a site management plan to: (a) address residual contaminated soils that may be excavated from the site during future redevelopment, (b) evaluate the potential for vapor intrusion for all current site buildings and any developed on the site in the future, including provision for mitigation of any impacts identified; (c) provide for the operation and maintenance of the components of the remedy; (d) monitor site groundwater; and (e) identify any use restrictions on site development or groundwater use;
- imposition of an environmental easement to restrict groundwater use and ensure compliance with the approved site management plan; and

- certification of the institutional and engineering controls.

In 2009, GMCH purchased from Delphi a portion of the Delphi manufacturing complex that included the Delphi Harrison Site. GMCH is currently negotiating a new Order on Consent with NYSDEC to formally implement the ROD-selected remedial program for the Delphi Harrison Site. A Site Management Plan (SMP) was prepared to address the components of the ROD-selected remedy and submitted to NYSDEC. The SMP will not be formally approved by NYSDEC until the new Order on Consent is established. GMCH has been conducting annual MNA groundwater sampling of the Delphi Harrison Site and submitting the results to NYSDEC.

## 1.5 Report Organization

The text of this report is divided into six (6) sections. Immediately following the text are the tables, figures, and appendices. A brief summary of each section is provided below.

**Section 1 - Introduction:** This section presents the purpose of the RI report, the Site background including Site description, Site history and previous relevant studies, and report organization.

**Section 2 - Remedial Investigation:** This section summarizes the fieldwork completed with respect to Building 10 including test borings, monitoring well installation, soil probes, indoor air assessment, sample collection, and field information.

**Section 3 - Physical Characteristics of the Study Area:** This section presents and interprets the various data collected and evaluates Site conditions (e.g., hydrogeology, geology, hydrology, etc.).

**Section 4 - Remedial Investigation Results:** The types and concentrations of detected chemical compounds in the different environmental media are discussed. The section is divided into the various types of samples collected which include: subsurface soil, groundwater, and vapor intrusion samples (sub-slab, indoor air, and outdoor air).

**Section 5 - Conceptual Site Model:** An evaluation of potential migration pathways and contaminant persistence is presented. This section presents the results of a general qualitative exposure assessment for the Site. The assessment includes an estimation of exposure point concentrations and a comparison of this data with published New York State standards, criteria and guidance values (SCGs).

**Section 6 - Conclusions & Recommendations:** This section summarizes the results and findings of the RI.

## **2. REMEDIAL INVESTIGATION (RI) ACTIVITIES**

Field explorations were performed in general accordance with the NYSDEC-approved Work Plans to obtain and evaluate site-specific data, nature and extent of contamination, and the degree to which releases and contamination pose a threat to human health and the environment.

The fieldwork activities, which were completed as part of the RI since the BCP Agreement was executed in May 2010, consisted of the following on-site activities.

- Test borings and bedrock monitoring well installations;
- Soil probes; and
- Soil, groundwater, sub-slab vapor, and indoor and outdoor air sampling.

This RI was completed in general accordance with the following documents.

- The scope of work described in the "Revised Remedial Investigation Work Plan, GM Components Holdings, LLC, 200 Upper Mountain Road, Lockport, New York, Building 10 Site #932140" dated October 2010;
- "GM Components Holdings, LLC, Brownfield Cleanup Program, Quality Assurance and Quality Control Plan, Building 7 (Site ID #C932138), Building 8 (Site ID #932139) and Building 10 (Site ID #C932140), Lockport Facility, 200 Upper Mountain Road, Lockport, New York" dated June 2010;
- "Site Health and Safety Plan, GM Components Holdings, LLC, Brownfield Cleanup Program, Building 7 (Site ID #C932138), Building 8 (Site ID #932139) and Building 10 (Site ID #C932140), Lockport Facility, 200 Upper Mountain Road, Lockport, New York" dated April 20, 2010;
- "Brownfield Cleanup Program, Citizen Participation Plans, GM Components Holdings, LLC, Building 7 Site ID #C932138, Building 8 Site ID #932139 and Building 10 Site ID #C932140, 200 Upper Mountain Road, City of Lockport, New York" dated June 2010 and;
- NYSDEC Division of Environmental Remediation DER-10, "Technical Guidance for Site Investigation and Remediation", dated May 2010.

A description of the field explorations conducted during this RI is presented in the following subsections.

### **2.1 Test Boring and Monitoring Well Installation**

In December 2010 and January 2011, Earth Dimensions Inc. (EDI) completed two (2) test borings and installed two (2) bedrock groundwater monitoring wells at locations east and downgradient of the Building 10 BCP Site (see Figure 3). The bedrock monitoring wells were installed to evaluate the bedrock conditions, bedrock groundwater flow direction, and collection of groundwater samples for analytical testing. The two (2) bedrock monitoring wells (MW-10-2 and MW-10-3) were installed between the Building 10 BCP Site and the Building 7 BCP Site, east of Building 10.

Boreholes were advanced through the overburden to the top of bedrock using a truck-mounted rotary drill rig and 6-5/8 inch inside diameter (I.D.) hollow stem augers (HSA). Overburden soil samples

from ahead of the HSA were collected continuously by driving a 1-3/8 inch I.D. by 24-inch long split spoon sampler with an automated 140-pound hammer falling approximately 30 inches, in general accordance with ASTM D1586 (Standard Penetration Test). Test borings were advanced with the HSAs until auger refusal (suspected top of bedrock) was encountered. Auger cuttings from the holes were containerized for subsequent disposal by GMCH (see Appendix B).

Soil samples collected from the test borings were classified in the field by visual examination in accordance with a modified Burmister Classification System. Boring logs that identify appropriate stratification lines, blow counts (if applicable), sample identification, sample depth interval and recovery, and date are included in Appendix C.

One analytical soil sample was collected from each of the two (2) completed test borings and analyzed for VOCs. A summary of the samples collected and the analysis performed is shown on Table I. Analytical test results from the test borings soil samples are summarized on Table II and the results are further discussed in Section 4.6.

Upon reaching the top of bedrock, as indicated by auger refusal, a 5-7/8 inch diameter tri-cone roller bit was used to form an approximate 2 foot deep socket hole in the top of bedrock. A 4-inch steel casing was then placed in the socket hole and grouted in-place. The grout (consisting of Portland cement and bentonite powder mixture) was allowed to set for at least 24 hours prior to initiating rock coring. A 3-7/8 inch diameter rock core barrel was used to core into the bedrock. Bedrock cores removed ranged from 9.8 feet to 10.3 feet in length. Following the completion of rock coring, the water used during the coring process was containerized for subsequent disposal by GMCH (see Appendix B).

The recovered rock core samples were logged which included run number, sample interval, length of sample recovered, rock quality designation (RQD), depth where drill water was lost, and a description of the rock sampled and individual discontinuities (bedding planes, joints, voids, etc.). This information is included on the boring logs (see Appendix C).

The bedrock monitoring wells were constructed of 2-inch I.D. flush-coupled Schedule 40 polyvinyl chloride (PVC) riser and screen. Following placement of the screen and riser within the 4-inch diameter steel casing, the annular space around the screen, which was approximately 7 feet in length, was backfilled with #N00 sand to approximately 2 feet above the top of the screen. An approximate 3-foot thick layer of bentonite chips was placed above the sand filter and hydrated to fill the annulus between the PVC well riser and steel casing above the top of the sand pack. A mixture of cement/bentonite grout was used to fill the remaining annulus space of the steel casing from the top of the bentonite seal to approximately 1-foot bgs. The wells were completed at the surface with a protective steel road box set in concrete.

Following installation, the wells were developed utilizing a centrifugal pump on the drill rig to evacuate the wells and remove drill cuttings and to verify that the wells were functioning properly. The monitoring wells were pumped to dry-like conditions, allowed to recharge for approximately 1 hour and then pumped to dry-like conditions again. The following table is a summary of the volume of water removed from each well.

Well Location	Volume Removed	One Well Volume	Number of Well Volumes Removed
MW-10-2	8 gallons	2 gallons	4
MW-10-3	4 gallons	2.3 gallons	1.7

One analytical groundwater sample was collected using low-flow techniques from each bedrock well for VOC analysis. A summary of the samples collected and the analysis performed is shown on Table I. Analytical test results from the groundwater samples collected from the bedrock monitoring wells are summarized on Table III & IV and discussed in Section 4.7.

## 2.2 Soil Probe Exploration

Matrix Environmental Technologies, Inc. (Matrix) installed 20 soil probes inside and west of the Building 10 BCP Site in December 2010 (see Figure 3). These soil probes are designated as 10-SB-1 through 10-SB-21. The soil probe logs are contained in Appendix C. It should be noted that no soil probe with designation 10-SB-13 was completed. The RI Work Plan required six (6) soil probes to be completed in the footprint of the SVE system. Seven soil probes locations were marked out in the event of a utility conflict at a specific location. The soil probe numbering system was kept consistent as was used in the GMCH excavation permit process; 10-SB-13 was the soil probe location that was not needed.

Ten (10) soil probes were completed in the southern portion of Building 10 where previous investigation activities had not been completed. These probes were designated as 10-SB-1 through 10-SB-10 (see Figure 3).

Prior to completing the interior soil probes, the concrete floor slab was cored to remove the concrete. Probes were then pushed through fill material and native overburden soils to the top of bedrock and/or refusal, at soil probes 10-SB-1 through 10-SB-17. Bedrock was generally encountered at 7 to 10 feet below the building slab, with the exception of 10-SB-11 (completed in the northern portion of the building), where refusal was encountered at 4.5 feet below the building slab. Soil probes 10-SB-18 through 10-SB-21 were pushed through fill material and native overburden soils to a depth of 3 feet bgs. Due to the presence of utilities within the area at depths of about 4 feet bgs and the previous cadmium detection was at sample depth of 0 to 2 feet bgs, these four (4) probes were not advanced past 3 feet bgs.

Six (6) soil probes were completed within the approximate 14,000 square foot footprint of the SVE/SSDS in the northern portion of Building 10. These probes were designated as 10-SB-11, 10-SB-12, and 10-SB-14 through 10-SB-17 (see Figure 3). 10-SB-13 was not completed. The purpose of the soil probes was to assess contaminant concentrations in the soil in the northern portion of Building 10 and evaluate the effectiveness of the SVE system. Upon completion, each soil probe was converted to a vacuum monitoring point which will be used to assess the vacuum distribution of the SVE system in the subsurface. Polyethylene tubing (¼-inch outer diameter) was installed to a depth of approximately 4 to 5 feet bgs within a sand pack at each location (see soil probe logs in Appendix C). The sand pack was installed from the bottom of the soil probe to approximately 3.5 feet below the slab. A hydrated bentonite seal was installed from about 3.5 feet to the bottom of the concrete slab. The vacuum monitoring point was finished with a flush mounted road box cover set in concrete.

Four (4) soil probes were also completed on the exterior western side of Building 10 in the vicinity of boring 10-105, which contained cadmium at a concentration of 22.3 ppm in the 0-2 foot sample. The

four (4) soil probes in the vicinity of boring 10-105 were designated as 10-SB-18 through 10-SB-21 (see Figure 3).

Soil probes were advanced using direct push methodology via hydraulic hammer on a track mounted probe rig. Soil samples from the soil probes were collected with a macrocore sampler which contained a 2-inch outer diameter by 48-inch long acetate liner. A new acetate liner was used for each 4-foot sample run.

A summary of the soil samples collected and respective analysis performed is shown on Table I. Soil sample analyses included VOCs, SVOCs, PCBs, and metals. Analytical test results from the soil probe soil samples are summarized on Table II and the results are further discussed in Section 4.6.

### **2.3 Field Screening**

Soil samples retrieved from the test borings and soil probes were field screened for total volatile organics using an organic vapor meter (OVM) equipped with a photo-ionization detector equipped with a 10.6 eV bulb. The OVM was calibrated daily using a gas standard (isobutylene), in accordance to manufacturer's requirements. The split spoon sampler and/or acetate liner was opened, and the soil samples retrieved were screened immediately with the OVM by passing the OVM over the top of the retrieved samples and splitting the sample cores open at 4 to 6 inch intervals. The peak OVM readings per 2-foot screening interval were recorded on the boring and soil probe logs in Appendix C.

### **2.4 Indoor Air Sampling**

Indoor air (IA) sampling was completed within Building 10 in January 2011 to assess the effectiveness of the previously installed SVE/SSDS operating in Building 10. Two sampling events were completed as part of the Building 10 IA sampling. Two (2) IA samples were collected on January 18, 2011 while the SVE/SSDS was in operation and two (2) IS samples were collected on January 20, 2011 after the SVE/SSDS had been shut down for at least 24 hours prior to the sampling. The sampling locations are identified on Figure 3.

The IA samples are identified by the location, sample type, and date of collection (i.e., 10-VI-2IA-011811).

The IA samples collected while the SVE/SSDS was in operation were 10-VI-1IA-011811 and 10-VI-2IA-011811. The IA samples collected while the SVE/SSDS was shut down were 10-VI-1IA-012011 and 10-VI-2IA-012011. One outdoor air sample, designated 10-VI-OUT-011811, was collected during the first sampling event (see Figure 3).

GMCH maintains a database of approved chemicals and chemical products stored and used within Building 10. GMCH provided a list of products containing the compounds of concern [TCE, PCE, vinyl chloride (VC), cis-1,2-dichloroethylene (cis-DCE) and trans-1,2-dichloroethylene (trans-DCE)]. No active or in-use products or chemicals containing the compounds of concern were identified for Building 10. A copy of the database was provided for review prior to completing the air sampling and is included in Appendix D.

During the initial air sampling event on January 18, 2011, observations of the chemicals and chemical products present within approximately 25 to 30 feet of the sampling areas were made. An OVM with a photo-ionization detector, which could measure total organic vapors in the part per billion (ppb) range,



was used to screen some of the individual containers observed and determine background levels within the sampling areas. The following table contains a list of the products observed in the vicinity of the VI sampling locations and the OVM readings.

<b>Sampling Location</b>	<b>Product Present</b>	<b>Field Screening Result</b>	<b>Background Field Screening Result</b>
10-VI-1IA	55-gallon drum with used air filters from the operation of the SVE system.	2,368 ppb	2,090 ppb
10-VI-2IA	Betco Cleaner degreaser	3,369 ppb	3,540 ppb

It should be noted that some minor interior painting had been completed on January 15, 2011, prior to the first IA sampling event and the floor inside Building 10 had been waxed on January 18, 2011, the day of the first IA sampling event.

The IA samples were collected from the breathing zone, approximately 4 feet above the floor slab. Polyethylene tubing was connected to the sample canister regulator using band clamps and extended into the air with wood lath to achieve the approximate 4 foot sampling height.

Prior to collecting the IA samples, a vacuum test was performed on each sample canister to verify that the band clamp connections to the regulators were not leaking. A Gilian-5 personal air pump operating at a flow rate of about 3 liters per minute was connected to the polyethylene tubing and turned on to purge the air from the tubing and create a vacuum. After 1 minute, the pump was turned back on to confirm that the band clamp seal was intact. See Air/Vapor Sampling Forms in Appendix E for testing documentation.

The IA samples were analyzed for VOCs via EPA Method TO-15 in general accordance with NYSDOH VI Guidance<sup>6</sup>. The air sampling was completed using dedicated, laboratory-supplied flow regulators and sample canisters set for an approximate eight-hour duration (e.g., standard shift duration in a commercial/industrial facility). The canister valves were generally closed, stopping the sampling after the vacuum had dropped to below -5 inches of mercury (in. Hg) and before it reached 0 in. Hg in order to maintain a vacuum on the canisters (see Air/Vapor Sampling Form in Appendix E).

Analytical test results from the IA sampling are summarized on Table V and the results are further discussed in Section 4.8.

## 2.5 Hydraulic Conductivity Testing

The hydraulic conductivity of the two (2) bedrock monitoring wells installed as part of the Building 10 RI were calculated via slug test methodologies using water levels measured by an electronic pressure transducer (Insitu MiniToll). Prior to installing the slug, an electronic pressure transducer was placed into the monitoring well approximately 2 feet from the bottom of the well, and was used to measure and record the recovery of the water column in the well. The pressure transducer was allowed to stabilize within the well based on the review of real time field readings on a laptop computer. Once stabilization had occurred and to check that the transducer was working properly, it was lifted approximately 1 foot up the water column for about 30 seconds to 1 minute and set back to rest 2 feet above the bottom of

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<sup>6</sup> "Final Guidance for Evaluating Soil Vapor Intrusion in the State New York" dated October 2006.

the well. The transducer reading was observed to correspond with this change in depth within the water column, confirming that the transducer was working properly.

The slug utilized for the testing consisted of a five-foot long by 1.5 inch diameter piece of PVC pipe filled with sand. The slug was placed into the well to displace the water inside the well. The slug remained in the well until the water level inside the well had generally recovered to within 95% of the static water level or after a minimum of 1 hour. The slug was then quickly removed from the well and the recovery of the water column in the well was measured and recorded by the pressure transducer. The recovery data, along with the static water level and monitoring well information (intake zone, diameter, etc.), were analyzed in accordance with methodologies outlined in Bouwer and Rice<sup>7</sup> as discussed in Section 3.7.

## **2.6 Groundwater Sampling**

In addition to the two (2) new groundwater monitoring wells, groundwater samples were also collected from two (2) existing wells (Bldg 10-MW-1 and MW-9-101-A, see Figure 3) as part of the Building 10 BCP RI. These four (4) monitoring wells are considered to be the Building 10 BCP Site monitoring well network.

Thirty-nine (39) monitoring wells were sampled between April and May 2011 across the GMCH Lockport Facility. The following is a breakdown of the sampled monitoring wells.

■ Building 7 BCP Site New and Existing Wells:	11
■ Building 8 BCP Site New and Existing Wells:	8
■ Building 10 BCP Site New and Existing Wells:	4
■ Delphi Harrison Thermal Systems Registry Site No. 932113:	10
■ Major Oil Storage Facility Tank Wells:	6

VOC analysis was completed at each of the 39 locations. Some of the monitoring well locations had additional sampling parameter requirements depending upon the rationale for sampling. For purposes of the groundwater assessment discussion, VOCs are the primary constituents of concern.

Groundwater sampling was conducted via low-stress low-flow sampling techniques using a water quality meter, disposable polyethylene tubing, and a variable speed peristaltic pump. A summary of the samples collected associated with the Building 10 BCP Site and the analyses performed are shown on Table I. Analytical test results from the groundwater samples collected from the bedrock monitoring wells are summarized on Table III and Table IV and discussed in Section 4.7. Groundwater generated during the well purging was containerized for subsequent disposal by GMCH (see Appendix B).

## **2.7 Environmental Sampling**

The various environmental samples collected as part of the RI were submitted to the TestAmerica Laboratories, Inc., as follows.

- TestAmerica Pittsburg – Soil samples collected during the December 2010 and January 2011 RI work;
- TestAmerica Buffalo – Groundwater samples collected during the April and May 2011 RI work; and

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<sup>7</sup> “The Bouwer and Rice Slug Test - An Update”, Bouwer, H. Groundwater Journal, Vol. 27., No.3, May-June 1989.



- TestAmerica Knoxville – Air samples collected during the January 2011 RI work.

The analytical data packages were submitted to Conestoga Rovers and Associates (CRA) for quality assessment and validation (see Appendix F). The data quality assessment and validation reports are further discussed in Section 4.1.

### **2.7.1 Subsurface Soil Samples**

Sixteen (16) subsurface soil samples (excluding Quality Control (QC) duplicate and matrix spike and matrix spike duplicate (MS/MSD) samples) were collected from the two (2) monitoring wells and 20 soil probes completed as part of the Building 10 RI. A duplicate soil sample was collected from 10-SB-3 (4 to 6 feet) and MS/MSD samples were collected from 10-SB-5 (4 to 7.5 feet). A summary of samples collected for analytical testing and parameters tested for are presented in Table I and the results are presented in Table II.

### **2.7.2 Groundwater Samples**

Four (4) groundwater samples (excluding QC duplicate and MS/MSD samples) were collected from the four (4) monitoring wells in the Building 10 BCP Site monitoring well network as part of the Building 10 RI. A duplicate groundwater sample was collected from MW-10-3 and MS/MSD samples were collected from MW-10-2. A summary of analytical samples collected and the analyte list are presented in Table I; results are presented in Table III and Table IV.

### **2.7.3 Soil Vapor Intrusion Samples**

Five (5) samples (excluding QC duplicate sample) were collected as part of the Building 10 BCP RI. Four (4) of the samples were IA samples and one (1) sample was an ambient outdoor air sample that was collected from an exterior upwind location of Building 10. A duplicate air sample was collected from 10-VI-2IA-011811. A summary of analytical samples collected and the analyte list are presented in Table I; results are presented in Table V.

## **2.8 Building 10 Subsurface Utility Assessment**

The plan view of the subsurface piping information for the Building 10 BCP Site is shown on Figure 4. The subsurface information from the drawings (i.e., pipe locations and inverts) was used to create cross-sections of the various sewer pipes along with investigation-derived information (i.e., depth to bedrock, groundwater elevation). The cross-section is shown on Figure 5.

There are three (3) types of sewers present beneath Building 10, as follows.

- Treated Sewers – These sewers contain contact cooling water and/or untreated manufacturing waste water. The treated sewers were directed to the former waste water treatment plant (WWTP) until 2006 when it was taken out of service. The treated sewers currently discharge via the sanitary sewer to the City of Lockport WWTP per permit number CL860103. The treated sewers are identified in blue on Figures 4 and 5.
- Sanitary Sewers – These sewers contain sanitary sewage from the restrooms and sinks present throughout Building 10. The sanitary sewers are discharged to the City of Lockport WWTP. The sanitary sewers are identified in red on Figures 4 and 5.

- Storm Sewers – These sewers primarily contain storm water from roof drains present on the roof of Building 10. During low flow (i.e., flow rate of less than 300 gallons per minute [gpm]) the storm sewers discharge to the City of Lockport WWTP. During high flow (i.e., flow rates greater than 300 gpm) the storm sewer discharges to the drainage swale at Outfall D002. This drainage swale connects to The Gulf (see Section 3.6 for description), east of Outfall D002. The Gulf discharges off-site along the eastern property line and eventually to Eighteenmile Creek northeast of the GMCH facility. The storm sewers are identified in light blue on Figures 4 and 5.

Based on a review of storm water flow data for Outfall D002 from September 18, 2010 through September 17, 2011 high flow events occurred 57 times (see Storm Water Flow Data in Appendix I). High flow events for Outfall D002 generally consist of flow rates greater than 300 gallons per minute (gpm). The number of high flow events was determined by evaluating: 1) the flow meter data (hourly log data for storm water flow within the parshall flume at the outfall prior to discharging to the drainage swale; 2) manual storm water measurement logs (daily manual readings and inspection notes); and 3) historic weather data from Niagara Falls Airport weather station for the same period. It should be noted that the electronic flow meter does not measure flows less than 100 gallons per 1 hour measured interval. Therefore flows less than 100 gallons are recorded as zero. It was also assumed that flow data indicative of high flow events that occurred within 12 hours of previous high flow event data, were part of the same high flow event. At least 12 hours must transpire between data indicative of a high flow event, in order for an event to be considered to be a separate event.

Outfall D002 has been monitored via NYSDEC SPDES program since 1990 through the present at various NYSDEC required frequencies throughout that time. Sampling parameters included the following compounds of concern (COC), TCE, PCE and 1,2-trans-dichloroethylene (trans-1,2-DCE). Table I-1 in Appendix I is a summary table of the analytical results for storm water sampling events for Outfall D002 from February 1991 through October 2010 for TCE, PCE and trans-1,2-DCE. Note that the frequency of the sampling and the number of grab samples required per sampling event has changed over the years as required by NYSDEC. Analytical results reported for sampling events with multiple grab samples (1991 through 2001) are the highest concentration detected within the grab samples for that particular sampling event.

Graphs depicting the PCE, TCE and trans-1,2-DCE analytical data from Outfall D002 are also provided in Appendix I. The analytical results for PCE, TCE and trans-1,2-DCE appear to be on a downward trend as shown by the trend lines included on each graph with trans-1,2-DCE results having been below method detection limits in the sample rounds from March 2009 through October 2010. The average concentrations for PCE and TCE are 22 ug/l and 50 ug/l, respectively, for 12 rounds of sample data from February 2008 through October 2010. There are no quantitative discharge limits on the GMCH Facility SPDES permit for Outfall D002.

The rationale for the presence of COC in the storm sewer is unknown but may be attributed to impacted groundwater infiltrating the storm sewer system at locations where system piping is present at or below the groundwater table.

It appears that part of the north-south orientated storm sewer piping present beneath the eastern portion of the building is below the groundwater table and also present within the bedrock. In addition, the storm sewer piping present on the east side of the building that transfers storm water from Building 10

to the main storm sewer line (which runs west-east through the center of the GMCH Facility) is also present beneath the groundwater table.

A GMCH facility-wide subsurface piping plan is shown on Figure 6 and a cross-section of the GMCH facility-wide subsurface piping, present through the central portion of the facility is shown on Figure 7. It appears that the majority of the storm water, sanitary, treated and process water (if present) from the individual buildings at the GMCH facility are directed to the utility corridor, which is present in the central portion of the facility with pipes generally orientated in a west to east direction. A significant portion of the subsurface piping present in the central portion of the facility is present near or below the groundwater table and also appears to be present near the top or below the top of bedrock throughout the majority of the GMCH facility.

## **2.9 Survey**

A survey was completed for the monitoring wells and soil probe locations done on the exterior of Building 10 by a licensed land surveyor (McIntosh & McIntosh, PC). The monitoring well ground surface, road box, and monitoring point elevation was measured and referenced to the National Geodetic Vertical datum (NGVD). The ground surface of the exterior soil probes were also referenced to the NGVD. The exterior monitoring well and soil probes were also measured horizontally and referenced to the NAD83/96, New York State Plan Coordinates, West Zone.

Detailed building drawings were provided by GMCH that identified prior sampling locations within the footprint of the building, and were used to locate the interior sampling locations as part of the Building 10 BCP Site RI. The interior monitoring wells and soil probe surface elevations were determined using the floor elevation from within Building 10 (elevation 615.46 feet AMSL). The monitoring points of the monitoring wells were measured with a tape measure from the top of the floor slab to the top of the monitoring point. The horizontal measurements of the monitoring wells, soil probes, and IA sample locations were measured from marked columns present throughout the building at a 40 foot spacing.

### **3. PHYSICAL CHARACTERISTICS OF THE STUDY AREA**

The following sections discuss surface features, meteorology, surface water hydrology, regional and Site geology, regional and Site hydrogeology, and land use.

#### **3.1 Surface Features**

The Building 10 BCP Site is approximately 10.6 of the 342.25 acres that make up the GMCH facility. The majority of the Building 10 BCP Site consists of the footprint of Building 10 (see Figure 3). The ground surface and building concrete floor slab are generally level surfaces and the concrete floor slab is at exterior ground surface in the northern and western portion of the Building 10 BCP Site and approximately 4 feet higher than exterior ground surface in the southern and western portion of the Building 10 BCP Site. The floor elevation within Building 10 is 615.46 feet above mean sea level.

North of the Building 10 BCP Site is a paved facility roadway, Building 9, and beyond that a paved parking lot. Residential properties are located along Upper Mountain Road north of the GMCH Facility. To the east is a paved facility roadway and some grassy areas, Building 7, Building 7A, and beyond that a paved parking lot. To the south is a paved facility roadway, a grassy area beyond which is a New York Central Railroad line. To the west are small facility buildings and storage areas, beyond which are unused GMCH property and the Town of Lockport Industrial Park.

The Building 10 BCP Site is occupied by one building with an approximate 453,134 square-foot footprint. Areas not occupied by the building include paved areas used as storage, parking, and loading docks. The building has been used for some manufacturing and warehousing since it was built in stages from 1960 to 1969.

#### **3.2 Meteorology**

The GMCH facility is located within Niagara County which is typified by moderately warm summers and cold winters with an average yearly temperature of 48 degrees Fahrenheit. Niagara County is bounded to the north by Lake Ontario, the Niagara River to the west, Erie County/Tonawanda Creek to the south, and both Orleans and Genesee Counties to the east. The proximity to Lake Ontario and Lake Erie has an effect on the temperature and precipitation in Niagara County. The average yearly rain fall is about 34 inches and the average snowfall is about 98 inches.

#### **3.3 Surface Water Hydrology**

##### **3.3.1 Regional Surface Water Hydrology**

In general, the Niagara Escarpment, further discussed in Section 3.4, acts as a regional surface water hydrologic divide. Surface water in the near vicinity and north of the escarpment flows northward towards Lake Ontario. Surface water bodies south of the escarpment generally flow to the south and southwest towards the Niagara River or the Erie Barge Canal. The Niagara River flows northerly discharging to Lake Ontario while the Erie Canal flows west to east. The Erie Canal is located approximately 1-mile southeast of the GMCH Facility and has a southwest-northeast orientation in that vicinity.

### **3.3.2 Site Surface Water Hydrology**

As the majority of the Building 10 BCP Site is covered by the building footprint, surface water drains off the building roof via sheet flow to roof drains which are connected to the subsurface storm sewer system. Areas outside of the building footprint drain via sheet flow to storm water catch basins, which are directed to the storm sewer system, or pond at low points where infiltration and/or evaporation occurs.

Surface water entering the storm sewer system flows to Outfall D002, located east of Building 8. During periods of low flow (i.e., flow rates less than 300 gpm) storm water at Outfall D002 is directed to the City of Lockport WWTP. During periods of high flow, storm water is discharged to the drainage swale east of Outfall D002, which flows east and connects to The Gulf stream, which enters the GMCH Lockport Facility from the southern property boundary. The drainage swale and The Gulf stream join near the eastern property line (between the location of MW-12 and MW-13), flow northeast beneath Upper Mountain Road, and flow down into the Gulf at a location east of the GMCH Lockport Facility and eventually to Eighteenmile Creek northeast of the GMCH Facility.

### **3.4 Regional Geology**

The existing topography in the vicinity of the GMCH facility is generally flat with an approximate 25 foot change in elevation from the Truck Gate at the western side (615 foot elevation) to the eastern side along Upper Mountain Road (590 foot elevation) over a distance of 3,150 feet, or less than a 1 % grade downward to the east.

The two primary surface reliefs in the area are the Niagara Escarpment, located approximately two miles to the north, and the Erie Canal located approximately 1-mile southeast of the GMCH facility, which has a southwest-northeast orientation in the vicinity of the facility. There is an approximate 200-foot difference in elevation from the ground surface elevation at the facility to the foot of the escarpment. This escarpment acts as a surface water and groundwater divide.

Regionally, the surficial geology consists of glacially derived soils comprised of lacustrine clays and silts which overly bedrock. The upper-most bedrock unit is the Lockport Group, which consists of the Gasport Limestone Formation and the Lockport Dolomite. Below the Lockport Group is the Clinton Group, which consists of the Rochester Shale Formation, the Irondequoit Limestone Formation, and the Rockway/Hickory Corners/Neahga Formation. This formation consists of dolostone, limestone, and shale units. Below the Rockway/Hickory Corners/Neahga Formation is the Medina Group, which consists of the Grismby Sandstone Formation, the Power Glen Shale Formation, and the Whirlpool Sandstone Formation. The Lockport, Clinton, and Medina groups are Middle to Lower Silurian in age and were deposited from 410 to 430 million years ago.

Bedrock in western New York generally dips to the south to southwest at about 40 feet per mile. The rock bedding is considered essentially flat over short distances.

### **3.5 Site Geology**

#### **3.5.1 Overburden**

Overburden soil conditions at the Building 10 BCP Site typically consist of fill material ranging in thickness from about 1 to 2 feet (based on probe locations completed in the northern portion of the building) to 3 to 5 feet (based on probe locations completed in the southern portion of the building). The fill material generally consists of fine grained silts and clays (potentially reworked native soils). The fill material overlays native soils (clayey silts to silty clays with lesser and varying amounts of sands and gravel). Bedrock is generally encountered at depths ranging from approximately 7 to 10 feet below the surface.

#### **3.5.2 Bedrock**

Bedrock underlying the GMCH facility is the Lockport Dolomite Formation. Two (2) shallow bedrock monitoring wells that were installed as part of the Building 10 BCP RI are completed in the Lockport Dolomite. The two (2) bedrock wells were advanced through the overburden soil and approximately 12 feet into the upper fractured bedrock.

The Lockport Dolomite is gray dolomitic limestone, which is hard and fine-grained with horizontal to low angle fractures. The upper fractured bedrock encountered at the Site can generally be classified as good (rock quality designation (RQDs) of 76 to 90 percent) quality based on the RQD obtained from the bedrock coring done and recorded on the test boring logs in Appendix C. However, one bedrock core at MW-10-2 from 7 to 11.8 feet had a RQD value of 26, which is considered to be poor.

RQD values for bedrock cores obtained from the Building 10 BCP Site ranged from 26 to 94 percent, with an average of 71 percent. In general, the rock cored in the borings completed as part of the Building 10 RI did not exhibit extensive fractures or jointing with the exception of rock core from MW-10-2 (7 to 11.8 feet) as indicated by the relatively low RQD value.

### **3.6 Regional Hydrogeology**

The Gulf is a large topographic depression, which acts as a hydraulic sink drawing groundwater towards it. Groundwater from the GMCH facility flows east toward The Gulf located on the east side of Upper Mountain Road (see Figure 1).

#### **3.7 Site Hydrogeology**

Two bedrock groundwater monitoring wells (see Figure 3) have been installed at the Building 10 BCP Site as part of the RI. Water levels in these bedrock wells range from about 2.5 to 3 feet below the top ground surface based on water level measurements collected on May 2, 2011 (see Table VI). Groundwater flow direction appears to be in a easterly direction with a gradient of about 0.005 ft/ft based on the groundwater elevations measured at MW-10-2 (located on the east side of Building 10) and TK-5 (located west of Building 10) (see Figure 8).

Groundwater beneath the entire GMCH facility (based on the measured groundwater elevations from 43 facility monitoring wells on May 2, 2011) flows generally from east to west with a gradient of about



0.009 ft/ft, based on the groundwater elevations of MW-9-101-A (located south of Building 9) and MW-13 (located along Upper Mountain Road on the eastern property line) (see Figure 8).

Groundwater flow within the bedrock at the Building 10 BCP Site is generally controlled by fractures and joints within the rock mass. As discussed in Section 2.8 above, sewer lines are present onsite that intercept groundwater. Groundwater flow may also be influenced in part by the sewer systems. The RQD values obtained during the subsurface explorations associated with Building 10 indicate the rock encountered during the coring is generally not highly fractured or jointed. However, localized variations can occur.

### 3.7.1 Hydraulic Conductivity and Velocities

Estimated horizontal hydraulic conductivity values were calculated from rising head slug tests conducted in the two (2) bedrock monitoring wells; MW-10-2 and MW-10-3. As shown in Appendix G, the effective hydraulic conductivity in the Building 10 BCP Site (inclusive of MW-10-2 and through MW-10-3) is relatively low and varies between approximately  $6.4 \times 10^{-5}$  cm/s (MW-10-2) and  $1.7 \times 10^{-4}$  cm/s (MW-10-3) or 0.2 to 0.5 feet per day (feet/day), with an average of 0.34 feet/day.

In other portions of the GMCH facility, the effective hydraulic conductivities ranges were as follows.

- Building 7 BCP RI Wells:  $1.6 \times 10^{-6}$  cm/s to  $5.2 \times 10^{-4}$  cm/s (0.005 to 1.5 feet/day)
- Building 8 BCP RI Wells:  $9.7 \times 10^{-6}$  cm/s to  $9.9 \times 10^{-4}$  cm/s (0.03 to 2.8 feet/day)
- Delphi Site:  $1.1 \times 10^{-6}$  cm/s to  $1.1 \times 10^{-2}$  cm/s (0.003 to 31 feet/day)

Groundwater flow velocities within the upper bedrock were calculated using Darcy's Law. It has been assumed that horizontal flow in the bedrock is isotropic. We note that Darcy's Law was developed for flow through porous media and not fractured rock, and the values calculated should be considered estimates. The parameters required for this determination include hydraulic conductivity, hydraulic gradient, and porosity. The hydraulic conductivity and hydraulic gradient were determined based on field measurements.

The porosity was estimated by assessing published values for fracture porosity. Snow<sup>8</sup> estimated fracture porosity to be on the order of 0.01 to 0.4%. However, the method presented by Snow does not account for variable fracture thickness or the presence of highly weathered fractures. For fractured bedrock with hydraulic conductivity on the order of  $10^{-2}$  to  $10^{-4}$  cm/s, Jumikis published values of secondary porosity between about 5 and 20%<sup>9</sup>. Freeze and Cherry<sup>10</sup> estimated porosity in fractured rock to be between 0 and 10% and Fetter<sup>11</sup> reported values from limestone and dolomite range from less than 1 percent to 30%. It is expected that the porosity ranges are from less than 1% to 10% for the shallow fractured bedrock at the GMCH Facility. Groundwater velocities were calculated using 0.5% and 5% to identify the potential range of groundwater velocities.

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8 "Rock Fracture Spacings, Openings and Porosities", Snow, D., Journal of Soil Mechanics and Foundations Division, Proceedings of the American Society of Civil Engineers, January 1968.

9 "Rock Mechanics"; Jumikis, A. R.; Trans Tech Publications, 1983.

10 "Groundwater"; Freeze, R.A., and Cherry, J.A; Prentice Hall Inc, 1979.

11 "Applied Hydrogeology" 3<sup>rd</sup> Edition; Fetter, C.W.; MacMillan College Publishing Company., 1994.

Utilizing a horizontal hydraulic gradient for the Building 10 BCP Site of 0.005 ft/ft, an average hydraulic conductivity of 124 feet/year, and assumed effective porosities of 0.005 and 0.05, the average linear velocity for groundwater ranges from 12.4 to 124 feet/day, with an average of approximately 68 feet/year (see Appendix G).

*Equation 1: Average Linear Velocity*

$$-\frac{K}{n} \times \frac{dh}{dl}$$

### 3.8 Land Use and Demography

The Building 10 BCP Site is part of the GMCH facility in the City of Lockport, which is located in Niagara County, New York. The City of Lockport is surrounded by the Town of Lockport. The Town of Lockport is bordered by the Town of Newfane to the north, the Town of Hartland to the northeast, the Town of Royalton to the east, the Town of Pendleton to the south, and the Town of Cambria to the west. The GMCH Lockport Facility is located in an area of mixed residential, agricultural, commercial, and industrial settings along Upper Mountain Road.

### 3.9 Fish & Wildlife Resources Impact Analysis

No fish and wildlife resource impact analysis (FWRIA) was required as part of the RI. The FWRIA Decision Key in Appendix 3C of NYSDEC DER-10 was used to come to this conclusion, as follows.

- Step 1: Is the site or area of concern a discharge or spill event? *Yes (Go to Step 13)*
- Step 13: Does the contamination at the site or area of concern have the potential to migrate to, erode into or otherwise impact any on-site or off-site habitat of endangered, threatened or special concern species or other fish and wildlife resource? (See #9 for a list of potential resources.

*The Bldg 10 BCP Site (light manufacturing and warehouse facility) is in an area of mixed residential agricultural, commercial, and industrial located in the City of Lockport. There is a very limited fish and wildlife population within a ¼ mile radius of the Building 10 BCP Site because it is located within a larger manufacturing facility (GMCH Lockport Facility). There are no state or federal wetlands with ¼ mile radius of the Building 10 BCP Site (see Figure 12).*

*Step #9 identified the following resources:*

- Any endangered, threatened or special concern species or rare plants or their habitat; - *Not Applicable (NA)*
- Any DEC designated significant habitats or rare NYS Ecological Communities; *NA*
- Tidal or Freshwater wetlands; *NA*
- Stream, creek or river; *NA*
- Pond, lake, lagoon; *NA*
- Drainage ditch or channel; *NA*
- Other surface water feature; *NA*
- Other marine or freshwater habitat; *NA*
- Forest; *NA*



- Grassland or grassy field; *NA*
- Parkland or woodland; *NA*
- Shrubby area; *NA*
- Urban wildlife habitat; *NA*
- Other terrestrial habitat. *NA*

*Additionally, the NYSDEC Natural Heritage Unit reviewed their files to determine if there are ecological concerns or habitats for endangered, threatened or special concern species in the vicinity of the Site (see Appendix H for letter to NYSDEC). The response from NYSDEC's Natural Heritage Unit indicated that "We have no records of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site" (see Appendix H for NYSDEC response letter).*

As "No" was the answer to Step 13, follow to Step #14.

Step #14: No FWRIA needed.

## **4. REMEDIAL INVESTIGATION RESULTS**

This section discusses the nature and extent of contamination at the Site. TestAmerica Laboratories Inc. provided analytical laboratory services for this RI.

### **4.1 Date Validation Reports**

CRA of Niagara Falls, New York prepared three quality assessment and validation reports (QAVR) for the analytical data collected as part of the Building 10 BCP RI. One report was prepared for each of the environmental media (soil, groundwater, and air) collected. These reports are as follows.

- Memorandum from CRA – “Data Quality Assessment and Validation, BCP Investigation, Building 10 Soils, GM-Lockport, Lockport, New York, December 2010 - January 2011” dated February 14, 2011.
- Memorandum from CRA – “Data Quality Assessment and Validation, BCP Investigation, Building 10 Air, GM-Lockport, Lockport, New York, January 2011” dated March 16, 2011.
- Memorandum from CRA – “Data Quality Assessment and Validation, BCP Investigation, Building 10 Groundwater, GM-Lockport, Lockport, New York, April 2011” dated July 7, 2011.

Copies of the three QAVRs, along with validated analytical data, qualifiers, and their definitions (as defined by CRA) are included in Appendix F. The following is a summary of the overall assessment of each report.

- Soil QAVR: The data was found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications and exceptions noted within the report. No data were rejected.
- Air QAVR: The data was found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications and exceptions noted within the report. No data were rejected.
- Groundwater QAVR: The data was found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used without qualification. No data were rejected.

Validated results were used to develop analytical tables and figures, and for discussion purposes within the report. Our presentation of analytical test results within the text does not include data qualifiers.

### **4.2 Comparative Criteria**

In order to determine if a potential threat to human health or the environment exists, the comparative criteria used for assessment of the various media samples were as follows.

#### Subsurface Soil

- 6 New York Code Rules and Regulation (6 NYCRR) Part 375 Environmental Remediation Programs, Subparts 375-12 to 375-4 & 375-6, effective December 14, 2006.

The Part 375 Protection of Groundwater Soil Cleanup Objectives (PGWSCOs) was used for assessment of the data.

#### Groundwater

- NYSDEC Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1), June 1998, amended April 2000 (Class GA criteria).

#### Vapor Intrusion Air Samples

- NYSDOH's "Final Guidance for Evaluating Soil Vapor Intrusion in the New York State" dated October 2006 (NYSDOH Guidance).

### **4.3 Contaminant Types**

Discussions of laboratory analytical results for the various identified environmental media are presented by the chemical classes including VOCs, SVOCs, PCBs, and inorganics that were analyzed for and detected as part of the RI. Some compounds of these chemical classes were identified at concentrations exceeding associated New York State criteria at sporadic locations around the Site. Based on previous investigations, the principal contaminant of concern in the groundwater for the Building 10 BCP Site and throughout the GMCH facility are VOCs, primarily PCE, TCE, and their breakdown products (i.e., cis-DCE and VC).

### **4.4 Source Areas**

No additional source areas or cause for releases of contaminants were identified as part of the RI. The soil probes completed inside Building 10 were completed to assess the following three areas.

- The southern portion of Building 10 had not been investigated as part of previous investigations; therefore, soil probes 10-SB-1 through 10-SB-10 were completed in the southern portion of the Building 10 BCP Site (see Figure 3).
- Cadmium was previously detected in an area west of the Building 10 BCP Site, in the vicinity of a Salvage Equipment Storage Area; therefore soil probes 10-SB-18 through 10-SB-21 were completed in this area.
- Six (6) soil probes (10-SB-11, 10-SB-12, and 10-SB-14 through 10-SB-17) were completed within the footprint of the SVE/SSDS to assess contaminant concentrations in the soil in this area, as the SVE system will have been in operation for approximately 21 months at the time of the investigation.

Ten (10) soil probes (10-SB-1 through 10-SB-10) were completed in the southern portion of Building 10. Field screening results with the OVM were non-detect at the ten (10) probe locations. The concentrations of VOCs, SVOCs, and metals detected in the four (4) samples analyzed from these soil probes were below their respective Part 375 Unrestricted Soil Cleanup Objectives (USCOs) without exception.

Four (4) soil probes (10-SB-18 through 10-SB-21) were completed around the location of the cadmium detected in boring 10-105. Of the metals detected in the four (4) samples analyzed from these soil probes, none exceeded their respective Part 375 PGWSCOs.

Six (6) soil probes were completed within the footprint of the SVE/SSDS and six samples were analyzed for VOCs. PCE was detected in the six (6) samples at concentrations exceeding the Part 375 PGWSCO (1.3 ppm). These detected concentrations ranged from 5 ppm (10-SB-16) to 870 ppm (10-SB-14).

#### **4.5 Surface Soil Analytical Results**

Surface soil samples were not collected as part of this RI, as the entire Building 10 BCP Site footprint is either covered by the building footprint or surface cover (i.e., pavement or concrete).

#### **4.6 Subsurface Soil Analytical Results**

Sixteen (16) subsurface soil samples (excluding QC samples) were collected for analysis from 20 soil probes and two (2) test borings completed as part of the Building 10 RI. Of the 16 samples collected:

- Thirteen (13) were analyzed for VOCs via SW-846 8260B;
- Five (5) were analyzed for SVOCs via SW-846 8270C;
- Five (5) were analyzed for PCBs via SW-846 881; and
- Eight (8) were analyzed for metals via SW-846 6010/7000 Series.

A summary of various samples collected for analytical testing and parameters is presented in Table I. Soil analytical results are summarized on Table II and on Figure 9.

##### **4.6.1 Volatile Organic Compounds**

Thirteen (13) subsurface soil samples (excluding QC duplicate and MS/MSD samples) were analyzed from the 20 soil probes and two (2) test borings completed as part of the Building 10 RI for VOCs.

From these 13 soil samples, four different VOCs were detected above method detection limits, which include methylene chloride, PCE, TCE, and cis-DCE (see Table II). PCE was the only compound detected at a concentration that exceeds both its Part 375 CSCO and PGWSCO. The Part 375 CSCO for PCE (150 ppm) was exceeded in three of the six samples collected from within the footprint of the SVE/SSDS, which is in operation. The PGWSCO (1.3 ppm) was exceeded in all six samples. The detected concentrations ranged from 5 ppm (10-SB-17 [4 to 6 feet]) to 870 ppm (10-SB-14 [6 to 8 feet]).

##### **4.6.2 Semi-Volatile Organic Compounds**

Five (5) subsurface soil samples (excluding QC duplicate and MS/MSD samples) were analyzed from the 20 soil probes and two (2) test borings completed as part of the Building 10 RI for SVOCs.

One (1) SVOC, bis(2-ethylhexyl)phthalate, was detected above method detection limits at a concentration of 92 ppb in one sample (10-SB-5 [4 to 7.5 feet]) (see Table II). Bis(2-

ethylhexyl)phthalate does not have a Part 375 CSCO or PGWSCO. No other SVOCs were detected above method detection limits in the other samples tested.

#### **4.6.3 Polychlorinated Biphenyls (PCBs)**

Five (5) subsurface soil samples (excluding QC duplicate and MS/MSD samples) were analyzed from the 20 soil probes and two (2) test borings completed as part of the Building 10 RI for PCBs. No PCBs were detected above method detection limits.

#### **4.6.4 Metals**

Eight (8) subsurface soil samples (excluding QC duplicate and MS/MSD samples) were analyzed from the 20 soil probes and two (2) test borings completed as part of the Building 10 RI for metals.

From these eight (8) soil samples, 18 different metals were detected above method detection limits (see Table II). None of the 18 metals were detected at concentrations above their respective Part 375 CSCOs or Part 375 PGWSCO.

#### **4.7 Groundwater Analytical Results**

Four (4) groundwater samples (excluding QC duplicate and MS/MSD samples) were collected as part of the Building 10 BCP Site RI for VOCs analysis. The groundwater samples were collected from the two (2) monitoring wells (MW-10-2 and MW-10-3) installed as part of the Building 10 BCP Site RI and two (2) existing monitoring wells (Bldg 10-MW-1 and MW-9-101-A). Figure 3 shows the approximate locations of the monitoring wells sampled and the groundwater analytical test results are summarized on Table III and Table IV and Figure 10.

Results of the groundwater sampling from the four (4) monitoring wells sampled as part of the RI indicate the presence of VOC in three (3) of the four (4) wells sampled. PCE was detected at a concentration of 120 ppm in the sample collected from Bldg 10-MW-1, located within the footprint of the SVE/SSDS. PCE concentrations detected in downgradient wells MW-10-2 and MW-10-3 were 1.1 ppm and 0.013 ppm, respectively. The source of the PCE present beneath the northern portion of Building 10 and detected in the downgradient groundwater monitoring wells appears to be within the area where the SVE/SSDS is currently operating.

##### **4.7.1 Volatile Organic Compounds**

Five (5) different VOCs (PCE, TCE, cis-DCE, trans-DCE, and VC) were detected above method detection limits in three (3) of the four (4) groundwater samples collected. No VOCs were detected above method detection limits in the groundwater sample collected from the upgradient well MW-9-101-A.

These five (5) chlorinated VOCs were detected above their respective NYSDEC Class GA criteria in the other three (3) monitoring locations. The highest concentrations were detected in the groundwater samples collected from Bldg 10-MW-1, with a total VOC concentration of 124.9 ppm. The total VOC concentration at MW-10-2 was about 3.5 ppm and MW-10-3 was 30 ppb.

In addition to the four (4) groundwater samples collected for VOC analysis as part of the Building 10 BCP Site RI, 35 additional monitoring wells located throughout the GMCH facility were sampled for VOCs as part of other BCP Site RIs or other NYSDEC monitoring programs. A posting map depicting the VOC concentrations for the entire GMCH facility is shown on Figure 10 and also summarized on Table IV.

Based on the findings of the BCP Site RIs and other sampling completed, chlorinated VOCs are present in the groundwater throughout the GMCH facility, from Building 10 to the east side of Building 7 and also beneath a portion of Building 8. To the east of Building 8 is the Delphi Harrison Site (discussed in Section 1.4) where chlorinated VOCs are also present in the groundwater. However, the VOC contamination does not appear to be migrating off-site as six (6) of the seven (7) monitoring wells along the eastern property line (downgradient location) did not contain concentrations of VOCs above method detection limits. These six wells, from north to south, are as follows: MW-6-2, MW-6-1, MW-11, MW-13, MW-7-2 and MW-7-4. PCE (6.7 ppb) and TCE (7 ppb) were detected slightly above their respective Class GA criteria (5 ppb) at MW-15, which is located about 100 feet from the eastern property line.

#### **4.8 Indoor Air Analytical Results**

Four (4) IA and one (1) outdoor air samples (excluding QC duplicate samples) were collected as part of the Building 10 BCP Site RI for VOCs analysis using EPA Method TO-15. Two (2) IA samples were collected on January 18, 2011 while the SVE/SSDS was in operation and two (2) IA samples were collected on January 20, 2011 after the SVE/SSDS had been shut down for at least 24-hours prior to the sampling. The results are summarized on Table V and Figure 11.

The results of the two IA samples (10-VI-1IA-011811 and 10-VI-2IA-011811) collected while the SVE/SSDS was in operation did not indicate the presence of VOCs that are regulated by the NYSDOH Guidance (see Table V). Six different VOCs (ethanol, ethylbenzene, hexane, m&p-xylene, o-xylene, and toluene) were detected above method detection limits in the two IA samples collected while the SVE/SSDS was in operation. The results from the outdoor air sample (10-VI-OUT-011811) collected from an upwind direction the same day the IA samples were collected indicated the presence of 22 different VOCs. Six (6) VOCs were detected in both the IA and outdoor samples.

The results of the two IA samples (10-VI-1IA-012011 and 10-VI-2IA-012011) collected after the SVE/SSDS had been shut down did not indicate the presence of VOCs regulated by the NYSDOH Guidance at concentrations exceeding their respective guidance values (see Table V). Six different VOCs (4-methyl-2-pentanone, ethanol, hexane, tert-Butyl alcohol, toluene, and TCE) were detected above method detection limits in the two IA samples collected while the SVE/SSDS was shut down. TCE was detected at a concentration of 4.6 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) at IA samples location, 10-VI-1IA-012011, which is below its NYSDOH Guidance value of 5  $\mu\text{g}/\text{m}^3$ .

The low concentrations of TCE detected in the IA sample (10-VI-1IA-012011) collected while the SVE/SSDS was shut down indicates that the system effectively mitigates soil vapor intrusion into Building 10.

## 5. CONCEPTUAL SITE MODEL

As described in DER-10, the Conceptual Site Model (CSM) process is utilized to: 1) develop a framework for analysis of contaminants identified at the Building 10 BCP Site during the investigative process and 2) to provide the basis for determining the need and scope of the remedial action process that is protective of human health and the environment. The CSM process includes delineation of the Contaminants of Concern (COCs), assessment of the extent and transport of the COCs within the environment, and development of a Qualitative Human Health Exposure Assessment (QHHEA) to determine if COCs present could constitute an exposure pathway currently or under the future intended land use scenarios. More specifically, the CSM addresses:

- Sources of Contamination;
- Nature and Extent of Contamination;
- Dominant Fate and Transport Characteristics (based on site conditions and contaminants encountered);
- Potential Exposure Paths; and
- Potentially Impacted Receptors.

The Building 10 CSM has been prepared using information derived from the RI sampling and analytical testing program. These investigations document the following key factors on contaminant presence and mobility at the Building 10 BCP Site:

### Site Features/Characteristics:

- The Building 10 BCP Site is currently an active manufacturing facility.
- The majority of the ground surface is currently almost entirely covered by building foundations, or pavement creating a physical barrier between the ground surface and the underlying soils.
- Immediately below this barrier is a fill layer consisting of fine grain silts and clays, ranging from approximately 1 to 5 feet below ground surface with deeper fill being encountered on the southern side of the Building 10 BCP Site. Below the fill are native clays and silts. Bedrock consisting of the Lockport Dolomite was encountered between 7 and 10 feet below ground surface.
- Based on the most recent Building 10 BCP Site groundwater elevation (El) data, the groundwater table across the GMCH facility flows towards the east at a moderate gradient from approximately El 617 at its highest point to approximately El 584 at its lowest point. There is a slight gradient specifically over the Building 10 BCP Site, ranging from approximately El 612 on the western side of the Building 10 BCP Site to approximately El 608 on the eastern side of the Building 10 BCP Site. Groundwater was encountered during the most recent investigations at approximately 2 to 3 feet below ground surface.
- Groundwater is not utilized for potable or non-potable uses at the Building 10 BCP Site.



## Site Data:

### *Soil:*

- Based on field investigations conducted prior to the RI in 2006 and 2007 (refer to Appendix A), cadmium and VOCs, specifically PCE, were detected above PGWSCOs in select soil samples. The PCE detections were noted at elevations consistent with the groundwater table.
- Based on the results of the RI soil investigation, VOCs, particularly PCE and TCE, were encountered in the soil in excess of the PGWSCOs in various locations at depths ranging from 0 to approximately 9 feet below ground surface. Concentrations of PCE ranged from 5 mg/kg to 830 mg/kg. Concentrations of TCE ranged from 0.48 mg/kg to 18.9 mg/kg.
- Based on the results of the Building 10 BCP Site RI soil investigation, metals, PCBs, and SVOCs were not detected above the ISCOs, CSCOs, or PGWSCOs.

### *Groundwater:*

- Based on historical and recent sampling as part of the Building 10 BCP Site RI, the primary contaminants identified in groundwater include PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride, with the highest concentration detected in well Bldg 10-MW-1.
- As previously noted, groundwater is not currently used onsite for potable water or non-potable purposes.
- Groundwater may be infiltrating the storm sewer system at locations where the system piping is present at or below the groundwater elevation.

### *Indoor Air:*

- As previously noted, a SVE/SSD system has been previously installed at the Building 10 BCP Site.
- Two IA samples were collected as part of the Building 10 BCP RI during the operation of the SVE/SSD system. The results indicated that the SVE/SSD system is effective in the mitigation of soil vapor intrusion at the Building 10 BCP Site.

## **5.1 Contaminants of Concern**

A summary of the Building 10 BCP Site contaminants of concern (COCs), potential source evaluation, and delineation of nature and extent has been developed from the Building 10 BCP Site explorations, sampling, and testing as described in detail in the preceding sections of this report.

Based on the investigation and analytical results as summarized above, the Building 10 BCP Site COCs have been identified based on the detection of substances that are Building 10 BCP Site-related and are present at the Building 10 BCP Site at levels higher than the relevant standards, criteria, and guidelines (SCGs). Consistent with the approved RIWP, the Building 10 BCP Site data were evaluated on the



basis of the soil cleanup objectives (SCOs) specified in the Part 375 BCP Regulations for soil (specifically ISCOs, CSCOs, and PGWSCOs) and the NYS Drinking Water (GA) Standards specified in NYSDEC TOGS 1.1.1. for groundwater and the decision matrices included in the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the New York State (2006) for sub-slab vapor and indoor air. The SCGs represent risk-derived concentrations determined by the NYSDEC/NYSDOH to be fully protective of human health and the environment under commercial or industrial land uses.

The COC analysis included the Building 10 BCP Site soil, groundwater, and sub-slab vapor/indoor air data sets that are summarized on Tables II through V, which identifies those substances that were detected at concentrations higher than comparison criteria. The determination of COCs for the Building 10 BCP Site was based on the following factors:

- COC substances have been consistently detected at concentrations above the screening criteria.
- COC substances can be associated to the Building 10 BCP Site operations and are not naturally-occurring and/or ambient conditions surrounding the Building 10 BCP Site.
- COC substances have been detected at a frequency and concentration that would indicate a reasonable potential for human or environmental exposure.

The evaluation of the Building 10 BCP Site data identified the following COCs:

- PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride in groundwater, and;
- PCE and TCE in soil.

These COCs have been included in the Qualitative Human Health Assessment (QHHEA) that was performed in accordance with NYSDOH protocol as detailed below. Though identified in excess of the PGWSCOs, cadmium and toluene in soil have not been included as a COC due to the following reasons:

- Due to only one incidence of cadmium and toluene detected in soil samples at a concentration greater than the PGWSCOs and cadmium above the CSCOs during the investigation, it is anticipated that these detections are anomalous and not representative of Site-wide conditions. The detections are below their respective ISCOs and the presence of these compounds is not anticipated to impact groundwater and migrate from the Building 10 BCP Site.

## **5.2 Chemical Properties of Contaminants of Concern**

The physical properties of chemical compounds influence their behavior, fate and transport, and potential migration in the environment, therefore influencing potential pathways that may result in or lead to human and environmental exposure. The following information (derived from chemical compound summaries generated by the Agency for Toxic Substances and Disease Registry [ATSDR]) provides general information on the physical properties of the COCs identified at the Building 10 BCP Site. The summary below provides general information of the behavior of the COCs in soil, groundwater, and vapor/air that may influence the potential for exposure to receptors. The information below was used to evaluate if potential exposure pathways could exist in connection with the COCs identified at the Building 10 BCP Site. Potential exposure pathways are further described and form the

basis of the site-specific QHHEA performed for the Building 10 BCP Site. The QHHEA was performed in accordance with the relevant NYSDOH QHHEA guidelines appended to DER 10.

#### *Chlorinated Solvents:*

Chlorinated solvents detected at the Building 10 BCP Site include PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride. PCE, TCE and other solvents are typically used as degreasers in manufacturing and for dry cleaning purposes commercially. TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride are considered breakdown or “daughter products” of PCE and result from natural breakdown of PCE in soil and groundwater.

Chlorinated solvents enter the environment by evaporating in air during use. In the event of release to the environment, chlorinated solvents can travel through soils and dissolve in groundwater. Contaminated soil vapors can be emitted from contaminated soils/groundwater and impact indoor air quality. Chlorinated solvents in soil and groundwater can degrade over time from parent compounds (PCE, TCE) to benign end products (chloride, ethene) however more harmful daughter products such as vinyl chloride can be formed during the breakdown process.

### **5.3 Qualitative Human Health Exposure Assessment**

A Qualitative Human Health Exposure Assessment (QHHEA) is an evaluation of the potential for a complete pathway to exist by which human receptors may be exposed to the Building 10 BCP Site COCs. The QHHEA process is used as an initial screening tool to assess the potential that any COC identified in the Building 10 BCP Site could represent a current or potential future human health risk. This initial screening process is used to focus results of the RI on the options to mitigate human exposure and potential risk that may currently exist or which could exist in the future. The Building 10 BCP Site QHHEA has been completed in accordance with DER-10 requirements for human health exposure assessment with the following specific objectives for the Building 10 BCP Site:

- Qualitatively evaluate actual or potential exposures to Building 10 BCP Site COCs;
- Characterize the exposure setting, identify potential exposure pathways, and evaluate contaminant fate and transport;
- Derive a conclusion whether or not a complete exposure pathway could exist currently or be reasonably anticipated in the future whereby human contact to the medium which contains contaminants on the Building 10 BCP Site could potentially occur; and,
- If the QHHEA concludes that complete exposure pathways are potentially present at the Building 10 BCP Site, describe the nature of the population exposed, or potentially exposed, to contaminants that are present at the Building 10 BCP Site and provide recommendations on additional exposure analysis and/or for remedial actions appropriate to mitigate the exposure pathway.

Or

If the QHHEA concludes that complete exposure pathways do not currently exist or could reasonably exist in the future, further human health exposure assessment is not warranted.

In accordance with the QHHEA guidance, analysis of exposure pathways for each of the COCs identified on the Building 10 BCP Site as are described above includes a positive determination that an exposure pathway is “complete” if all the following factors or conditions are identified at the Building 10 BCP Site:

1. Presence of a contaminant in a medium (soil, air, or water);
2. Receptor (i.e., a Site visitor, occupant or worker);
3. Transport mechanism (i.e. volatilization) within which the contaminant can migrate to the receptor; and
4. Route of exposure (i.e. inhalation) for the receptor.

The QHHEA for the Building 10 BCP Site is detailed on Table VII, which identifies the potential for exposure pathways that exist currently or that could reasonably exist in the future based on commercial or industrial site use. For each media (soil, groundwater, vapor/air) on the Building 10 BCP Site, Table VII presents an assessment of whether COCs are/could be present, the key fate and transport characteristics of these substances, the potential current and future human exposure/land use scenarios, and identification of exposure pathways. Pathway analysis is based on the assumed exposure scenarios as consistent with the relevant State guidelines as referenced above and as appropriate for this Building 10 BCP Site.

The current and reasonably anticipated exposure settings for the Building 10 BCP Site are based on inadvertent ingestion, adsorption or inhalation of COCs to the extent these substances have been identified as being contained within soil, groundwater, or air/vapor at the Building 10 BCP Site. Exposed populations include workers under the current Building 10 BCP Site use scenario, and workers and occupants of the Building 10 BCP Site in future commercial or industrial occupancy of the Building 10 BCP Site. The future Building 10 BCP Site use scenario includes the assumption that the existing ground surface may be disturbed (e.g. buildings and pavement removed). The rationale for the Building 10 BCP Site exposure setting is further described on Table VII.

In summary, exposure pathways for soil, groundwater, and vapor/air are currently incomplete because there are controls on the Building 10 BCP Site that mitigate the potential for exposure to any reasonably anticipated current site occupant. These controls are, in effect, comparable in scope to “engineering controls” as these controls are defined in the relevant regulations of 6 NYCRR Part 375-1 including a surface cap, access restriction/control, lack of potable use of groundwater, and the presence of a SVE/SSD system prevent the potential for exposure to the COC.

Assessment of future conditions assume that yet to be defined commercial or industrial development may occur at the Building 10 BCP Site, which could involve the removal of the existing ground cover to accommodate new construction and/or result in groundwater extraction or use. Under these scenarios, the QHHEA process concludes that exposure pathways to certain receptor populations could potentially become temporarily complete. For groundwater, currently there is no complete exposure pathway given that groundwater is not currently used at the Building 10 BCP Site, however should it be used in the future particularly for potable uses, the exposure pathway would be complete. The remedial technology and/or engineering/institutional control options to address these potential future exposure pathways will be evaluated as part of an Alternatives Analysis Report (AAR) for the Building 10 BCP Site.

## 6. CONCLUSIONS & RECOMMENDATIONS

In accordance with the NYSDEC BCA for the Building 10 BCP Site, GMCH has undertaken this RI as a “participant” to investigate the nature and extent of contaminants. The RI included a comprehensive exploration and sampling program designed to characterize soil and groundwater across the Building 10 BCP Site and indoor air within Building 10.

This RI Report provides the results of the RI and incorporates previous Site investigation data and results. The RI has been completed consistent with the applicable NYSDEC 6 NYCRR Part 375 Regulations and related guidance documents (most notably the guidance criteria in NYSDEC DER-10), and the RIWP as approved by the NYSDEC in conjunction with the NYSDOH.

The information developed during the RI was used to evaluate if remedial actions are warranted at the Building 10 BCP Site to be protective of human health and the environment. GMCH anticipates that future use of the Site will be limited to commercial or industrial use.

### 6.1 Conclusions

Based on the previous Phase II investigations, and this RI program, the following conclusions have been identified to meet the approved RIWP objectives and characterization requirements from the applicable regulatory and guidance documents described above:

- The nature and extent of soil, groundwater, and soil vapor impacts at the Building 10 BCP Site has been determined from the information and data collected during the RI and the previous investigation activities completed at the GMCH facility since 2006.
- COCs at the Building 10 BCP Site consist of PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride in soil and groundwater.
- Potential impacts to indoor air are currently being mitigated via a soil vapor extraction/sub-slab depressurization (SVE/SSD) system installed at the Building 10 BCP Site.
- Since the majority of the ground surface is currently covered by the Building floor slabs and/or paving, there are no currently complete exposure pathways to the impacted groundwater and/or soils.
- Cadmium, toluene, o-xylene and m.p-xylene were each detected one time in soil samples collected from the Building 10 BCP Site. The limited number of detections for these compounds indicates that soil is not significantly impacted in association with these compounds within the Building 10 BCP Site.
- COC contaminated groundwater is present within the Building 10 BCP Site and migrating in an easterly direction towards Building 7. Another source of COCs is present in the groundwater down gradient (east) of Building 10 associated with the Building 7 BCP Site. However, natural attenuation is occurring and reducing the COC contamination to non-detectable levels at the GMCH Facility down gradient property line. Therefore, off-site groundwater contamination does not appear to be a concern.

- Groundwater is not currently used at the Building 10 BCP Site for potable or industrial purposes, nor are such uses reasonably anticipated in the future.

The RI results and conclusions as summarized above provided the input necessary for the Qualitative Human Health Exposure Assessment (QHHEA) for the Building 10 BCP Site that was prepared in accordance with applicable NYSDOH guidance. The QHHEA is used to determine whether any of the COCs identified at the Building 10 BCP Site could pose an existing or potential hazard to the exposed or potentially exposed populations. Results of the QHHEA include:

- There were no complete human health exposure pathways identified at the Building 10 BCP Site under the current Building 10 BCP Site conditions with respect to soil and groundwater. Access to impacted soils is mitigated by the building foundations and pavement. There is no potential exposure to COCs in groundwater as groundwater is not, nor is planned to be, used for potable or non-potable purposes.
- There is a potentially complete exposure pathway for soil vapor within the Building 10 BCP Site building in the event that the engineering controls are disabled or become inactive. Continued mitigation with the existing SVE/SSD system or modified engineering control in the future is indicated.
- The potential for future complete exposure pathways from inadvertent ingestion, dermal absorption, and inhalation of COCs could potentially exist to the extent that the building foundations/pavement are removed and the soil and groundwater, and subsequently soil vapors become exposed at the ground surface; or if groundwater that does contain COCs is extracted in the future and used in a way that creates an exposure pathway. Appropriate remedial technologies and/or engineering/institutional controls for these potential future exposure pathways should be evaluated as part of the remedial program for the Building 10 BCP Site.
- The RI has produced a sufficient quantity and quality of data to support development of an Alternatives Analysis Report (AAR) and Remedial Action Work Plan (RAWP) as appropriate for current, intended, and reasonably anticipated future commercial or industrial use of the Building 10 BCP Site.

## **6.2 Recommendations**

Consistent with the BCP, it is reasonable and appropriate to conclude that the potential future risk presented by exposure to COC can be addressed for the Building 10 BCP Site. Potential soil and groundwater remediation and/or engineering/institutional controls scenarios should be considered to reduce contamination levels, mitigate the potential for soil vapor intrusion at the Building 10 BCP Site, and reduce the potential for contaminated groundwater to infiltrate the on-site sewer system. Such an evaluation will include the effectiveness of the existing SVE/SSD system.

Therefore, consistent with Section II.A.2 of the BCA, GMCH will prepare and submit an Alternatives Analysis Report (AAR) to document the remedial alternative screening process, and a Remedial Action Work Plan (RAWP) to detail the scope and implementation process for the proposed institutional and engineering controls for the Building 10 BCP Site and other mitigation activities, if warranted.

## 7. REFERENCES

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**Table I**  
Analytical Sample Summary Table  
GMCH Lockport Facility  
Building 10 BCP Site  
Site #C932140

Location	Sample Identifier	Date Collected	Depth/ Interval (ft bgs)	Matrix	VOCs Method SW-846 8260B	SVOCs Method SW-846 8270C	PCBs Method SW-846 8081	Metals Method SW-846 6010/7000 Series	EPA Method TO-15	Comments
<b>SOIL SAMPLES</b>										
10-SB-3	10-SB3-122910-0950	12/29/2010	4 to 6	Soil	X	X	X	X		
10-SB-3	DUP-122910-0001	12/29/2010	4 to 6	Soil	X	X	X	X		Dup of 7-SB-4-122710-1015
10-SB-5	10-SB5-122910-0950	12/29/2010	4 to 7.5	Soil	X	X	X	X		MS/MSD
10-SB-8	10-SB8-122910-1130	12/29/2010	8 to 10	Soil	X	X	X	X		
10-SB-10	10-SB10-122910-1325	12/29/2010	7 to 9	Soil	X	X	X	X		
10-SB-11	10-SB11-123010-1040	12/30/2010	2 to 4	Soil	X					
10-SB-12	10-SB12-123010-0830	12/30/2010	4 to 6	Soil	X					
10-SB-14	10-SB14-123010-0900	12/30/2010	6 to 8	Soil	X					
10-SB-15	10-SB15-123010-0940	12/30/2010	6 to 8	Soil	X					Equipment Blank
10-SB-16	10-SB16-123010-1125	12/30/2010	2 to 4	Soil	X					
10-SB-17	10-SB17-123010-1100	12/30/2010	4 to 6	Soil	X					
10-SB-18	10-SB18-123010-1420	12/30/2010	0 to 2	Soil				X		
10-SB-19	10-SB19-123010-1400	12/30/2010	0 to 2	Soil				X		
10-SB-20	10-SB20-123010-1410	12/30/2010	0 to 2	Soil				X		
10-SB-21	10-SB21-123010-1430	12/30/2010	0 to 2	Soil				X		
MW-10-2	MW102-123010-1450	12/30/2010	2 to 4	Soil	X					
MW-10-3	MW103-123010-1510	12/30/2010	2 to 3.5	Soil	X					
QA/QC	EB-122910-0002	12/29/2010	NA	Soil	X	X	X	X		
<b>GROUNDWATER SAMPLES</b>										
MW-10-2	MW-10-2-042911-1400	4/29/2011	NA	GW	X					MS/MSD
MW-10-3	MW-10-3-042911-1100	4/29/2011	NA	GW	X					
MW-10-3	DUP-042911-001	4/29/2011	NA	GW	X					Dup of MW-10-3-042911-1100
MW-9-101-A	MW-9-101-A-042911-0900	4/29/2011	NA	GW	X					
Bldg 10	BLDG-10-MW-1-042911-1640	4/29/2011	NA	GW	X					
Rinse Blank	BLDG-10-RINSE-042911-1600	4/29/2011	NA	GW	X					Rinse Blank
QA/QC	Trip Blank	4/29/2011	NA	GW	X					Trip Blank
<b>VAPOR INTRUSION AIR SAMPLES</b>										
10-VI-1IA	10-VI-1IA-011811-0803	01/18/11	NA	Indoor Air					X	
10-VI-2IA	10-VI-2IA-011811-0801	01/18/11	NA	Indoor Air					X	
10-VI-DUP	10-VI-DUP-011811-0830	01/18/11	NA	Indoor Air					X	Dup of 10-VI-2IA-011811-0801
10-VI-2IA	10-VI-2IA-012011-0735	01/20/11	NA	Indoor Air					X	
10-VI-1IA	10-VI-1IA-012011-0737	01/20/11	NA	Indoor Air					X	
10VI-OUT	10VI-OUT-011811-0810	01/18/11	NA	Outdoor Air					X	

## Notes:

1. ft bgs = feet below ground surface
2. GW = groundwater
3. VOCs = Volatile Organic Compounds
4. SVOCs = Semi-Volatile Organic Compounds
5. PCBs = Polychlorinated Biphenyls
6. TO-15 = Toxic Organic Compounds in Air
7. MS/MSD = Matrix Spike/Matrix Spike Duplicate
8. NA = Non Applicable
9. QA/QC = Quality Assurance/Quality Control Sample
10. EB = Equipment Blank
11. Dup = Duplicate Sample

**TABLE II**  
**SOIL ANALYTICAL RESULTS - BUILDING 10**  
**GMCH LOCKPORT FACILITY**  
**LOCKPORT, NEW YORK**  
**BCP SITE #C932140**

BUILDING LOCATION DATE DEPTH SAMPLE TYPE	Protection of Groundwater SCOs (PGWSCOs)	Restricted Commercial SCOs (CSCOs)	Restricted Industrial SCOs (ISCOs)	Building 10 10-SB-3 12/29/2010 4 - 6 ft BGS FD	Building 10 10-SB-3 12/29/2010 4 - 6 ft BGS N	Building 10 10-SB-5 12/29/2010 4 - 7.5 ft BGS N	Building 10 10-SB-8 12/29/2010 8 - 10 ft BGS N	Building 10 10-SB-10 12/29/2010 7 - 9 ft BGS N	Building 10 10-SB-11 12/30/2010 2 - 4 ft BGS N	Building 10 10-SB-12 12/30/2010 4 - 6 ft BGS N	Building 10 10-SB-14 12/30/2010 6 - 8 ft BGS N	Building 10 10-SB-15 12/30/2010 6 - 8 ft BGS N	Building 10 10-SB-16 12/30/2010 2 - 4 ft BGS N
<b>Metals (mg/kg)</b>													
Aluminum	-	-	-	4890 J	5660 J	5810 J	5240 J	5180 J	-	-	-	-	-
Antimony	-	-	-	1.1 UJ	1.1 UJ	1.0 UJ	1.2 UJ	1.1 UJ	-	-	-	-	-
Arsenic	16	16	16	2.4	2.8	3.9	2.4	2.2	-	-	-	-	-
Barium	820	400	10000	93.0 J	111 J	67.2 J	40.5 J	61.5 J	-	-	-	-	-
Beryllium	47	590	2700	0.45 U	0.43 U	0.42 U	0.46 U	0.43 U	-	-	-	-	-
Cadmium	7.5	9.3	60	0.13 J	0.15 J	0.19 J	0.14 J	0.31 J	-	-	-	-	-
Calcium	-	-	-	34700 J	39200 J	58900 J	34700 J	31700 J	-	-	-	-	-
Chromium	-	1500	6800	8.0 J	9.1 J	8.5 J	7.9 J	7.6 J	-	-	-	-	-
Cobalt	-	-	-	5.6	6.9	7.3	6	6.1	-	-	-	-	-
Copper	1720	270	10000	9.9	10.4	17.3	8	8.5	-	-	-	-	-
Iron	-	-	-	11800 J	13300 J	13800 J	11700 J	11800 J	-	-	-	-	-
Lead	450	1000	3900	3.1	3.8	5.7	2.8	3.3	-	-	-	-	-
Magnesium	-	-	-	5570 J	6890 J	13400 J	5280 J	5790 J	-	-	-	-	-
Manganese	2000	10000	10000	391 J	483 J	588 J	430 J	509 J	-	-	-	-	-
Mercury	0.73	2.8	5.7	0.039 U	0.038 U	0.037 U	0.038 U	0.037 U	-	-	-	-	-
Nickel	130	310	10000	12	14.3	14.9	12	13	-	-	-	-	-
Potassium	-	-	-	886	1040	1170	1060	1000	-	-	-	-	-
Selenium	4	1500	6800	0.56 U	0.54 U	0.52 U	0.58 U	0.54 U	-	-	-	-	-
Silver	8.3	1500	6800	0.56 U	0.54 U	0.52 U	0.58 U	0.54 U	-	-	-	-	-
Sodium	-	-	-	186 J	183 J	123 J	157 J	128 J	-	-	-	-	-
Thallium	-	-	-	1.1 U	1.1 U	1.0 U	1.2 U	1.1 U	-	-	-	-	-
Vanadium	-	-	-	13.2 J	14.8 J	14.5 J	13.4 J	13.2 J	-	-	-	-	-
Zinc	2480	10000	10000	22.5	25.5	42	33.9	90.7	-	-	-	-	-
<b>PCBs (mg/kg)</b>													
Aroclor-1016 (PCB-1016)	3.2	1	25	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U	-	-	-	-	-
Aroclor-1221 (PCB-1221)	3.2	1	25	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U	-	-	-	-	-
Aroclor-1232 (PCB-1232)	3.2	1	25	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U	-	-	-	-	-
Aroclor-1242 (PCB-1242)	3.2	1	25	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U	-	-	-	-	-
Aroclor-1248 (PCB-1248)	3.2	1	25	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U	-	-	-	-	-
Aroclor-1254 (PCB-1254)	3.2	1	25	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U	-	-	-	-	-
Aroclor-1260 (PCB-1260)	3.2	1	25	0.019 U	0.019 U	0.018 U	0.019 U	0.019 U	-	-	-	-	-
<b>Semi-Volatile Organic Compounds (mg/kg)</b>													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	-	-	-	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
2,4,5-Trichlorophenol	0.1	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
2,4-Dichlorophenol	0.4	-	-	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
2,4-Dinitrophenol	0.2	-	-	2 U	2 U	1.9 U	2 U	1.9 U	-	-	-	-	-
2,4-Dinitrotoluene	-	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
2,6-Dinitrotoluene	0.17	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
2-Chloronaphthalene	-	-	-	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
2-Chlorophenol	-	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
2-Methylnaphthalene	36.4	-	-	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
2-Methylphenol	0.33	500	1000	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
2-Nitroaniline	0.4	-	-	2 U	2 U	1.9 U	2 U	1.9 U	-	-	-	-	-
2-Nitrophenol	0.3	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
3,3'-Dichlorobenzidine	-	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
3-Nitroaniline	0.5	-	-	2 U	2 U	1.9 U	2 U	1.9 U	-	-	-	-	-
4,6-Dinitro-2-methylphenol	-	-	-	2 U	2 U	1.9 U	2 U	1.9 U	-	-	-	-	-
4-Bromophenyl phenyl ether	-	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
4-Chloro-3-methylphenol	-	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
4-Chloroaniline	0.22	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
4-Chlorophenyl phenyl ether	-	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
4-Methylphenol	0.33	500	1000	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
4-Nitroaniline	-	-	-	2 U	2 U	1.9 U	2 U	1.9 U	-	-	-	-	-



TABLE II  
SOIL ANALYTICAL RESULTS - BUILDING 10  
GMCH LOCKPORT FACILITY  
LOCKPORT, NEW YORK  
BCP SITE #C932140

BUILDING LOCATION DATE DEPTH SAMPLE TYPE	Protection of Groundwater SCOs (PGWSCOs)	Restricted Commercial SCOs (CSCOs)	Restricted Industrial SCOs (ISCOs)	Building 10 10-SB-3 12/29/2010 4 - 6 ft BGS FD	Building 10 10-SB-3 12/29/2010 4 - 6 ft BGS N	Building 10 10-SB-5 12/29/2010 4 - 7.5 ft BGS N	Building 10 10-SB-8 12/29/2010 8 - 10 ft BGS N	Building 10 10-SB-10 12/29/2010 7 - 9 ft BGS N	Building 10 10-SB-11 12/30/2010 2 - 4 ft BGS N	Building 10 10-SB-12 12/30/2010 4 - 6 ft BGS N	Building 10 10-SB-14 12/30/2010 6 - 8 ft BGS N	Building 10 10-SB-15 12/30/2010 6 - 8 ft BGS N	Building 10 10-SB-16 12/30/2010 2 - 4 ft BGS N
4-Nitrophenol	0.1	-	-	2 U	2 U	1.9 U	2 U	1.9 U	-	-	-	-	-
Acenaphthene	98	500	1000	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Acenaphthylene	107	500	1000	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Acetophenone	-	500	1000	-	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
Anthracene	1000	500	1000	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Atrazine	-	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
Benzaldehyde	-	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
Benzo(a)anthracene	1	5.6	11	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Benzo(a)pyrene	22	1	1.1	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Benzo(b)fluoranthene	1.7	5.6	11	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Benzo(g,h,i)perylene	1000	500	1000	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Benzo(k)fluoranthene	1.7	56	110	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	-	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
bis(2-Chloroethoxy)methane	-	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
bis(2-Chloroethyl)ether	-	-	-	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	435	-	-	0.77 U	0.78 U	0.092 J	0.78 U	0.75 U	-	-	-	-	-
Butyl benzylphthalate (BBP)	122	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
Caprolactam	-	-	-	2 U	2 U	1.9 U	2 U	1.9 U	-	-	-	-	-
Carbazole	-	-	-	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Chrysene	1	56	110	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Dibenz(a,h)anthracene	1000	0.56	1.1	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Dibenzofuran	6.2	500	1000	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
Diethyl phthalate	7.1	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
Dimethyl phthalate	27	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
Di-n-butylphthalate (DBP)	8.1	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	120	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
Fluoranthene	1000	500	1000	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Fluorene	386	500	1000	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Hexachlorobenzene	1.4	6	12	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Hexachlorobutadiene	-	-	-	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Hexachlorocyclopentadiene	-	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
Hexachloroethane	-	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	8.2	5.6	11	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Isophorone	4.4	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
Naphthalene	12	500	1000	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Nitrobenzene	0.17	69	140	0.77 U	0.78 U	0.74 U	0.78 U	0.75 U	-	-	-	-	-
N-Nitrosodi-n-propylamine	-	-	-	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
N-Nitrosodiphenylamine	-	-	-	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
Pentachlorophenol	0.8	6.7	55	0.38 U	0.38 U	0.36 U	0.38 U	0.37 U	-	-	-	-	-
Phenanthrene	1000	500	1000	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Phenol	0.33	500	1000	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
Pyrene	1000	500	1000	0.077 U	0.078 U	0.074 U	0.078 U	0.075 U	-	-	-	-	-
<b>Total Solids (%)</b>													
Total solids	-	-	-	85.6	86.3	90.1	86.2	88.3	75.7	82.5	88.4	84.8	84.4
<b>Volatile Organic Compounds (mg/kg)</b>													
1,1,1-Trichloroethane	0.68	500	1000	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
1,1,2,2-Tetrachloroethane	0.6	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
1,1,2-Trichloroethane	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
1,1-Dichloroethane	0.27	240	480	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
1,1-Dichloroethene	0.33	500	1000	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
1,2,3-Trichlorobenzene	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.4	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
1,2-Dibromo-3-chloropropane (DBCP)	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
1,2-Dibromoethane (Ethylene dibromide)	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
1,2-Dichlorobenzene	1.1	500	1000	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
1,2-Dichloroethane	0.02	30	60	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U

TABLE II  
SOIL ANALYTICAL RESULTS - BUILDING 10  
GMCH LOCKPORT FACILITY  
LOCKPORT, NEW YORK  
BCP SITE #C932140

BUILDING LOCATION DATE DEPTH SAMPLE TYPE	Protection of Groundwater SCOs (PGWSCOs)	Restricted Commercial SCOs (CSCOs)	Restricted Industrial SCOs (ISCOs)	Building 10 10-SB-3 12/29/2010 4 - 6 ft BGS FD	Building 10 10-SB-3 12/29/2010 4 - 6 ft BGS N	Building 10 10-SB-5 12/29/2010 4 - 7.5 ft BGS N	Building 10 10-SB-8 12/29/2010 8 - 10 ft BGS N	Building 10 10-SB-10 12/29/2010 7 - 9 ft BGS N	Building 10 10-SB-11 12/30/2010 2 - 4 ft BGS N	Building 10 10-SB-12 12/30/2010 4 - 6 ft BGS N	Building 10 10-SB-14 12/30/2010 6 - 8 ft BGS N	Building 10 10-SB-15 12/30/2010 6 - 8 ft BGS N	Building 10 10-SB-16 12/30/2010 2 - 4 ft BGS N
1,2-Dichloropropane	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
1,3-Dichlorobenzene	2.4	280	560	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
1,4-Dichlorobenzene	1.8	130	250	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
2-Butanone (Methyl ethyl ketone) (MEK)	0.3	500	1000	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
2-Hexanone	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Acetone	0.05	500	1000	0.023 U	0.023 U	0.022 U	0.023 U	0.023 U	6.6 U	120 U	230 U	120 U	12 U
Benzene	0.06	44	89	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Bromodichloromethane	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Bromoform	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Bromomethane (Methyl bromide)	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 UJ	30 UJ	57 UJ	29 UJ	3 UJ
Carbon disulfide	2.7	-	-	0.0058 UJ	0.0058 U	0.0055 U	0.0058 UJ	0.0057 UJ	1.7 U	30 U	57 U	29 U	3 U
Carbon tetrachloride	0.76	22	44	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Chlorobenzene	1.1	500	1000	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Chlorobromomethane	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	1.9	350	700	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 UJ	30 UJ	57 UJ	29 UJ	3 UJ
Chloroform (Trichloromethane)	0.37	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Chloromethane (Methyl chloride)	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
cis-1,2-Dichloroethene	0.25	500	1000	0.0058 U	0.0058 U	0.0055 U	0.0058 U	<b>0.00089 J</b>	1.7 U	30 U	57 U	29 U	3 U
cis-1,3-Dichloropropene	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Cyclohexane	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Dibromochloromethane	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Dichlorodifluoromethane (CFC-12)	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Ethylbenzene	1	390	780	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Isopropyl benzene	2.3	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
m&p-Xylenes	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl acetate	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Methyl cyclohexane	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Methyl tert butyl ether (MTBE)	0.93	500	1000	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Methylene chloride	0.05	500	1000	0.0058 U	<b>0.0013 J</b>	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
o-Xylene	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Tetrachloroethene	1.3	150	300	0.0058 U	0.0058 U	<b>0.00085 J</b>	<b>0.018</b>	<b>0.014</b>	<b>21</b> <sup>[A]</sup>	<b>460</b> <sup>[ABC]</sup>	<b>870</b> <sup>[ABC]</sup>	<b>350</b> <sup>[ABC]</sup>	<b>70</b> <sup>[A]</sup>
Toluene	0.7	500	1000	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
trans-1,2-Dichloroethene	0.19	500	1000	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
trans-1,3-Dichloropropene	-	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Trichloroethene	0.47	200	400	0.0058 U	0.0058 U	0.0055 U	<b>0.00091 J</b>	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Trichlorofluoromethane (CFC-11)	-	-	-	0.0058 UJ	0.0058 U	0.0055 U	0.0058 UJ	0.0057 UJ	1.7 U	30 U	57 U	29 U	3 U
Trifluorotrichloroethane (Freon 113)	6	-	-	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Vinyl chloride	0.02	13	27	0.0058 U	0.0058 U	0.0055 U	0.0058 U	0.0057 U	1.7 U	30 U	57 U	29 U	3 U
Xylenes (total)	1.6	500	1000	0.018 U	0.017 U	0.017 U	0.017 U	0.017 U	5 U	91 U	170 U	88 U	8.9 U

Notes and Abbreviations:

- Results shown in red exceed the following criteria:  
**[A]:** Protection of Groundwater Criteria  
**[B]:** Restricted Commercial Criteria  
**[C]:** Restricted Industrial Criteria
- Results shown in **bold** were detected.
- U - Results not detected above shown reporting limit.  
J - Estimated result
- Sample Types: N - Normal Sample, FD- Field Duplicate
- Data compared to the NYSDEC Soil Cleanup Objectives (NYCRR Part 375)
- The SCOs for trivalent chromium were used as the criteria for total chromium data.

TABLE II  
SOIL ANALYTICAL RESULTS - BUILDING 10  
GMCH LOCKPORT FACILITY  
LOCKPORT, NEW YORK  
BCP SITE #C932140

BUILDING LOCATION DATE DEPTH SAMPLE TYPE	Protection of Groundwater SCOs (PGWSCOs)	Restricted Commercial SCOs (CSCOs)	Restricted Industrial SCOs (ISCOs)	Building 10 10-SB-17 12/30/2010 4 - 6 ft BGS N	Building 10 10-SB-18 12/30/2010 0 - 2 ft BGS N	Building 10 10-SB-19 12/30/2010 0 - 2 ft BGS N	Building 10 10-SB-20 12/30/2010 0 - 2 ft BGS N	Building 10 10-SB-21 12/30/2010 0 - 2 ft BGS N	Building 10 MW-10-2 12/30/2010 2 - 4 ft BGS N	Building 10 MW-10-3 12/30/2010 2 - 3.5 ft BGS N
<b>Metals (mg/kg)</b>										
Aluminum	-	-	-	-	9310 J	8310 J	9420 J	10400 J	-	-
Antimony	-	-	-	-	1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ	-	-
Arsenic	16	16	16	-	3.5	4.5	3.8	4.3	-	-
Barium	820	400	10000	-	62.8 J	74.4 J	58.5 J	117 J	-	-
Beryllium	47	590	2700	-	0.48 U	0.44 U	0.45 U	0.48 U	-	-
Cadmium	7.5	9.3	60	-	0.81	0.38 J	0.36 J	0.21 J	-	-
Calcium	-	-	-	-	94500 J	43500 J	44500 J	49100 J	-	-
Chromium	-	1500	6800	-	39.4 J <sup>(A)</sup>	15.6 J	17.7 J	16.4 J	-	-
Cobalt	-	-	-	-	7.8	7.9	10.9	11.1	-	-
Copper	1720	270	10000	-	21.2	18.7	19.2	50.1	-	-
Iron	-	-	-	-	15600 J	17200 J	17400 J	19000 J	-	-
Lead	450	1000	3900	-	52.7	12	10.7	8.4	-	-
Magnesium	-	-	-	-	36000 J	9000 J	8370 J	10200 J	-	-
Manganese	2000	10000	10000	-	607 J	440 J	661 J	529 J	-	-
Mercury	0.73	2.8	5.7	-	0.036 J	0.039 U	0.015 J	0.040 U	-	-
Nickel	130	310	10000	-	30.3	18.9	21.6	22.6	-	-
Potassium	-	-	-	-	1430	1320	1380	1660	-	-
Selenium	4	1500	6800	-	0.60 U	0.55 U	0.56 U	0.60 U	-	-
Silver	8.3	1500	6800	-	0.60 U	0.55 U	0.56 U	0.60 U	-	-
Sodium	-	-	-	-	445 J	371 J	1120	303 J	-	-
Thallium	-	-	-	-	1.2 U	1.1 U	1.1 U	1.2 U	-	-
Vanadium	-	-	-	-	28.9 J	21.7 J	21.6 J	24.6 J	-	-
Zinc	2480	10000	10000	-	200	59	59.1	40.1	-	-
<b>PCBs (mg/kg)</b>										
Aroclor-1016 (PCB-1016)	3.2	1	25	-	-	-	-	-	-	-
Aroclor-1221 (PCB-1221)	3.2	1	25	-	-	-	-	-	-	-
Aroclor-1232 (PCB-1232)	3.2	1	25	-	-	-	-	-	-	-
Aroclor-1242 (PCB-1242)	3.2	1	25	-	-	-	-	-	-	-
Aroclor-1248 (PCB-1248)	3.2	1	25	-	-	-	-	-	-	-
Aroclor-1254 (PCB-1254)	3.2	1	25	-	-	-	-	-	-	-
Aroclor-1260 (PCB-1260)	3.2	1	25	-	-	-	-	-	-	-
<b>Semi-Volatile Organic Compounds (mg/kg)</b>										
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	0.1	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	0.4	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	0.2	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	0.17	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	36.4	-	-	-	-	-	-	-	-	-
2-Methylphenol	0.33	500	1000	-	-	-	-	-	-	-
2-Nitroaniline	0.4	-	-	-	-	-	-	-	-	-
2-Nitrophenol	0.3	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	0.5	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	-	-	-	-	-	-	-	-	-	-
4-Bromophenyl phenyl ether	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	0.22	-	-	-	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	0.33	500	1000	-	-	-	-	-	-	-
4-Nitroaniline	-	-	-	-	-	-	-	-	-	-

TABLE II  
SOIL ANALYTICAL RESULTS - BUILDING 10  
GMCH LOCKPORT FACILITY  
LOCKPORT, NEW YORK  
BCP SITE #C932140

BUILDING LOCATION DATE DEPTH SAMPLE TYPE	Protection of Groundwater SCOs (PGWSCOs)	Restricted Commercial SCOs (CSCOs)	Restricted Industrial SCOs (ISCOs)	Building 10 10-SB-17 12/30/2010 4 - 6 ft BGS N	Building 10 10-SB-18 12/30/2010 0 - 2 ft BGS N	Building 10 10-SB-19 12/30/2010 0 - 2 ft BGS N	Building 10 10-SB-20 12/30/2010 0 - 2 ft BGS N	Building 10 10-SB-21 12/30/2010 0 - 2 ft BGS N	Building 10 MW-10-2 12/30/2010 2 - 4 ft BGS N	Building 10 MW-10-3 12/30/2010 2 - 3.5 ft BGS N
4-Nitrophenol	0.1	-	-	-	-	-	-	-	-	-
Acenaphthene	98	500	1000	-	-	-	-	-	-	-
Acenaphthylene	107	500	1000	-	-	-	-	-	-	-
Acetophenone	-	500	1000	-	-	-	-	-	-	-
Anthracene	1000	500	1000	-	-	-	-	-	-	-
Atrazine	-	-	-	-	-	-	-	-	-	-
Benzaldehyde	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	1	5.6	11	-	-	-	-	-	-	-
Benzo(a)pyrene	22	1	1.1	-	-	-	-	-	-	-
Benzo(b)fluoranthene	1.7	5.6	11	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	1000	500	1000	-	-	-	-	-	-	-
Benzo(k)fluoranthene	1.7	56	110	-	-	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	435	-	-	-	-	-	-	-	-	-
Butyl benzylphthalate (BBP)	122	-	-	-	-	-	-	-	-	-
Caprolactam	-	-	-	-	-	-	-	-	-	-
Carbazole	-	-	-	-	-	-	-	-	-	-
Chrysene	1	56	110	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	1000	0.56	1.1	-	-	-	-	-	-	-
Dibenzofuran	6.2	500	1000	-	-	-	-	-	-	-
Diethyl phthalate	7.1	-	-	-	-	-	-	-	-	-
Dimethyl phthalate	27	-	-	-	-	-	-	-	-	-
Di-n-butylphthalate (DBP)	8.1	-	-	-	-	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	120	-	-	-	-	-	-	-	-	-
Fluoranthene	1000	500	1000	-	-	-	-	-	-	-
Fluorene	386	500	1000	-	-	-	-	-	-	-
Hexachlorobenzene	1.4	6	12	-	-	-	-	-	-	-
Hexachlorobutadiene	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	8.2	5.6	11	-	-	-	-	-	-	-
Isophorone	4.4	-	-	-	-	-	-	-	-	-
Naphthalene	12	500	1000	-	-	-	-	-	-	-
Nitrobenzene	0.17	69	140	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	0.8	6.7	55	-	-	-	-	-	-	-
Phenanthrene	1000	500	1000	-	-	-	-	-	-	-
Phenol	0.33	500	1000	-	-	-	-	-	-	-
Pyrene	1000	500	1000	-	-	-	-	-	-	-
<b>Total Solids (%)</b>										
Total solids	-	-	-	<b>84.2</b>	<b>83.5</b>	<b>85.7</b>	<b>84.9</b>	<b>82.7</b>	<b>86.5</b>	<b>88.5</b>
<b>Volatile Organic Compounds (mg/kg)</b>										
1,1,1-Trichloroethane	0.68	500	1000	0.3 U	-	-	-	-	0.0058 U	0.0056 U
1,1,2,2-Tetrachloroethane	0.6	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
1,1,2-Trichloroethane	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
1,1-Dichloroethane	0.27	240	480	0.3 U	-	-	-	-	0.0058 U	0.0056 U
1,1-Dichloroethene	0.33	500	1000	0.3 U	-	-	-	-	0.0058 U	0.0056 U
1,2,3-Trichlorobenzene	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	3.4	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
1,2-Dibromo-3-chloropropane (DBCP)	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
1,2-Dibromoethane (Ethylene dibromide)	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
1,2-Dichlorobenzene	1.1	500	1000	0.3 U	-	-	-	-	0.0058 U	0.0056 U
1,2-Dichloroethane	0.02	30	60	0.3 U	-	-	-	-	0.0058 U	0.0056 U

TABLE II  
SOIL ANALYTICAL RESULTS - BUILDING 10  
GMCH LOCKPORT FACILITY  
LOCKPORT, NEW YORK  
BCP SITE #C932140

BUILDING LOCATION DATE DEPTH SAMPLE TYPE	Protection of Groundwater SCOs (PGWSCOs)	Restricted Commercial SCOs (CSCOs)	Restricted Industrial SCOs (ISCOs)	Building 10 10-SB-17 12/30/2010 4 - 6 ft BGS N	Building 10 10-SB-18 12/30/2010 0 - 2 ft BGS N	Building 10 10-SB-19 12/30/2010 0 - 2 ft BGS N	Building 10 10-SB-20 12/30/2010 0 - 2 ft BGS N	Building 10 10-SB-21 12/30/2010 0 - 2 ft BGS N	Building 10 MW-10-2 12/30/2010 2 - 4 ft BGS N	Building 10 MW-10-3 12/30/2010 2 - 3.5 ft BGS N
1,2-Dichloropropane	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
1,3-Dichlorobenzene	2.4	280	560	0.3 U	-	-	-	-	0.0058 U	0.0056 U
1,4-Dichlorobenzene	1.8	130	250	0.3 U	-	-	-	-	0.0058 U	0.0056 U
2-Butanone (Methyl ethyl ketone) (MEK)	0.3	500	1000	0.3 U	-	-	-	-	0.0058 U	0.0056 U
2-Hexanone	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Acetone	0.05	500	1000	1.2 U	-	-	-	-	0.023 U	0.023 U
Benzene	0.06	44	89	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Bromodichloromethane	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Bromoform	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Bromomethane (Methyl bromide)	-	-	-	0.3 UJ	-	-	-	-	0.0058 U	0.0056 U
Carbon disulfide	2.7	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Carbon tetrachloride	0.76	22	44	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Chlorobenzene	1.1	500	1000	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Chlorobromomethane	-	-	-	-	-	-	-	-	-	-
Chloroethane	1.9	350	700	0.3 UJ	-	-	-	-	0.0058 U	0.0056 U
Chloroform (Trichloromethane)	0.37	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Chloromethane (Methyl chloride)	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
cis-1,2-Dichloroethene	0.25	500	1000	0.3 U	-	-	-	-	<b>0.0038 J</b>	0.0056 U
cis-1,3-Dichloropropene	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Cyclohexane	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Dibromochloromethane	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Dichlorodifluoromethane (CFC-12)	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Ethylbenzene	1	390	780	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Isopropyl benzene	2.3	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
m&p-Xylenes	-	-	-	-	-	-	-	-	-	-
Methyl acetate	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Methyl cyclohexane	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Methyl tert butyl ether (MTBE)	0.93	500	1000	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Methylene chloride	0.05	500	1000	0.3 U	-	-	-	-	<b>0.0023 J</b>	<b>0.0012 J</b>
o-Xylene	-	-	-	-	-	-	-	-	-	-
Styrene	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Tetrachloroethene	1.3	150	300	<b>5<sup>[A]</sup></b>	-	-	-	-	<b>0.049</b>	<b>0.0034 J</b>
Toluene	0.7	500	1000	0.3 U	-	-	-	-	0.0058 U	0.0056 U
trans-1,2-Dichloroethene	0.19	500	1000	0.3 U	-	-	-	-	0.0058 U	0.0056 U
trans-1,3-Dichloropropene	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Trichloroethene	0.47	200	400	0.3 U	-	-	-	-	<b>0.0084</b>	0.0056 U
Trichlorofluoromethane (CFC-11)	-	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Trifluorotrichloroethane (Freon 113)	6	-	-	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Vinyl chloride	0.02	13	27	0.3 U	-	-	-	-	0.0058 U	0.0056 U
Xylenes (total)	1.6	500	1000	0.89 U	-	-	-	-	0.017 U	0.017 U

Notes and Abbreviations:

- Results shown in red exceed the following criteria:  
**[A]:** Protection of Groundwater Criteria  
**[B]:** Restricted Commercial Criteria  
**[C]:** Restricted Industrial Criteria
- Results shown in **bold** were detected.
- U - Results not detected above shown reporting limit.  
J - Estimated result
- Sample Types: N - Normal Sample, FD- Field Duplicate
- Data compared to the NYSDEC Soil Cleanup Objectives (NYCRR Part 375)
- The SCOs for trivalent chromium were used as the criteria for total chromium data.

**TABLE III**  
**GROUNDWATER ANALYTICAL RESULTS - BUILDING 10**  
**GMCH LOCKPORT FACILITY**  
**LOCKPORT, NEW YORK**  
**BCP SITE #C932140**

BUILDING LOCATION DATE SAMPLE TYPE	Class GA TOGS 1.1.1 ug/L	Building 10 MW-10-1 4/29/2011 N	Building 10 MW-10-2 4/29/2011 N	Building 10 MW-10-3 4/29/2011 FD	Building 10 MW-10-3 4/29/2011 N	Building 9 MW-9-101-A 4/29/2011 N
<b>Volatile Organic Compounds (ug/L)</b>						
cis-1,2-Dichloroethene	5	2000 U	<b>1100</b> <sup>[A]</sup>	<b>11</b> <sup>[A]</sup>	<b>11</b> <sup>[A]</sup>	4.0 U
Tetrachloroethene	5	<b>120000</b> <sup>[A]</sup>	<b>1100</b> <sup>[A]</sup>	<b>13</b> <sup>[A]</sup>	<b>13</b> <sup>[A]</sup>	4.0 U
trans-1,2-Dichloroethene	5	<b>16</b> <sup>[A]</sup>	<b>10</b> <sup>[A]</sup>	1.0 U	1.0 U	4.0 U
Trichloroethene	5	<b>2800</b> <sup>[A]</sup>	<b>1200</b> <sup>[A]</sup>	<b>6</b> <sup>[A]</sup>	<b>5.8</b> <sup>[A]</sup>	4.0 U
Vinyl chloride	2	<b>100</b> <sup>[A]</sup>	<b>66</b> <sup>[A]</sup>	1.0 U	1.0 U	4.0 U

**Notes and Abbreviations:**

- Results shown in red exceed:  
**[A]**: Indicates result is greater than TOGS 1.1.1
- Results shown in **bold** were detected.
- U - Results not detected above shown reporting limit.  
J - Estimated result
- Sample Types: N - Normal Sample, FD- Field Duplicate
- Compounds compared to the NYSDEC Technical and Operational Guidance Series Glass GA Standards & Guidance (TOGS 1.1.1), June 1998 (Amended April 2000)

TABLE IV  
SITE-WIDE GROUNDWATER ANALYTICAL RESULTS  
GMCH LOCKPORT FACILITY  
LOCKPORT, NEW YORK

LOCATION DESCRIPTION LOCATION DATE SAMPLE TYPE	Class GA TOGS 1.1.1  ug/L	Building 6 MW-6-1 11/30/2007 N	Building 6 MW-6-1 2/20/2008 N	Building 6 MW-6-1 8/14/2008 N	Building 6 MW-6-1 4/27/2011 N	Building 6 MW-6-2 11/29/2007 N	Building 6 MW-6-2 2/20/2008 N	Building 6 MW-6-2 4/15/2008 N	Building 6 MW-6-2 8/14/2008 N	Building 6 MW-6-2 4/27/2011 N	Building 6 MW-6-F-7 8/13/2008 N	Building 6 MW-6-F-7 11/5/2008 N	Building 6 MW-6-F-8 8/13/2008 N	Building 6 MW-6-F-8 11/5/2008 N	Building 6 MW-6-F-8 4/27/2011 N	Building 6 MW-6-F-9 8/13/2008 N	Building 6 MW-6-F-9 11/5/2008 N	Building 7 MW-7-1 11/30/2007 N	Building 7 MW-7-1 2/20/2008 N	Building 7 MW-7-1 4/27/2011 N
<b>Metals (ug/l)</b>																				
Calcium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron (dissolved)	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	35000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium (dissolved)	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese (dissolved)	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium (dissolved)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	20000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium (dissolved)	20000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Miscellaneous (ug/l)</b>																				
Total organic carbon (TOC)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Natural Attenuation Parameters (ug/l)</b>																				
Alkalinity, total (as CaCO3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	10000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	10000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	250000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfide	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Semi-Volatile Organic Compounds (ug/l)</b>																				
Acenaphthene	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Volatile Organic Compounds (ug/l)</b>																				
1,1,1-Trichloroethane	5	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
1,1,2,2-Tetrachloroethane	5	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
1,1,2-Trichloroethane	1	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
1,1-Dichloroethane	5	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
1,1-Dichloroethene	5	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
1,2,3-Trichlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	0.0006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	3	2 U	-	-	-	2 U	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-
1,2-Dichloroethane	0.6	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
1,2-Dichloroethene (total)	5	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2.4	2 U	4 U	-	2 U	4 U	8 <sup>[A]</sup>	2 U	-
1,2-Dichloropropane	1	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
1,3-Dichlorobenzene	3	2 U	-	-	-	2 U	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-
1,4-Dichlorobenzene	3	2 U	-	-	-	2 U	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	50	-	10 U	2 U	-	-	10 U	10 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	-	10 U	-
2-Chloroethyl vinyl ether	-	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	4 U	2 U	4 U	-	2 U	4 U	2 U	2 U	-
2-Hexanone	50	-	10 U	2 U	-	-	10 U	10 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	-	10 U	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	50	-	10 U	2 U	-	-	10 U	10 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	-	10 U	-
Acetone	50	-	10 U	2 U	-	-	10 U	10 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	-	10 U	-
Acrolein	5	10 U	-	-	-	10 U	-	-	-	-	-	-	-	-	-	-	-	10 U	-	-
Acrylonitrile	0.07	10 U	-	-	-	10 U	-	-	-	-	-	-	-	-	-	-	-	10 U	-	-
Benzene	1	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	3 <sup>[A]</sup>	2 U	-
Bromodichloromethane	50	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-



TABLE IV  
SITE-WIDE GROUNDWATER ANALYTICAL RESULTS  
GMCH LOCKPORT FACILITY  
LOCKPORT, NEW YORK

LOCATION DESCRIPTION LOCATION DATE SAMPLE TYPE	Class GA TOGS 1.1.1  ug/L	Building 6 MW-6-1 11/30/2007 N	Building 6 MW-6-1 2/20/2008 N	Building 6 MW-6-1 8/14/2008 N	Building 6 MW-6-1 4/27/2011 N	Building 6 MW-6-2 11/29/2007 N	Building 6 MW-6-2 2/20/2008 N	Building 6 MW-6-2 4/15/2008 N	Building 6 MW-6-2 8/14/2008 N	Building 6 MW-6-2 4/27/2011 N	Building 6 MW-6-F-7 8/13/2008 N	Building 6 MW-6-F-7 11/5/2008 N	Building 6 MW-6-F-8 8/13/2008 N	Building 6 MW-6-F-8 11/5/2008 N	Building 6 MW-6-F-8 4/27/2011 N	Building 6 MW-6-F-9 8/13/2008 N	Building 6 MW-6-F-9 11/5/2008 N	Building 7 MW-7-1 11/30/2007 N	Building 7 MW-7-1 2/20/2008 N	Building 7 MW-7-1 4/27/2011 N
Bromoform	50	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
Bromomethane (Methyl bromide)	5	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
Carbon disulfide	-	-	2 U	2 U	-	-	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-
Carbon tetrachloride	5	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
Chlorobenzene	5	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
Chlorobromomethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	5	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
Chloroform (Trichloromethane)	7	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
Chloromethane (Methyl chloride)	5	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
cis-1,2-Dichloroethene	5	-	2 U	2 U	1.0 U	-	2 U	2 U	2 U	1.0 U	2 U	<b>2.4</b>	2 U	2 U	1.0 U	2 U	2 U	-	2 U	1.0 U
cis-1,3-Dichloropropene	0.4	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
Dibromochloromethane	50	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
Dichlorodifluoromethane (CFC-12)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
Isopropyl benzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
m&p-Xylenes	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	5	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
o-Xylene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	5	-	2 U	2 U	-	-	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-
Tetrachloroethene	5	2 U	2 U	2 U	1.0 U	2 U	2 U	2 U	2 U	1.0 U	2 U	2 U	2 U	2 U	1.0 U	2 U	2 U	2 U	2 U	1.0 U
Toluene	5	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	<b>7<sup>[A]</sup></b>	2 U	-
trans-1,2-Dichloroethene	5	-	2 U	2 U	1.0 U	-	2 U	2 U	2 U	1.0 U	2 U	2 U	2 U	2 U	1.0 U	2 U	2 U	-	2 U	1.0 U
trans-1,3-Dichloropropene	0.4	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-
Trichloroethene	5	2 U	2 U	2 U	1.0 U	<b>25<sup>[A]</sup></b>	2 U	<b>4</b>	2 U	1.0 U	2 U	2 U	2 U	2 U	1.0 U	2 U	2 U	<b>110<sup>[A]</sup></b>	<b>56<sup>[A]</sup></b>	1.0 U
Trichlorofluoromethane (CFC-11)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	-	-	2 U	2 U	-	-	2 U	2 U	2 U	-	2 U	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-
Vinyl chloride	2	2 U	2 U	2 U	1.0 U	2 U	2 U	2 U	2 U	1.0 U	2 U	2 U	2 U	2 U	1.0 U	2 U	2 U	2 U	2 U	1.0 U
Xylenes (total)	5	-	2 U	2 U	-	-	2 U	2 U	2 U	-	2 U	6 U	2 U	6 U	-	2 U	6 U	-	2 U	-

Notes and Abbreviations:

- Results shown in red exceed:  
[A]: Indicates result is greater than TOGS 1.1.1
- Results shown in bold were detected.
- U - Results not detected above shown reporting limit.  
J - Estimated result
- Sample Types: N - Normal Sample, FD- Field Duplicate
- Compounds compared to the NYSDEC Technical and Operational Guidance Series Glass GA Standards & Guidance (TOGS 1.1.1), June 1998 (Amended April 2000)

TABLE IV  
SITE-WIDE GROUNDWATER ANALYTICAL RESULTS  
GMCH LOCKPORT FACILITY  
LOCKPORT, NEW YORK

LOCATION DESCRIPTION LOCATION DATE SAMPLE TYPE	Class GA TOGS 1.1.1  ug/L	Building 7 MW-7-2 11/29/2007 N	Building 7 MW-7-2 2/20/2008 N	Building 7 MW-7-2 8/13/2008 N	Building 7 MW-7-2 4/27/2011 N	Building 7 MW-7-3 11/29/2007 N	Building 7 MW-7-3 2/20/2008 N	Building 7 MW-7-3 4/27/2011 N	Building 7 MW-7-4 8/14/2008 N	Building 7 MW-7-4 4/27/2011 N	Building 7 MW-7-5 4/28/2011 FD	Building 7 MW-7-5 4/28/2011 N	Building 7 MW-7-6 4/27/2011 N	Building 7 MW-7-7 4/28/2011 N	Building 7 MW-7-8 4/28/2011 N	Building 7 MW-7-A-6 4/28/2011 N	Building 7 MW-7-C-2 4/29/2011 N	Building 7 MW-7-P-1 4/28/2011 N	Building 8 MW-8-003-B 4/28/2011 N
<b>Metals (ug/l)</b>																			
Calcium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron (dissolved)	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	35000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium (dissolved)	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese (dissolved)	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium (dissolved)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	20000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium (dissolved)	20000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Miscellaneous (ug/l)</b>																			
Total organic carbon (TOC)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Natural Attenuation Parameters (ug/l)</b>																			
Alkalinity, total (as CaCO3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	10000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	10000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	250000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfide	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Semi-Volatile Organic Compounds (ug/l)</b>																			
Acenaphthene	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Volatile Organic Compounds (ug/l)</b>																			
1,1,1-Trichloroethane	5	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	5	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	1	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	5	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	0.0006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	3	2 U	-	-	-	2 U	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.6	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethene (total)	5	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	1	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	3	2 U	-	-	-	2 U	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	3	2 U	-	-	-	2 U	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	50	-	10 U	2 U	-	-	10 U	-	2 U	-	-	-	-	-	-	-	-	-	-
2-Chloroethyl vinyl ether	-	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
2-Hexanone	50	-	10 U	2 U	-	-	10 U	-	2 U	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	50	-	10 U	2 U	-	-	10 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Acetone	50	-	10 U	2 U	-	-	10 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Acrolein	5	10 U	-	-	-	10 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrylonitrile	0.07	10 U	-	-	-	10 U	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	1	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	50	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-

TABLE IV  
SITE-WIDE GROUNDWATER ANALYTICAL RESULTS  
GMCH LOCKPORT FACILITY  
LOCKPORT, NEW YORK

LOCATION DESCRIPTION LOCATION DATE SAMPLE TYPE	Class GA TOGS 1.1.1  ug/L	Building 7 MW-7-2 11/29/2007 N	Building 7 MW-7-2 2/20/2008 N	Building 7 MW-7-2 8/13/2008 N	Building 7 MW-7-2 4/27/2011 N	Building 7 MW-7-3 11/29/2007 N	Building 7 MW-7-3 2/20/2008 N	Building 7 MW-7-3 4/27/2011 N	Building 7 MW-7-4 8/14/2008 N	Building 7 MW-7-4 4/27/2011 N	Building 7 MW-7-5 4/28/2011 FD	Building 7 MW-7-5 4/28/2011 N	Building 7 MW-7-6 4/27/2011 N	Building 7 MW-7-7 4/28/2011 N	Building 7 MW-7-8 4/28/2011 N	Building 7 MW-7-A-6 4/28/2011 N	Building 7 MW-7-C-2 4/29/2011 N	Building 7 MW-7-P-1 4/28/2011 N	Building 8 MW-8-003-B 4/28/2011 N
Bromoform	50	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl bromide)	5	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	-	-	2 U	2 U	-	-	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	5	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	5	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Chlorobromomethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	5	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	7	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Chloromethane (Methyl chloride)	5	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	5	-	2 U	2 U	1.0 U	-	2 U	8.6 <sup>[A]</sup>	2 U	1.0 U	640 <sup>[A]</sup>	680 <sup>[A]</sup>	350 <sup>[A]</sup>	200 U	29 <sup>[A]</sup>	16000 <sup>[A]</sup>	230 <sup>[A]</sup>	6.2 <sup>[A]</sup>	190 <sup>[A]</sup>
cis-1,3-Dichloropropene	0.4	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	50	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Isopropyl benzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
m&p-Xylenes	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	5	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
o-Xylene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	5	-	2 U	2 U	-	-	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	2 U	2 U	2 U	1.0 U	2 U	2 U	1.0 U	2 U	1.0 U	8800 <sup>[A]</sup>	8900 <sup>[A]</sup>	470 <sup>[A]</sup>	26000 <sup>[A]</sup>	290 <sup>[A]</sup>	140000 <sup>[A]</sup>	1.0 U	0.57 J	300 <sup>[A]</sup>
Toluene	5	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	5	-	2 U	2 U	1.0 U	-	2 U	1.0 U	2 U	1.0 U	200 U	7.4 <sup>[A]</sup>	2.7	200 U	4.0 U	2000 U	1.0 U	4.9	5.0 U
trans-1,3-Dichloropropene	0.4	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	2 U	2 U	2 U	1.0 U	2 U	2 U	1.0 U	2 U	1.0 U	870 <sup>[A]</sup>	890 <sup>[A]</sup>	240 <sup>[A]</sup>	200 U	100 <sup>[A]</sup>	19000 <sup>[A]</sup>	1.0 U	2.1	110 <sup>[A]</sup>
Trichlorofluoromethane (CFC-11)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	-	-	20 U	2 U	-	-	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	2 U	2 U	2 U	1.0 U	2 U	2 U	46 <sup>[A]</sup>	2 U	1.0 U	200 U	5.8 <sup>[A]</sup>	35 <sup>[A]</sup>	200 U	4.0 U	2000 U	12 <sup>[A]</sup>	27 <sup>[A]</sup>	19 <sup>[A]</sup>
Xylenes (total)	5	-	2 U	2 U	-	-	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-

Notes and Abbreviations:

- Results shown in red exceed:  
[A]: Indicates result is greater than TOGS 1.1.1
- Results shown in bold were detected.
- U - Results not detected above shown reporting limit.  
J - Estimated result
- Sample Types: N - Normal Sample, FD- Field Duplicate
- Compounds compared to the NYSDEC Technical and Operational Guidance Series Glass GA Standards & Guidance (TOGS 1.1.1), June 1998 (Amended April 2000)

TABLE IV  
SITE-WIDE GROUNDWATER ANALYTICAL RESULTS  
GMCH LOCKPORT FACILITY  
LOCKPORT, NEW YORK

LOCATION DESCRIPTION LOCATION DATE SAMPLE TYPE	Class GA TOGS 1.1.1  ug/L	Building 8 MW-8-1 4/29/2011 N	Building 8 MW-8-2 4/29/2011 N	Building 8 MW-8-3 5/2/2011 FD	Building 8 MW-8-3 5/2/2011 N	Building 8 MW-8-4 5/2/2011 N	Building 9 MW-9-101-A 4/29/2011 N	Building 9 MW-9-12 8/14/2008 N	Building 9 MW-9-4 8/14/2008 N	Building 10 BLDG10 4/29/2011 N	Building 10 MW-10-2 4/29/2011 N	Building 10 MW-10-3 4/29/2011 FD	Building 10 MW-10-3 4/29/2011 N	Sitewide MW-1 7/19/2007 N	Sitewide MW-4 7/20/2009 N	Sitewide MW-4 4/22/2011 FD	Sitewide MW-4 4/22/2011 N	Sitewide MW-7 10/25/2006 N	Sitewide MW-7 11/29/2007 N	Sitewide MW-7 11/5/2008 N
<b>Metals (ug/l)</b>																				
Calcium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	493000	476000	-	327000
Iron	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3100 <sup>[A]</sup>	3100 <sup>[A]</sup>	230	580 <sup>[A]</sup>
Iron (dissolved)	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6060 <sup>[A]</sup>
Magnesium	35000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium (dissolved)	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	139000 <sup>[A]</sup>	138000 <sup>[A]</sup>	112200 <sup>[A]</sup>	98500 <sup>[A]</sup>
Manganese	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74000 <sup>[A]</sup>
Manganese (dissolved)	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2280 <sup>[A]</sup>
Potassium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium (dissolved)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	20000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium (dissolved)	20000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1420000 <sup>[A]</sup>	1390000 <sup>[A]</sup>	237000 <sup>[A]</sup>	278000 <sup>[A]</sup>
<b>Miscellaneous (ug/l)</b>																				
Total organic carbon (TOC)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Natural Attenuation Parameters (ug/l)</b>																				
Alkalinity, total (as CaCO3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia-N	2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	10000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	10000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	250000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfide	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Semi-Volatile Organic Compounds (ug/l)</b>																				
Acenaphthene	20	-	-	-	-	-	-	2 U	73 U	-	-	-	-	-	-	-	-	-	-	-
Anthracene	50	-	-	-	-	-	-	2 U	73 U	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	-	-	-	-	-	-	-	2 U	73 U	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	0.002	-	-	-	-	-	-	2 U	73 U	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	-	-	-	-	-	-	-	2 U	73 U	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	0.002	-	-	-	-	-	-	2 U	73 U	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	5	-	-	-	-	-	-	2 U	73 U	-	-	-	-	-	-	-	-	-	-	-
Chrysene	0.002	-	-	-	-	-	-	2 U	73 U	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	-	-	-	-	-	-	-	2 U	73 U	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	50	-	-	-	-	-	-	2 U	7990 <sup>[A]</sup>	-	-	-	-	-	-	-	-	-	-	-
Fluorene	50	-	-	-	-	-	-	2 U	73 U	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	0.002	-	-	-	-	-	-	2 U	73 U	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	10	-	-	-	-	-	-	2 U	73 U	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	50	-	-	-	-	-	-	2 U	7970 <sup>[A]</sup>	-	-	-	-	-	-	-	-	-	-	-
Pyrene	50	-	-	-	-	-	-	2 U	73 U	-	-	-	-	-	-	-	-	-	-	-
<b>Volatile Organic Compounds (ug/l)</b>																				
1,1,1-Trichloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	6 <sup>[A]</sup>	-	-	-	-	-	-
1,1,2-Trichloroethane	1	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
1,1-Dichloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
1,1-Dichloroethene	5	-	-	-	-	-	-	-	-	-	-	-	-	480 <sup>[A]</sup>	-	-	-	-	-	-
1,2,3-Trichlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
1,2,4-Trichlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	0.04	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	0.0006	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
1,2-Dichlorobenzene	3	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
1,2-Dichloroethane	0.6	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
1,2-Dichloroethene (total)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	1	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
1,3-Dichlorobenzene	3	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
1,4-Dichlorobenzene	3	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	50	-	-	-	-	-	-	-	-	-	-	-	-	10 U	-	-	-	-	-	-
2-Chloroethyl vinyl ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	50	-	-	-	-	-	-	-	-	-	-	-	-	10 U	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	50	-	-	-	-	-	-	-	-	-	-	-	-	59 <sup>[A]</sup>	-	-	-	-	-	-
Acetone	50	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-
Acrolein	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrylonitrile	0.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	1	-	-	-	-	-	-	-	-	-	-	-	-	5 <sup>[A]</sup>	-	-	-	-	-	-
Bromodichloromethane	50	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-

TABLE IV  
SITE-WIDE GROUNDWATER ANALYTICAL RESULTS  
GMCH LOCKPORT FACILITY  
LOCKPORT, NEW YORK

LOCATION DESCRIPTION LOCATION DATE SAMPLE TYPE	Class GA TOGS 1.1.1  ug/L	Building 8 MW-8-1 4/29/2011 N	Building 8 MW-8-2 4/29/2011 N	Building 8 MW-8-3 5/2/2011 FD	Building 8 MW-8-3 5/2/2011 N	Building 8 MW-8-4 5/2/2011 N	Building 9 MW-9-101-A 4/29/2011 N	Building 9 MW-9-12 8/14/2008 N	Building 9 MW-9-4 8/14/2008 N	Building 10 BLDG10 4/29/2011 N	Building 10 MW-10-2 4/29/2011 N	Building 10 MW-10-3 4/29/2011 FD	Building 10 MW-10-3 4/29/2011 N	Sitewide MW-1 7/19/2007 N	Sitewide MW-4 7/20/2009 N	Sitewide MW-4 4/22/2011 FD	Sitewide MW-4 4/22/2011 N	Sitewide MW-7 10/25/2006 N	Sitewide MW-7 11/29/2007 N	Sitewide MW-7 11/5/2008 N
Bromoform	50	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
Bromomethane (Methyl bromide)	5	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
Carbon disulfide	-	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
Carbon tetrachloride	5	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
Chlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
Chlorobromomethane	5	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
Chloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
Chloroform (Trichloromethane)	7	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
Chloromethane (Methyl chloride)	5	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
cis-1,2-Dichloroethene	5	<b>0.86 J</b>	<b>9300 <sup>[A]</sup></b>	<b>5</b>	<b>4.3</b>	<b>68 <sup>[A]</sup></b>	4.0 U	-	-	2000 U	<b>1100 <sup>[A]</sup></b>	<b>11 <sup>[A]</sup></b>	<b>11 <sup>[A]</sup></b>	<b>220 <sup>[A]</sup></b>	<b>41500 <sup>[A]</sup></b>	<b>50000 <sup>[A]</sup></b>	<b>45000 <sup>[A]</sup></b>	<b>35800 <sup>[A]</sup></b>	<b>39500 <sup>[A]</sup></b>	<b>70000 <sup>[A]</sup></b>
cis-1,3-Dichloropropene	0.4	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
Dibromochloromethane	50	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	5	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
Ethylbenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	<b>4</b>	-	-	-	-	-	-
Isopropyl benzene	5	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
m&p-Xylenes	5	-	-	-	-	-	-	-	-	-	-	-	-	<b>46 <sup>[A]</sup></b>	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	-	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
Methylene chloride	5	-	-	-	-	-	-	-	-	-	-	-	-	<b>200 <sup>[A]</sup></b>	-	-	-	-	-	-
o-Xylene	5	-	-	-	-	-	-	-	-	-	-	-	-	<b>15 <sup>[A]</sup></b>	-	-	-	-	-	-
Styrene	5	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
Tetrachloroethene	5	1.0 U	40 U	<b>1.9</b>	<b>1.7</b>	1.0 U	4.0 U	-	-	<b>120000 <sup>[A]</sup></b>	<b>1100 <sup>[A]</sup></b>	<b>13 <sup>[A]</sup></b>	<b>13 <sup>[A]</sup></b>	<b>114000 <sup>[A]</sup></b>	50 U	<b>1.8</b>	<b>1.5</b>	<b>77 <sup>[A]</sup></b>	<b>49 <sup>[A]</sup></b>	200 U
Toluene	5	-	-	-	-	-	-	-	-	-	-	-	-	<b>44 <sup>[A]</sup></b>	-	-	-	-	-	-
trans-1,2-Dichloroethene	5	1.0 U	40 U	1.0 U	1.0 U	1.0 U	4.0 U	-	-	<b>16 <sup>[A]</sup></b>	<b>10 <sup>[A]</sup></b>	1.0 U	1.0 U	<b>15 <sup>[A]</sup></b>	50 U	1000 U	1000 U	<b>62 <sup>[A]</sup></b>	<b>390 <sup>[A]</sup></b>	200 U
trans-1,3-Dichloropropene	0.4	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
Trichloroethene	5	1.0 U	<b>660 <sup>[A]</sup></b>	<b>9.3 <sup>[A]</sup></b>	<b>6 <sup>[A]</sup></b>	<b>12 <sup>[A]</sup></b>	4.0 U	-	-	<b>2800 <sup>[A]</sup></b>	<b>1200 <sup>[A]</sup></b>	<b>6 <sup>[A]</sup></b>	<b>5.8 <sup>[A]</sup></b>	<b>200 <sup>[A]</sup></b>	<b>23000 <sup>[A]</sup></b>	<b>24000 B <sup>[A]</sup></b>	<b>21000 B <sup>[A]</sup></b>	<b>260000 <sup>[A]</sup></b>	<b>434000 <sup>[A]</sup></b>	<b>1100 <sup>[A]</sup></b>
Trichlorofluoromethane (CFC-11)	5	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
Vinyl acetate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	1.0 U	<b>270 <sup>[A]</sup></b>	1.0 U	1.0 U	<b>17 <sup>[A]</sup></b>	4.0 U	-	-	<b>100 <sup>[A]</sup></b>	<b>66 <sup>[A]</sup></b>	1.0 U	1.0 U	<b>220 <sup>[A]</sup></b>	<b>6660 <sup>[A]</sup></b>	<b>12000 <sup>[A]</sup></b>	<b>10000 <sup>[A]</sup></b>	<b>1700 <sup>[A]</sup></b>	<b>3200 <sup>[A]</sup></b>	<b>2600 <sup>[A]</sup></b>
Xylenes (total)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes and Abbreviations:

- Results shown in red exceed:  
[A]: Indicates result is greater than TOGS 1.1.1
- Results shown in bold were detected.
- U - Results not detected above shown reporting limit.  
J - Estimated result
- Sample Types: N - Normal Sample, FD- Field Duplicate
- Compounds compared to the NYSDEC Technical and Operational Guidance Series Glass GA Standards & Guidance (TOGS 1.1.1), June 1998 (Amended April 2000)

TABLE IV  
SITE-WIDE GROUNDWATER ANALYTICAL RESULTS  
GMCH LOCKPORT FACILITY  
LOCKPORT, NEW YORK

LOCATION DESCRIPTION	Class GA	Sitewide	Sitewide	Sitewide	Sitewide	Sitewide	Sitewide	Sitewide	Sitewide	Sitewide	Sitewide	Sitewide	Sitewide	Sitewide	Sitewide	Sitewide	Sitewide	Sitewide
LOCATION	TOGS 1.1.1	MW-7	MW-7	MW-7	MW-8	MW-8	MW-9	MW-9	MW-10	MW-10	MW-11	MW-11	MW-11	MW-12	MW-12	MW-12	MW-12	MW-13
DATE		2/24/2009	7/15/2009	4/22/2011	7/15/2009	4/22/2011	7/20/2009	4/22/2011	7/15/2009	4/21/2011	10/24/2006	11/28/2007	4/21/2011	10/25/2006	11/28/2007	3/16/2009	4/20/2011	10/24/2006
SAMPLE TYPE	ug/L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
<b>Metals (ug/l)</b>																		
Calcium	-	193000	-	121000	-	220000	-	392000	-	281000	-	-	92500	-	-	269000	227000 B	-
Iron	300	90	-	200	-	120	-	34 J	-	750 <sup>[A]</sup>	-	800 <sup>[A]</sup>	740 <sup>[A]</sup>	140	7500 <sup>[A]</sup>	6680 <sup>[A]</sup>	11500 <sup>[A]</sup>	6600 <sup>[A]</sup>
Iron (dissolved)	300	-	30	-	28	-	10 U	-	78	-	-	-	-	-	-	-	-	9210 <sup>[A]</sup>
Magnesium	35000	86700 <sup>[A]</sup>	-	60100 <sup>[A]</sup>	-	102000 <sup>[A]</sup>	-	94900 <sup>[A]</sup>	-	77300 <sup>[A]</sup>	-	30700	42100 <sup>[A]</sup>	30800	44800 <sup>[A]</sup>	46000 <sup>[A]</sup>	81700 <sup>[A]</sup>	65100 <sup>[A]</sup>
Magnesium (dissolved)	300	-	84900 <sup>[A]</sup>	-	102000 <sup>[A]</sup>	-	-	-	103000 <sup>[A]</sup>	-	-	-	-	-	-	-	-	53700 <sup>[A]</sup>
Manganese	300	40	-	25	-	530 <sup>[A]</sup>	-	110	-	2100 B <sup>[A]</sup>	-	80	80	86 B	6020 <sup>[A]</sup>	4440 <sup>[A]</sup>	8600 <sup>[A]</sup>	7100 <sup>[A]</sup>
Manganese (dissolved)	300	-	32	-	395 <sup>[A]</sup>	-	-	-	313 <sup>[A]</sup>	-	-	-	-	-	-	-	-	6030 <sup>[A]</sup>
Potassium	-	14200	-	13800	-	7900	-	6900	-	6900	-	7600	12300	5700	4500	3900	5100	3700
Potassium (dissolved)	-	-	24100	-	15700	-	19000	-	20600	-	-	-	-	-	-	-	-	9100
Sodium	20000	213000 <sup>[A]</sup>	-	3290000 <sup>[A]</sup>	-	355000 <sup>[A]</sup>	-	1710000 <sup>[A]</sup>	-	1760000 <sup>[A]</sup>	-	84700 <sup>[A]</sup>	234000 <sup>[A]</sup>	119000 <sup>[A]</sup>	684000 <sup>[A]</sup>	666000 <sup>[A]</sup>	1060000 <sup>[A]</sup>	958000 <sup>[A]</sup>
Sodium (dissolved)	20000	-	230000 <sup>[A]</sup>	-	246000 <sup>[A]</sup>	-	1600000 <sup>[A]</sup>	-	1950000 <sup>[A]</sup>	-	-	-	-	-	-	-	-	1210000 <sup>[A]</sup>
<b>Miscellaneous (ug/l)</b>																		
Total organic carbon (TOC)	-	-	28000	9200	22000	1000 U	17000	1000 U	9100	4100	1900	3000	2800	6500	4000	-	3300	8400
<b>Natural Attenuation Parameters (ug/l)</b>																		
Alkalinity, total (as CaCO3)	-	270000	310000	223000	300000	244000	290000	233000	320000	277000	341000	230000	294000	333000	274000	270000	272000	431000
Ammonia	-	-	-	530	-	300	-	110	-	110	-	-	38	-	-	-	1100	-
Ammonia-N	2000	980	1280	-	760	-	260	-	270	-	120	370	-	1550	1470	1890	-	1350
Chloride	-	410000	452000	267000	457000	683000	3100000	3410000	4260000	3230000 B	108000	410000	170000 B	1300000	1300000	2300000	1880000 B	2200000
Methane	-	40	72	15	86	18	32	6.9	348	64	8	8	7.1	24	12	870	42	160
Methane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	10000	50 U	600 U	50 U	600 U	50 U	600 U	390	600 U	50 U	160	160	320	50 U	50 U	50 U	50 U	50 U
Nitrite (as N)	10000	50 U	600 U	50 U	600 U	50 U	900	50 U	600 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Sulfate	250000	430000 <sup>[A]</sup>	460000 <sup>[A]</sup>	463000 <sup>[A]</sup>	588000 <sup>[A]</sup>	562000 <sup>[A]</sup>	379000 <sup>[A]</sup>	362000 <sup>[A]</sup>	265000 <sup>[A]</sup>	175000	66000	144000	53500	110000	79000	140000	108000	98000
Sulfide	50	100 U	2400 <sup>[A]</sup>	100 U	2000 <sup>[A]</sup>	100 U	1200 <sup>[A]</sup>	100 U	800 <sup>[A]</sup>	100 U	100 U	1000 <sup>[A]</sup>	100 U	100 U	40 U	100 U	100 U	100 U
<b>Semi-Volatile Organic Compounds (ug/l)</b>																		
Acenaphthene	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Volatile Organic Compounds (ug/l)</b>																		
1,1,1-Trichloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	0.0006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethene (total)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloroethyl vinyl ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrolein	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrylonitrile	0.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE IV  
SITE-WIDE GROUNDWATER ANALYTICAL RESULTS  
GMCH LOCKPORT FACILITY  
LOCKPORT, NEW YORK

LOCATION DESCRIPTION LOCATION DATE SAMPLE TYPE	Class GA TOGS 1.1.1  ug/L	Sitewide MW-7 2/24/2009 N	Sitewide MW-7 7/15/2009 N	Sitewide MW-7 4/22/2011 N	Sitewide MW-8 7/15/2009 N	Sitewide MW-8 4/22/2011 N	Sitewide MW-9 7/20/2009 N	Sitewide MW-9 4/22/2011 N	Sitewide MW-10 7/15/2009 N	Sitewide MW-10 4/21/2011 N	Sitewide MW-11 10/24/2006 N	Sitewide MW-11 11/28/2007 N	Sitewide MW-11 4/21/2011 N	Sitewide MW-12 10/25/2006 N	Sitewide MW-12 11/28/2007 N	Sitewide MW-12 3/16/2009 N	Sitewide MW-12 4/20/2011 N	Sitewide MW-13 10/24/2006 N	Sitewide MW-13 11/28/2007 N	Sitewide MW-13 11/5/2008 N
Bromoform	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl bromide)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobromomethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane (Methyl chloride)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	5	56000 <sup>[A]</sup>	58200 <sup>[A]</sup>	42000 <sup>[A]</sup>	859 <sup>[A]</sup>	810 <sup>[A]</sup>	1670 <sup>[A]</sup>	1100 <sup>[A]</sup>	248 <sup>[A]</sup>	230 <sup>[A]</sup>	2 U	2	1.0 U	15 <sup>[A]</sup>	11 <sup>[A]</sup>	150 <sup>[A]</sup>	96 <sup>[A]</sup>	2 U	2 U	2 U
cis-1,3-Dichloropropene	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropyl benzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
m&p-Xylenes	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	71 <sup>[A]</sup>	112 <sup>[A]</sup>	5000 U	5.4 <sup>[A]</sup>	7.7 <sup>[A]</sup>	186 <sup>[A]</sup>	180 <sup>[A]</sup>	115 <sup>[A]</sup>	67 <sup>[A]</sup>	2 U	2 U	1.0 U	2 U	2 U	2	1.0 U	2 U	2 U	2 U
Toluene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	5	380 J <sup>[A]</sup>	107 <sup>[A]</sup>	5000 U	6.3 <sup>[A]</sup>	2.5	50 U	4.9	5 U	1.6	2 U	2 U	1.0 U	2 U	2 U	2 U	1.0 U	2 U	2 U	2 U
trans-1,3-Dichloropropene	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	530000 <sup>[A]</sup>	618000 <sup>[A]</sup>	680000 B <sup>[A]</sup>	50.2 <sup>[A]</sup>	78 B <sup>[A]</sup>	3290 <sup>[A]</sup>	2300 B <sup>[A]</sup>	74.6 <sup>[A]</sup>	88 <sup>[A]</sup>	2 U	2 U	1.0 U	2 U	2 U	5.5 <sup>[A]</sup>	1.2	2	2 U	2 U
Trichlorofluoromethane (CFC-11)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	3600 J <sup>[A]</sup>	2450 <sup>[A]</sup>	5000 U	98.1 <sup>[A]</sup>	120 <sup>[A]</sup>	50 U	32 <sup>[A]</sup>	43.5 <sup>[A]</sup>	27 <sup>[A]</sup>	2 U	2	1.0 U	33 <sup>[A]</sup>	14 <sup>[A]</sup>	81 <sup>[A]</sup>	37 <sup>[A]</sup>	2 U	2 U	2 U
Xylenes (total)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes and Abbreviations:

- Results shown in red exceed:  
[A]: Indicates result is greater than TOGS 1.1.1
- Results shown in bold were detected.
- U - Results not detected above shown reporting limit.  
J - Estimated result
- Sample Types: N - Normal Sample, FD- Field Duplicate
- Compounds compared to the NYSDEC Technical and Operational Guidance Series Glass GA Standards & Guidance (TOGS 1.1.1), June 1998 (Amended April 2000)



TABLE IV  
SITE-WIDE GROUNDWATER ANALYTICAL RESULTS  
GMCH LOCKPORT FACILITY  
LOCKPORT, NEW YORK

LOCATION DESCRIPTION LOCATION DATE SAMPLE TYPE	Class GA TOGS 1.1.1  ug/L	Sitewide MW-13 4/21/2011 N	Sitewide MW-14 10/24/2006 N	Sitewide MW-14 11/29/2007 N	Sitewide MW-14 2/24/2009 N	Sitewide MW-14 4/21/2011 N	Sitewide MW-15 10/24/2006 N	Sitewide MW-15 11/28/2007 N	Sitewide MW-15 4/21/2011 N	Sitewide TK-1 5/10/2011 N	Sitewide TK-2 5/17/2011 N	Sitewide TK-3 5/18/2011 N	Sitewide TK-4 5/18/2011 N	Sitewide TK-5 5/18/2011 N	Sitewide TK-6 5/18/2011 N	Sitewide TK-DUP 5/18/2011 FD
<b>Metals (ug/l)</b>																
Calcium	-	210000	-	-	165000	149000	-	-	217000	-	-	-	-	-	-	-
Iron	300	7400 <sup>[A]</sup>	150	440 <sup>[A]</sup>	60	52	20 U	140	19 J	-	-	-	-	-	-	-
Iron (dissolved)	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	35000	53200 <sup>[A]</sup>	94900 <sup>[A]</sup>	111000 <sup>[A]</sup>	79800 <sup>[A]</sup>	68000 <sup>[A]</sup>	62300 <sup>[A]</sup>	71700 <sup>[A]</sup>	55500 <sup>[A]</sup>	-	-	-	-	-	-	-
Magnesium (dissolved)	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	300	6300 B <sup>[A]</sup>	200	250	180	190 B	270	390 <sup>[A]</sup>	240 B	-	-	-	-	-	-	-
Manganese (dissolved)	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	-	8300	8000	10500	7300	5400	4700	4900	3700	-	-	-	-	-	-	-
Potassium (dissolved)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	20000	1320000 <sup>[A]</sup>	831000 <sup>[A]</sup>	777000 <sup>[A]</sup>	833000 <sup>[A]</sup>	875000 <sup>[A]</sup>	311000 <sup>[A]</sup>	455000 <sup>[A]</sup>	390000 <sup>[A]</sup>	-	-	-	-	-	-	-
Sodium (dissolved)	20000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Miscellaneous (ug/l)</b>																
Total organic carbon (TOC)	-	5800	3300	4000	-	2800	3600	2000	3500	-	-	-	-	-	-	-
<b>Natural Attenuation Parameters (ug/l)</b>																
Alkalinity, total (as CaCO3)	-	368000	336000	371000	299000	339000	434000	346000	394000	-	-	-	-	-	-	-
Ammonia	-	940	-	-	-	140	-	-	20 U	-	-	-	-	-	-	-
Ammonia-N	2000	-	250	530	230	-	90	1030	-	-	-	-	-	-	-	-
Chloride	-	2090000 B	1700000	1800000	1500000	1750000 B	660000	1100000	895000 B	-	-	-	-	-	-	-
Methane	-	58	310	160	150	16	2 U	2 U	1.0 U	-	-	-	-	-	-	-
Methane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	10000	69	50 U	50 U	70	93	1890	50 U	950	-	-	-	-	-	-	-
Nitrite (as N)	10000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	-	-	-	-	-	-	-
Sulfate	250000	105000	88000	87000	68000	78200	84000	74000	86700	-	-	-	-	-	-	-
Sulfide	50	100 U	100 U	120 <sup>[A]</sup>	100 U	100 U	100 U	40 U	100 U	-	-	-	-	-	-	-
<b>Semi-Volatile Organic Compounds (ug/l)</b>																
Acenaphthene	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	50	-	-	-	-	-	-	-	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(a)pyrene	-	-	-	-	-	-	-	-	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(b)fluoranthene	0.002	-	-	-	-	-	-	-	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(g,h,i)perylene	-	-	-	-	-	-	-	-	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(k)fluoranthene	0.002	-	-	-	-	-	-	-	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bis(2-ethylhexyl)phthalate	5	-	-	-	-	-	-	-	-	17.8 <sup>[A]</sup>	10 U	10 U	10.1 <sup>[A]</sup>	10 U	10 U	22.2 <sup>[A]</sup>
Chrysene	0.002	-	-	-	-	-	-	-	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibenz(a,h)anthracene	-	-	-	-	-	-	-	-	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Fluoranthene	50	-	-	-	-	-	-	-	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Fluorene	50	-	-	-	-	-	-	-	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Indeno(1,2,3-cd)pyrene	0.002	-	-	-	-	-	-	-	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	50	-	-	-	-	-	-	-	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Pyrene	50	-	-	-	-	-	-	-	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U
<b>Volatile Organic Compounds (ug/l)</b>																
1,1,1-Trichloroethane	5	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	5	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2-Trichloroethane	1	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethane	5	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethene	5	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	0.0006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	3	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichloroethane	0.6	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichloroethene (total)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	1	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,3-Dichlorobenzene	3	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,4-Dichlorobenzene	3	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Butanone (Methyl ethyl ketone) (MEK)	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloroethyl vinyl ether	-	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	3 U
2-Hexanone	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrolein	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrylonitrile	0.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	1	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromodichloromethane	50	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U

TABLE IV  
SITE-WIDE GROUNDWATER ANALYTICAL RESULTS  
GMCH LOCKPORT FACILITY  
LOCKPORT, NEW YORK

LOCATION DESCRIPTION LOCATION DATE SAMPLE TYPE	Class GA TOGS 1.1.1  ug/L	Sitewide MW-13 4/21/2011 N	Sitewide MW-14 10/24/2006 N	Sitewide MW-14 11/29/2007 N	Sitewide MW-14 2/24/2009 N	Sitewide MW-14 4/21/2011 N	Sitewide MW-15 10/24/2006 N	Sitewide MW-15 11/28/2007 N	Sitewide MW-15 4/21/2011 N	Sitewide TK-1 5/10/2011 N	Sitewide TK-2 5/17/2011 N	Sitewide TK-3 5/18/2011 N	Sitewide TK-4 5/18/2011 N	Sitewide TK-5 5/18/2011 N	Sitewide TK-6 5/18/2011 N	Sitewide TK-DUP 5/18/2011 FD
Bromoform	50	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromomethane (Methyl bromide)	5	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	5	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chlorobenzene	5	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chlorobromomethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	5	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chloroform (Trichloromethane)	7	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chloromethane (Methyl chloride)	5	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
cis-1,2-Dichloroethene	5	1.0 U	2 U	10 <sup>[A]</sup>	2.2	1.0 U	2 U	2 U	1.0 U	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	0.4	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dibromochloromethane	50	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dichlorodifluoromethane (CFC-12)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	3 U
Isopropyl benzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
m&p-Xylenes	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	-	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methylene chloride	5	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
o-Xylene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	1.0 U	2 U	2 U	2 U	1.0 U	7 <sup>[A]</sup>	7 <sup>[A]</sup>	6.7 <sup>[A]</sup>	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Toluene	5	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
trans-1,2-Dichloroethene	5	1.0 U	2 U	2 U	2 U	1.0 U	2 U	2 U	1.0 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
trans-1,3-Dichloropropene	0.4	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Trichloroethene	5	1.0 U	2 U	2 U	16 <sup>[A]</sup>	1.0 U	2 U	2 U	0.65 J	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Trichlorofluoromethane (CFC-11)	5	-	-	-	-	-	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl acetate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	1.0 U	2 U	2 U	2 U	1.0 U	2 U	2 U	1.0 U	2 U	2 U	2 U	2 U	2 U	2 U	3 U
Xylenes (total)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes and Abbreviations:

- Results shown in red exceed:  
[A]: Indicates result is greater than TOGS 1.1.1
- Results shown in bold were detected.
- U - Results not detected above shown reporting limit.  
J - Estimated result
- Sample Types: N - Normal Sample, FD- Field Duplicate
- Compounds compared to the NYSDEC Technical and Operational Guidance Series Glass GA Standards & Guidance (TOGS 1.1.1), June 1998 (Amended April 2000)

**TABLE V**  
**INDOOR AIR ANALYTICAL RESULTS - BUILDING 10**  
**GMCH LOCKPORT FACILITY**  
**LOCKPORT, NEW YORK**  
**BCP SITE #C932140**

BUILDING LOCATION DATE SAMPLE TYPE	Building 10 10-VI-11A 1/18/2011 N	Building 10 10-VI-11A 1/20/2011 N	Building 10 10-VI-21A 1/18/2011 N	Building 10 10-VI-21A 1/20/2011 N	Building 10 10-VI-OUT 1/18/2011 N
<b>Volatile Organic Compounds (ug/m3)</b>					
1,1,1-Trichloroethane	38 U	8.2 U	20 U	20 U	0.44 U
1,1,2,2-Tetrachloroethane	48 U	10 U	25 U	25 U	0.55 U
1,1,2-Trichloroethane	38 U	8.2 U	20 U	20 U	0.44 U
1,1-Dichloroethane	28 U	6.1 U	15 U	15 U	0.32 U
1,1-Dichloroethene	28 U	5.9 U	14 U	14 U	0.32 U
1,2,4-Trichlorobenzene	52 U	11 U	27 U	27 U	0.59 U
1,2,4-Trimethylbenzene	34 U	7.4 U	18 U	18 U	<b>2.3</b>
1,2-Dibromoethane (Ethylene dibromide)	54 U	12 U	28 U	28 U	0.61 U
1,2-Dichlorobenzene	42 U	9.0 U	22 U	22 U	0.48 U
1,2-Dichloroethane	28 U	6.1 U	15 U	15 U	0.32 U
1,2-Dichloropropane	32 U	6.9 U	17 U	17 U	0.37 U
1,2-Dichlorotetrafluoroethane (CFC 114)	49 U	10 U	25 U	25 U	0.56 U
1,3,5-Trimethylbenzene	34 U	7.4 U	18 U	18 U	<b>0.99</b>
1,3-Dichlorobenzene	42 U	9.0 U	22 U	22 U	0.48 U
1,4-Dichlorobenzene	42 U	9.0 U	22 U	22 U	<b>7.5</b>
1,4-Dioxane	61 U	14 U	33 U	33 U	0.72 U
2,2,4-Trimethylpentane	79 U	18 U	43 U	43 U	<b>1.1</b>
2-Butanone (Methyl ethyl ketone) (MEK)	83 UJ	18 UJ	44 UJ	44 UJ	<b>12 J</b>
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	70 U	<b>26</b>	37 U	37 U	<b>4.2</b>
Benzene	22 U	4.8 U	12 U	12 U	<b>0.95</b>
Benzyl chloride	72 U	16 U	38 U	38 U	0.83 U
Bromodichloromethane	47 U	10 U	24 U	24 U	0.54 U
Bromoform	72 UJ	16 UJ	37 UJ	37 UJ	0.83 UJ
Bromomethane (Methyl bromide)	27 U	5.8 U	14 U	14 U	0.31 U
Carbon tetrachloride	22 U	4.8 U	11 U	11 U	<b>0.7</b>
Chlorobenzene	32 U	6.9 U	17 U	17 U	0.37 U
Chloroethane	18 U	4.0 U	9.5 U	9.5 U	0.21 U
Chloroform (Trichloromethane)	34 U	7.3 U	18 U	18 U	0.39 U
Chloromethane (Methyl chloride)	35 U	7.8 U	19 U	19 U	<b>1.1</b>
cis-1,2-Dichloroethene	28 U	5.9 U	14 U	14 U	0.32 U
cis-1,3-Dichloropropene	32 U	6.8 U	16 U	16 U	0.36 U
Cyclohexane	59 U	13 U	31 U	31 U	0.69 U
Dibromochloromethane	60 U	13 U	31 U	31 U	0.68 U
Dichlorodifluoromethane (CFC-12)	35 U	7.4 U	18 U	18 U	<b>3</b>
Ethanol	<b>2400</b>	<b>620</b>	<b>3400</b>	<b>810</b>	<b>88</b>
Ethylbenzene	30 U	6.5 U	<b>33</b>	16 U	<b>7.3</b>
Hexachlorobutadiene	75 U	16 U	38 U	38 U	0.85 U
Hexane	<b>1000</b>	<b>850</b>	<b>2300</b>	<b>1200</b>	<b>2.5</b>
m&p-Xylenes	<b>38</b>	6.5 U	<b>76</b>	16 U	<b>25</b>
Methyl tert butyl ether (MTBE)	50 U	11 U	26 U	26 U	0.58 U
Methylene chloride	59 U	13 U	32 U	32 U	<b>0.81</b>
o-Xylene	30 U	6.5 U	<b>21</b>	16 U	<b>6</b>
Styrene	30 U	6.4 U	15 U	15 U	<b>1.7</b>
tert-Butyl alcohol	85 U	<b>98</b>	45 U	<b>76</b>	<b>17</b>
Tetrachloroethene	47 U	10 U	24 U	24 U	<b>3.5</b>
Toluene	<b>60</b>	<b>210</b>	<b>380</b>	<b>300</b>	<b>9.5</b>
trans-1,2-Dichloroethene	28 U	5.9 U	14 U	14 U	0.32 U
trans-1,3-Dichloropropene	32 U	6.8 U	16 U	16 U	0.36 U
Trichloroethene	19 U	<b>4.6</b>	9.7 U	9.7 U	<b>3.6</b>
Trichlorofluoromethane (CFC-11)	39 U	8.4 U	20 U	20 U	<b>1.6</b>
Trifluorotrichloroethane (Freon 113)	54 U	11 U	28 U	28 U	0.61 U
Vinyl chloride	18 U	3.8 U	9.2 U	9.2 U	<b>0.33</b>

**Notes and Abbreviations:**

- Results shown in **bold** were detected.
- U - Results not detected above shown reporting limit.  
J - Estimated result
- Sample Types: N - Normal Sample, FD- Field Duplicate

Table VI  
Summary of Groundwater Elevation Measurements  
GMCH Lockport Facility  
Building 10 BCP Site

Monitoring Point	Monitoring Point Elevation (feet)	5/2/2011 Groundwater Depth (feet)	5/2/2011 Groundwater Elevation (feet)
MW-3 S	613.28	7.65	605.63
MW-4	613.07	7.84	605.23
MW-7	613.86	6.15	607.71
MW-8	608.97	5.79	603.18
MW-9	604.90	7.67	597.23
MW-10	604.70	13.82	590.88
MW-11	590.10	5.35	584.75
MW-12	590.71	5.76	584.95
MW-13 *	589.02	4.82	584.20
MW-14	592.77	4.79	587.98
MW-15	594.04	7.41	586.63
MW-6-1	598.23	2.17	596.06
MW-6-2	609.33	3.21	606.12
MW-7-1	597.67	2.25	595.42
MW-7-2	592.57	3.62	588.95
MW-7-3	594.04	3.12	590.92
MW-7-4	593.53	11.79	581.74
MW-7-5	610.96	8.78	602.18
MW-7-6	606.30	3.26	603.04
MW-7-7	610.24	1.89	608.35
MW-7-8	610.92	0.80	610.12
Bldg 10 MW-1	615.05	5.79	609.26
TK-1	622.7	5.07	617.63
TK-2	616.96	3.56	613.40
TK-3	619.95	8.59	611.36
TK-4	618.8	8.34	610.46
TK-5	618.9	6.93	611.97
TK-6	621.69	8.64	613.05
MW-7-A-6	612.13	1.93	610.20
MW-8-003-B	610.94	4.72	606.22
MW-8-1	615.11	5.20	609.91
MW-8-2	615.14	7.61	607.53
MW-8-3	615.06	8.57	606.49
MW-8-4	613.42	6.77	606.65
MW-6-F-7	613.42	4.22	609.20
MW-6-F-8	613.22	2.41	610.81
MW-6-F-9	613.13	5.61	607.52
MW-7-P-1	615.09	9.23	605.86
MW-9-101-A	615.00	5.06	609.94
MW-10-2	610.96	2.61	608.35
MW-10-3	610.4	2.97	607.43
MW-7-C-2	609.42	4.65	604.77
MW-9-12	614.92	8.67	606.25

## Notes:

1. Elevations shown were calculated based on measurements made by GZA on May 2, 2011.
2. Monitoring points have been established at the top of the PVC casing for each well.
3. NM - Not measured.
4. NI - Not installed at the time of the measurement.
5. \* = monitoring point is top of steel casing.

TABLE VII: FATE & TRANSPORT AND POTENTIAL EXPOSURE PATHWAYS FOR SITE CONTAMINANTS OF CONCERN  
GMCH LOCKPORT BUILDING 10 BCP SITE REMEDIAL INVESTIGATION PROGRAM  
GENERAL MOTORS COMPONENTS HOLDINGS  
LOCKPORT, NEW YORK

Media	Constituents of Concern (COCs)	Fate & Transport	Potentially Affected Populations	Exposure Pathways			Potential Exposure Setting & Mechanism
				<i>Ingestion</i>	<i>Absorption</i>	<i>Inhalation</i>	
Soil	<ul style="list-style-type: none"> <li>Chlorinated Solvents (TCE, cis-1,2-DCE)</li> </ul>	<ul style="list-style-type: none"> <li>Chlorinated solvents were encountered in soil in excess of Protection of Groundwater SCOs between approximately 8 and 12 feet below ground surface.</li> <li>The Site is largely covered with building foundations and pavement, with access controlled which precludes direct exposure to impacted soil.</li> <li>Chlorinated solvents in soil could become present in air if the soil is disturbed during a future excavation scenario.</li> </ul>	<ul style="list-style-type: none"> <li>Current Site Workers</li> <li>Future Site Workers/ Occupants</li> </ul>	Incomplete	Incomplete	Incomplete	<p><b>Ingestion:</b> No current pathway exists due to the presence of the buildings and pavement covering a majority of the Site. COCs could become a potential future exposure pathway if the soil is exposed during excavation and inadvertently ingested.</p> <p><b>Absorption:</b> No current pathway exists due to the presence of the buildings and pavement covering a majority of the Site. COCs could become a potential future exposure pathway if soil is exposed during excavation and contacts skin.</p> <p><b>Inhalation:</b> No current pathway exists due to the presence of the buildings and pavement covering a majority of the Site. Could become a potential future exposure pathway soil is disturbed. Inhalation of COCs via vapor/air originating from soil contamination is possible. Refer to discussion below.</p>
			<ul style="list-style-type: none"> <li>Future Construction Workers (if the Site is re-developed or excavation is to occur)</li> </ul>	Potentially Complete	Potentially Complete	Potentially Complete	

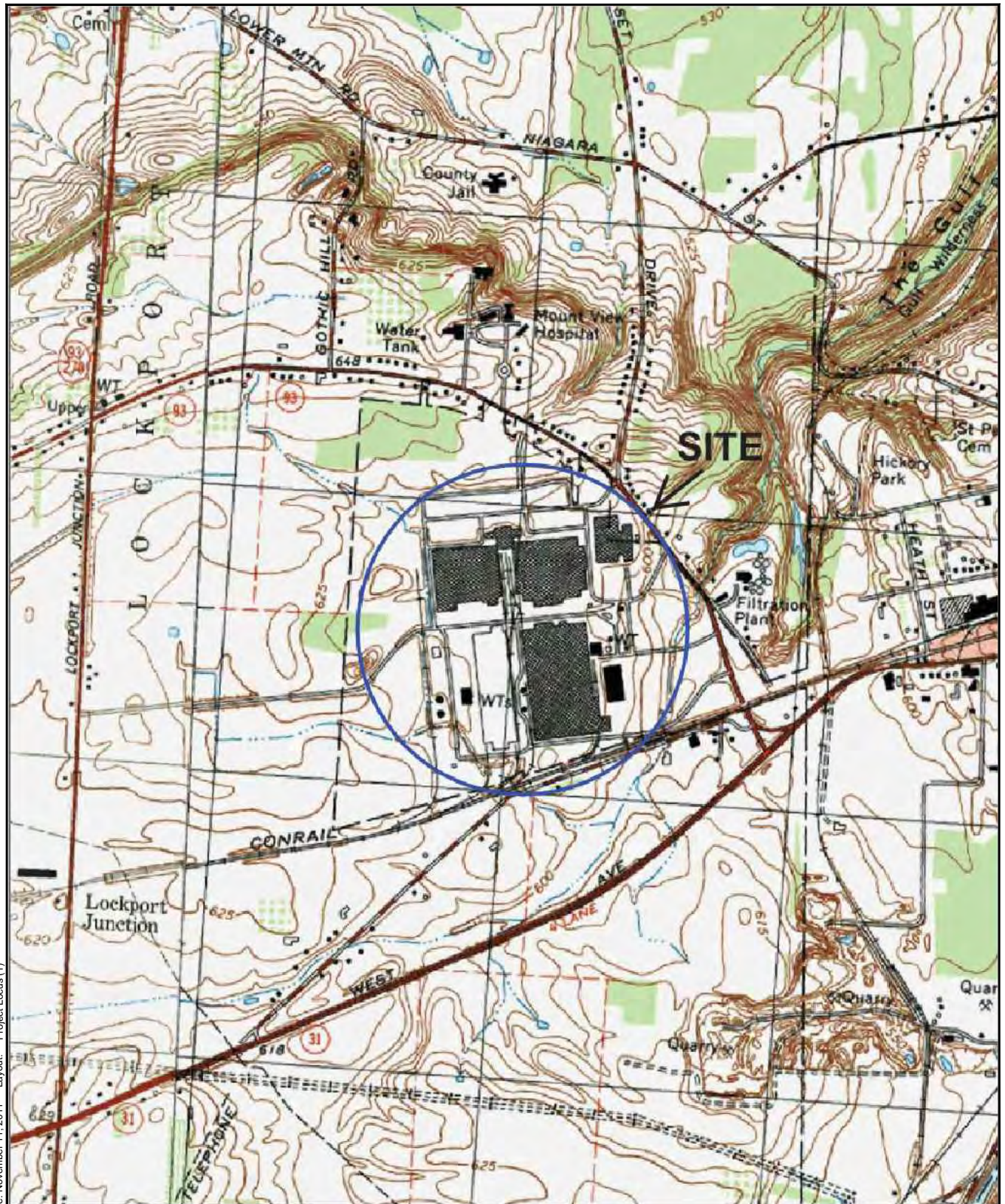
TABLE VII: FATE & TRANSPORT AND POTENTIAL EXPOSURE PATHWAYS FOR SITE CONTAMINANTS OF CONCERN  
GMCH LOCKPORT BUILDING 10 BCP SITE REMEDIAL INVESTIGATION PROGRAM  
GENERAL MOTORS COMPONENTS HOLDINGS  
LOCKPORT, NEW YORK

Media	Constituents of Concern (COCs)	Fate & Transport	Potentially Affected Populations	Exposure Pathways			Potential Exposure Setting & Mechanism
				Ingestion	Absorption	Inhalation	
Groundwater	<ul style="list-style-type: none"> <li>Chlorinated Solvents (PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, Vinyl Chloride)</li> </ul>	<ul style="list-style-type: none"> <li>Groundwater is not currently, nor is it intended to be used for drinking water purposes, nor is it used for industrial pumping purposes.</li> <li>Groundwater flow direction is towards the east, and there is a potential for contaminated groundwater to migrate offsite without mitigation.</li> <li>Volatilization of chlorinated solvents from groundwater could be emitted into ambient air.</li> </ul>	<ul style="list-style-type: none"> <li>Current Site Workers</li> <li>Future Site Workers/ Occupants under current use scenario</li> </ul>	Incomplete	Incomplete	Not Applicable	<p><b>Ingestion:</b> No current pathway. The Site groundwater is not currently used, nor under any reasonable future use scenario would groundwater be used for potable water. However, if used in the future, an exposure pathway could become complete.</p> <p><b>Absorption:</b> No current pathway. Could be a future potential exposure pathway under a different non-potable usage scenario if impacted groundwater comes into contact with skin, and COC absorbed (i.e. – inadvertently coming in contact with it during a future excavation or groundwater sampling event). It is anticipated that if encountered as part of excavation or future groundwater sampling, extracted groundwater would otherwise be largely isolated from exposure (e.g. contained within the process-pipes, tanks, drums, etc.).</p> <p><b>Inhalation:</b> Inhalation of groundwater is unlikely and not a complete pathway, though inhalation of COCs via vapor/air originating from groundwater contamination is possible. Refer to discussion below.</p>
			<ul style="list-style-type: none"> <li>Future Construction Workers (if the Site is re-developed or excavation is to occur) or site occupants under another use scenario</li> </ul>	Potentially Complete	Potentially Complete	Not Applicable	

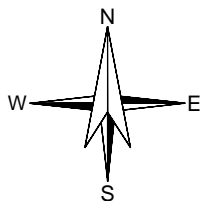
TABLE VII: FATE & TRANSPORT AND POTENTIAL EXPOSURE PATHWAYS FOR SITE CONTAMINANTS OF CONCERN  
GMCH LOCKPORT BUILDING 10 BCP SITE REMEDIAL INVESTIGATION PROGRAM  
GENERAL MOTORS COMPONENTS HOLDINGS  
LOCKPORT, NEW YORK

Media	Constituents of Concern (COCs)	Fate & Transport	Potentially Affected Populations	Exposure Pathways			Potential Exposure Setting & Mechanism
				<i>Ingestion</i>	<i>Absorption</i>	<i>Inhalation</i>	
Soil Vapor/Air	<ul style="list-style-type: none"> <li>Chlorinated Solvents (PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, Vinyl Chloride)</li> </ul>	<ul style="list-style-type: none"> <li>Based on sub-slab vapor and indoor air testing conducted within the Site building as part of the RI, COC-impacted soil vapor have been identified that will require mitigation per NYSDOH guidance.</li> <li>There is a potential that COC vapors could be emitted into the ambient air if soil is excavated and/or groundwater is exposed to surface in the future</li> </ul>	<ul style="list-style-type: none"> <li>Current Site Workers</li> <li>Future Site Workers/Occupants</li> </ul>	Not Applicable	Not Applicable	Complete	<p><b>Ingestion:</b> Not an applicable pathway.</p> <p><b>Absorption:</b> Not an applicable pathway.</p> <p><b>Inhalation:</b> Currently a complete exposure pathway exists within Building 10. According to NYSDOH guidance, mitigation via a sub-slab depressurization system or other active measure is required. Such a measure will be considered as part of the Remedial Action or as part of an Interim Remedial Measure for the Site.</p>
			<ul style="list-style-type: none"> <li>Future Construction Workers (if the Site is re-developed or excavation is to occur)</li> </ul>	Not Applicable	Not Applicable	Potentially Complete	<p>A potentially complete pathway also exists should the building foundations and and/or soil be disturbed in the future or if groundwater is extracted or exposed. Such exposure in the future should be managed under a Site Management Plan for the Site.</p>





SITE COORDINATES: 43°10'2"N 78°44'12"W



U.S.G.S. QUADRANGLE: LOCKPORT, NEW YORK

**HALEY & ALDRICH**

GM COMPONENTS HOLDINGS, LLC  
LOCKPORT FACILITY  
200 UPPER MOUNTAIN ROAD  
LOCKPORT, NEW YORK

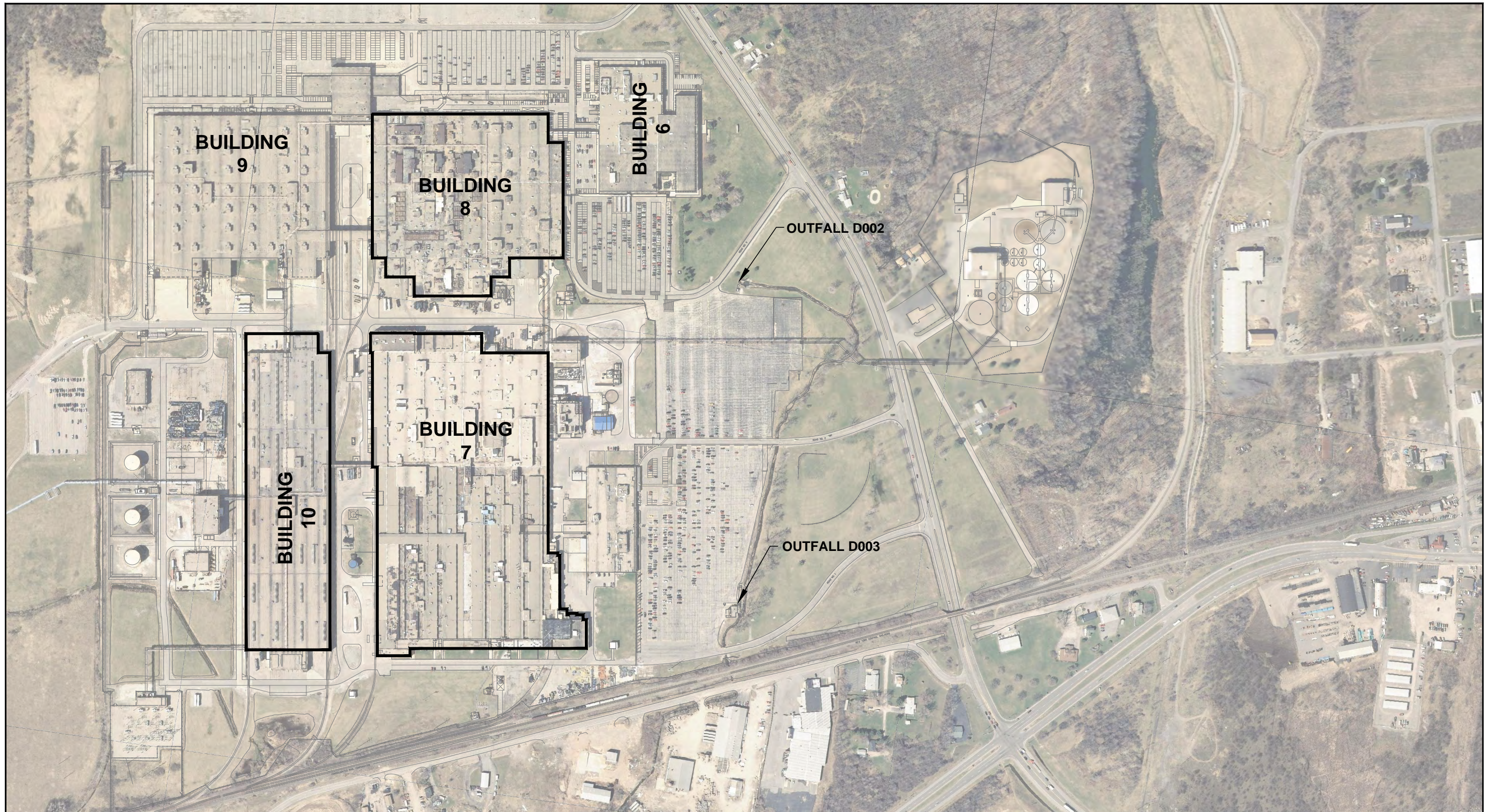
PROJECT LOCUS

SCALE: 1:24000  
NOVEMBER 2011

FIGURE 1

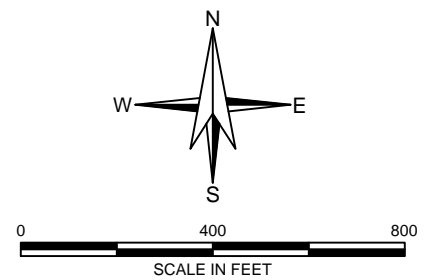


G:\36795\_GM LOCKPORT\CAD\36795-BLDG 10-02.DWG



**NOTES:**

1. THIS FIGURE IS BASED ON THE DRAWING PROVIDED BY DELPHI THERMAL AND INTERIOR SYSTEMS, DATED SEPTEMBER 2007.
2. AERIAL IMAGERY COURTESY OF NYS GIS CLEARINGHOUSE, 2008.



**HALEY &  
ALDRICH**

GM COMPONENTS HOLDINGS, LLC.  
LOCKPORT FACILITY  
200 UPPER MOUNTAIN ROAD  
LOCKPORT, NEW YORK

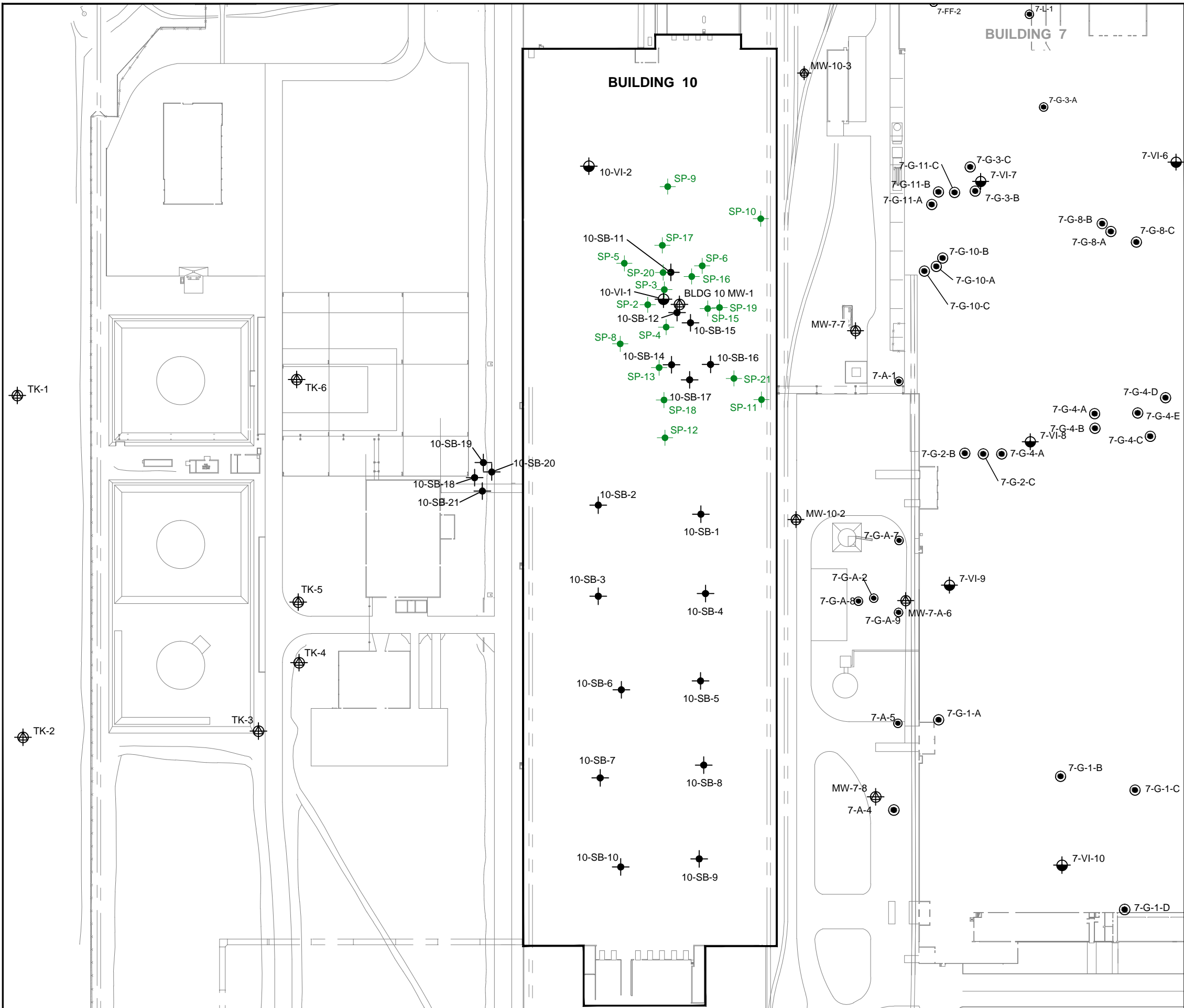
**SITE PLAN**

SCALE: AS SHOWN  
NOVEMBER 2011

**FIGURE 2**



G:\36795\_GM LOCKPORT\CAD\36795-BLDG10-03.DWG



**LEGEND:**

- TCE AREA MONITORING WELL WITHIN THE ENVIRONMENTAL EASEMENT AREA, PREVIOUSLY LOCATED. (APPROXIMATE LOCATION)
- APPROXIMATE LOCATION OF MONITORING WELL
- APPROXIMATE LOCATION OF SOIL BORING
- APPROXIMATE LOCATION OF AIR SAMPLE
- ERM BORING LOCATION
- APPROXIMATE LOCATION OF SOIL PROBES (GZA, OCTOBER 2010)

**NOTES:**

- THIS FIGURE IS BASED ON THE DRAWING PROVIDED BY DELPHI THERMAL AND INTERIOR SYSTEMS, DATED SEPTEMBER 2007.
- THE LOCATIONS OF THE MONITORING WELLS WERE DETERMINED BY GEOENVIRONMENTAL OF NEW YORK. THE LOCATIONS OF MONITORING WELLS SHOULD BE CONSIDERED APPROXIMATE.

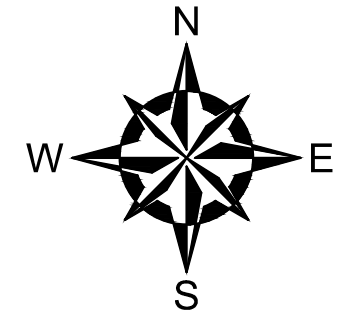
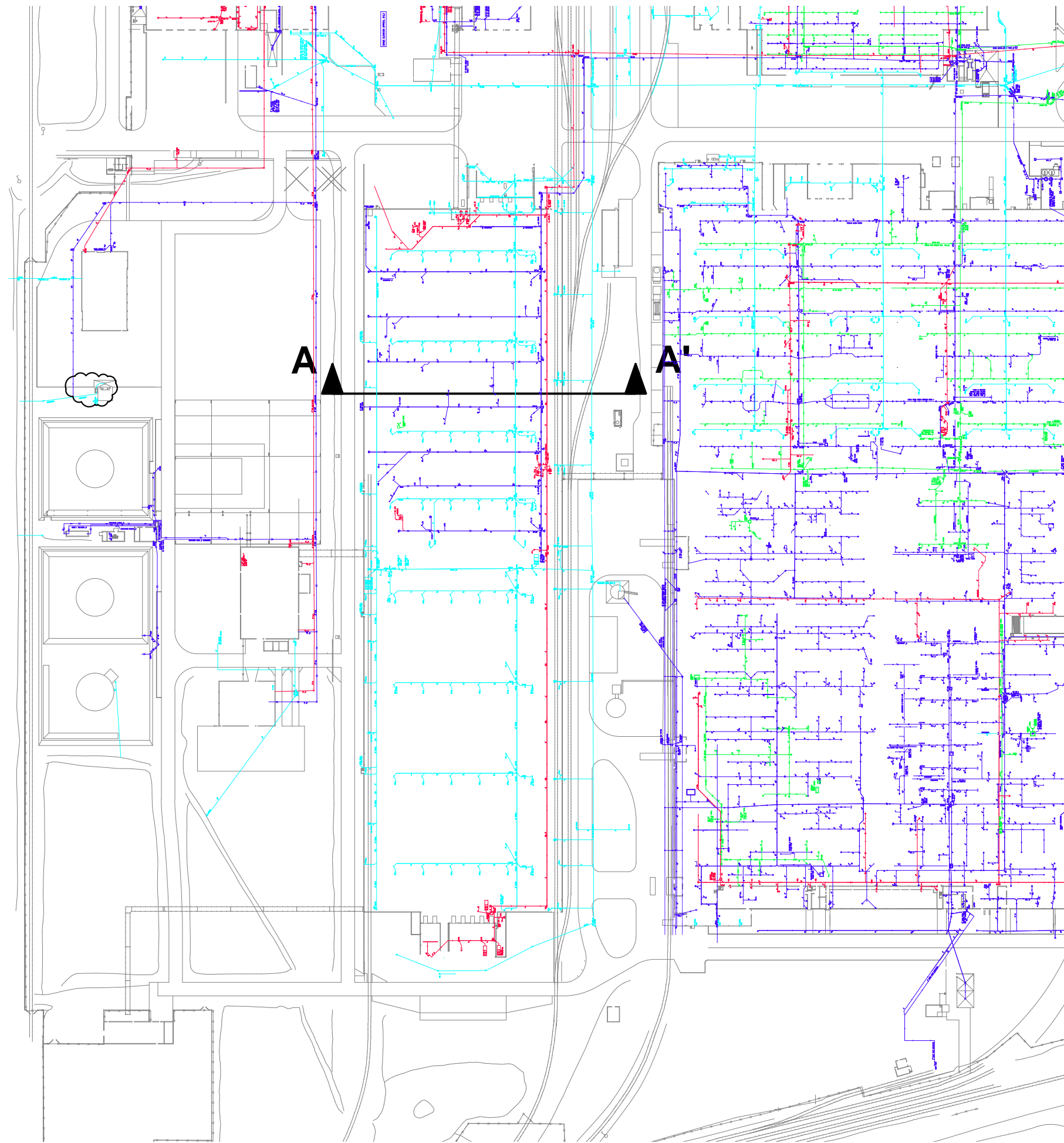
**SITE KEY:**  
NOT TO SCALE

**HALEY & ALDRICH** GM COMPONENTS HOLDINGS, LLC.  
LOCKPORT FACILITY  
200 UPPER MOUNTAIN ROAD  
LOCKPORT, NEW YORK

**BUILDING 10  
SAMPLING LOCATION PLAN**

SCALE: AS SHOWN  
NOVEMBER 2011

**FIGURE 3**




**LEGEND:**

- LOCATION OF TREATED SEWER
- LOCATION OF SANITARY SEWER
- LOCATION OF STORM SEWER
- LOCATION OF PROCESS SEWER



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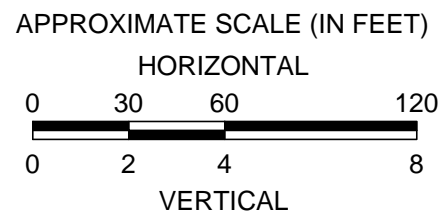
NO.		ISSUE/DESCRIPTION		BY	
				DATE	
GM COMPONENTS HOLDINGS, LLC LOCKPORT FACILITY 200 UPPER MOUNTAIN ROAD LOCKPORT, NEW YORK					
BUILDING 10 SUBSURFACE PIPE LOCATION MAP PLAN VIEW					
PREPARED BY:  GZA GeoEnvironmental of N.Y. Engineers and Scientists 535 WASHINGTON STREET 11th FLOOR BUFFALO, NEW YORK 14203 (716) 685-2300			PREPARED FOR:  GM COMPONENTS HOLDINGS, LLC		
PROJ MGR: CZB		REVIEWED BY:		CHECKED BY:	
DESIGNED BY:		DRAWN BY: DEW		SCALE: 1"= 300'	
DATE JULY 2011		PROJECT NO. 21.0056546.00		REVISION NO.	
FIGURE 4					

# A




**LEGEND:**

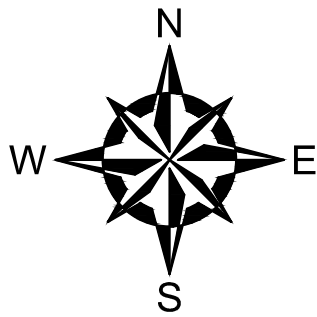
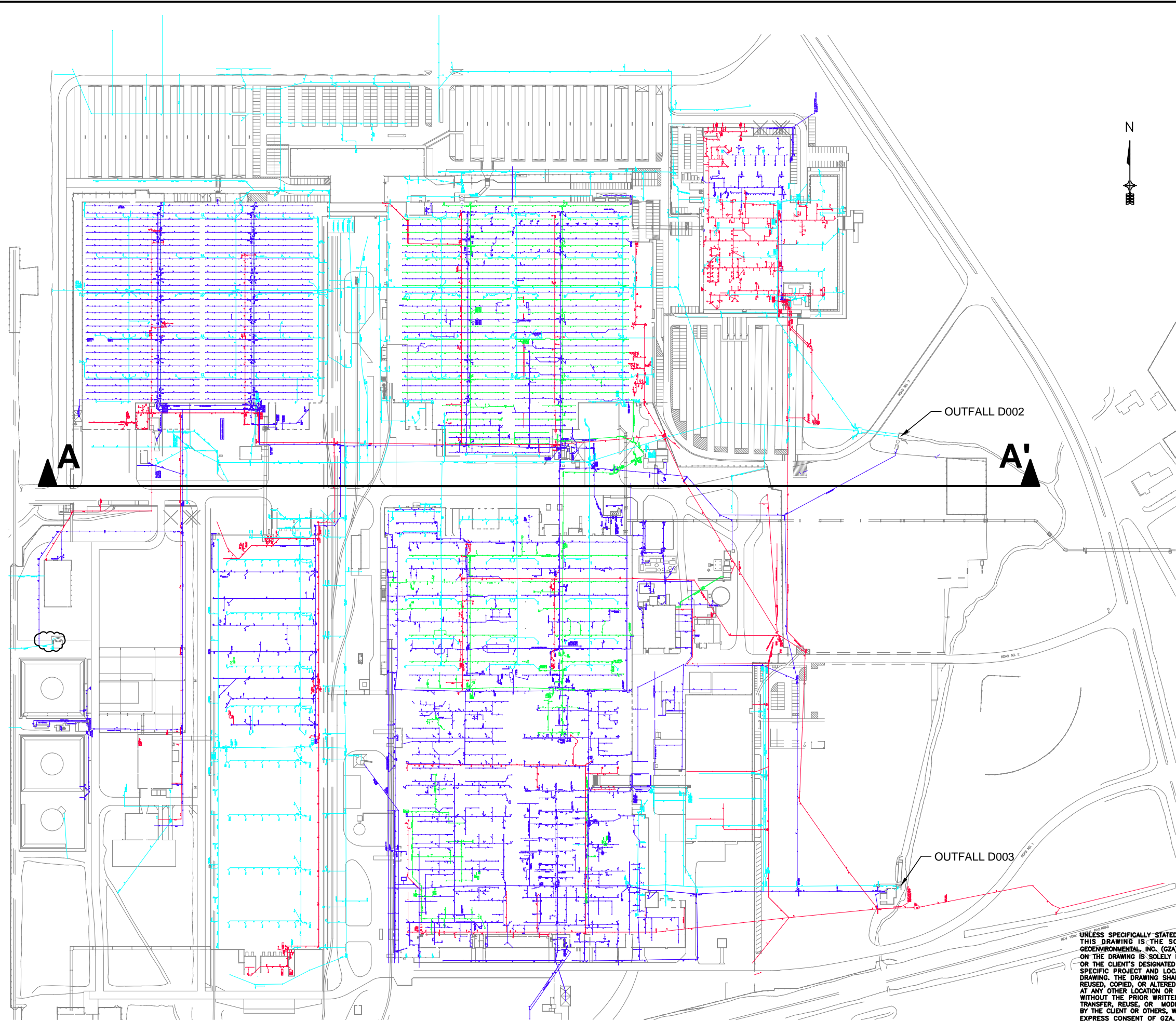
- APPROXIMATE EXISTING GROUND SURFACE
- APPROXIMATE GROUNDWATER ELEVATION AS MEASURED ON MAY 2, 2011
- APPROXIMATE TOP OF BEDROCK ELEVATION
- LOCATION OF TREATED SEWER
- LOCATION OF SANITARY SEWER
- LOCATION OF STORM SEWER
- INDICATES PIPE RUNNING IN A NORTH-SOUTH ORIENTATION



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NO.	ISSUE/DESCRIPTION		BY DATE
<p align="center"><b>GM COMPONENTS HOLDINGS, LLC</b>  <b>LOCKPORT FACILITY</b>  <b>200 UPPER MOUNTAIN ROAD</b>  <b>LOCKPORT, NEW YORK</b></p>			
<p align="center"><b>BUILDING 10</b>  <b>SUBSURFACE PIPE LOCATION MAP CROSS SECTION A-A'</b></p>			
PREPARED BY:  <b>GZA</b> GeoEnvironmental of N.Y. Engineers and Scientists 535 WASHINGTON STREET 11TH FLOOR BUFFALO, NEW YORK 14203 (716) 685-2300		PREPARED FOR: <p align="center"><b>GM COMPONENTS HOLDINGS, LLC</b></p>	
PROJ MGR:	CZB	REVIEWED BY:	CHECKED BY:
DESIGNED BY:		DRAWN BY: DEW	SCALE: 1"= 300'
DATE	PROJECT NO.	REVISION NO.	<p align="center"><b>FIGURE</b>  <b>5</b></p>
JULY 2011	21.0056546.00		

©2011 - GZA GeoEnvironmental of N.Y. 021-0130796.dwg Lockport\001\30796-BU010-08-07.dwg [Site Plan View] November 11, 2011 - 9:50am aulds




**LEGEND:**

- LOCATION OF TREATED SEWER
- LOCATION OF SANITARY SEWER
- LOCATION OF STORM SEWER
- LOCATION OF PROCESS SEWER

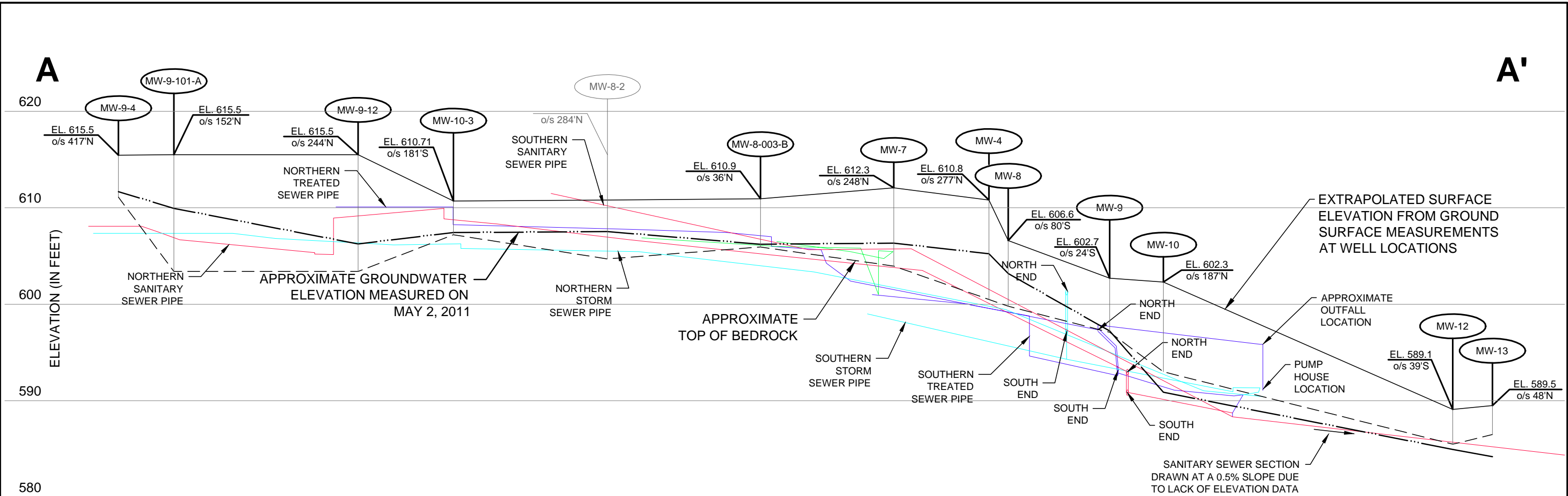


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NO.	ISSUE/DESCRIPTION	BY	DATE
GM COMPONENTS HOLDINGS, LLC LOCKPORT FACILITY 200 UPPER MOUNTAIN ROAD LOCKPORT, NEW YORK			
BETWEEN BUILDINGS RUNNING EAST-WEST SUBSURFACE PIPE LOCATION MAP PLAN VIEW			
PREPARED BY:  GZA GeoEnvironmental of N.Y. Engineers and Scientists 535 WASHINGTON STREET 11th FLOOR BUFFALO, NEW YORK 14203 (716) 685-2300		PREPARED FOR: GM COMPONENTS HOLDINGS, LLC	
PROJ MGR: CZB	REVIEWED BY:	CHECKED BY:	FIGURE 6
DESIGNED BY:	DRAWN BY: DEW	SCALE: 1"= 300'	
DATE JULY 2011	PROJECT NO. 21.0056546.00	REVISION NO.	



© 2011 - GZA GeoEnvironmental of N.Y. 021-0130796.dwg Lockport\021\30796-BLD110-08-07.dwg [Site Cross-Section (7)] November 11, 2011 - 9:51am alldas

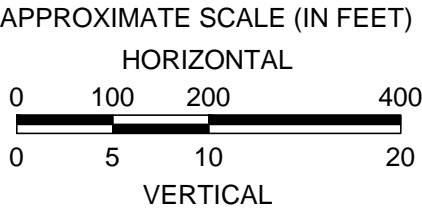


**NOTE:**

1. PIPE LOCATIONS SHOWN ARE FOR DEMONSTRATION PURPOSES ONLY, AND MAY NOT REPRESENT ALL PIPE LOCATION DUE TO LACK OF PIPE ELEVATION DATA.

**LEGEND:**

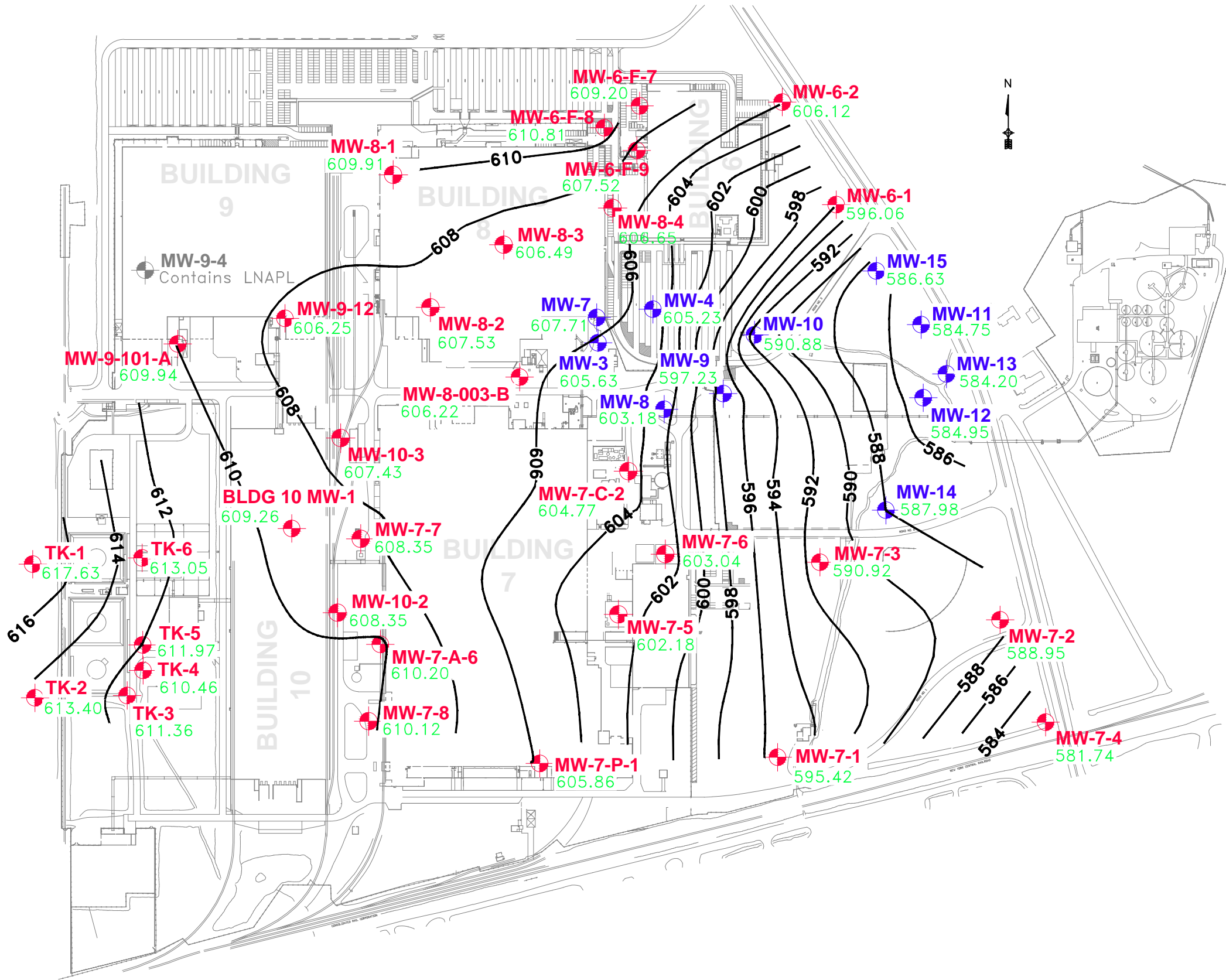
- APPROXIMATE EXISTING GROUND SURFACE
- · · · · · APPROXIMATE GROUNDWATER ELEVATION AS MEASURED ON MAY 2, 2011
- - - - - APPROXIMATE TOP OF BEDROCK ELEVATION
- LOCATION OF TREATED SEWER
- LOCATION OF SANITARY SEWER
- LOCATION OF STORM SEWER
- INDICATES PIPE RUNNING IN A NORTH-SOUTH ORIENTATION



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NO.		ISSUE/DESCRIPTION	BY	DATE
GM COMPONENTS HOLDINGS, LLC LOCKPORT FACILITY 200 UPPER MOUNTAIN ROAD LOCKPORT, NEW YORK				
BETWEEN BUILDINGS RUNNING EAST-WEST SUBSURFACE PIPE LOCATION MAP CROSS SECTION A-A'				
PREPARED BY: GZA GeoEnvironmental of N.Y. Engineers and Scientists 535 WASHINGTON STREET 11th FLOOR BUFFALO, NEW YORK 14203 (716) 685-2300		PREPARED FOR: GM COMPONENTS HOLDINGS, LLC		
PROJ MGR: CZB	REVIEWED BY:	CHECKED BY:	FIGURE	
DESIGNED BY:	DRAWN BY: DEW	SCALE: 1"= 300'	7	
DATE JULY 2011	PROJECT NO. 21.0056546.00	REVISION NO.		

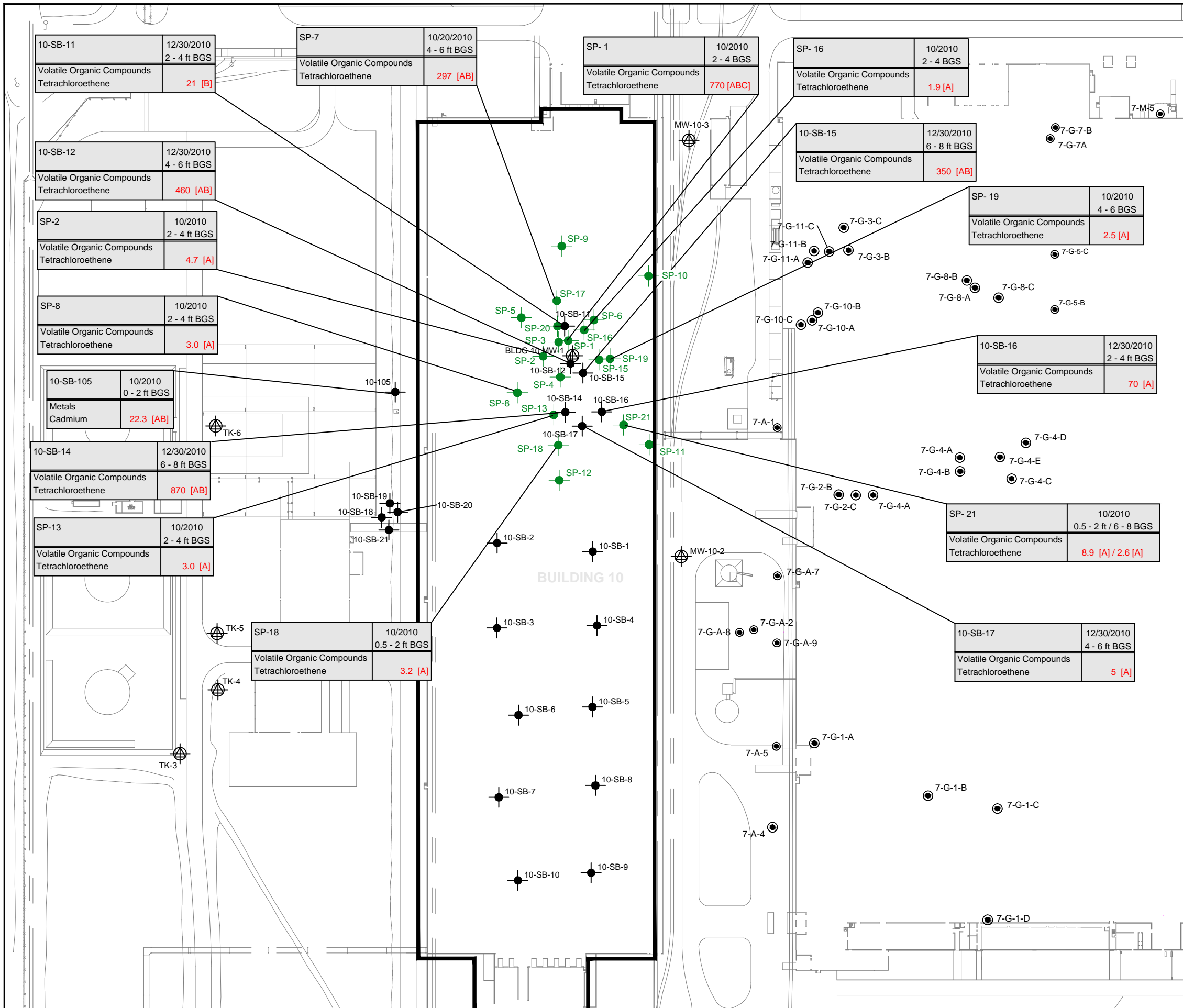




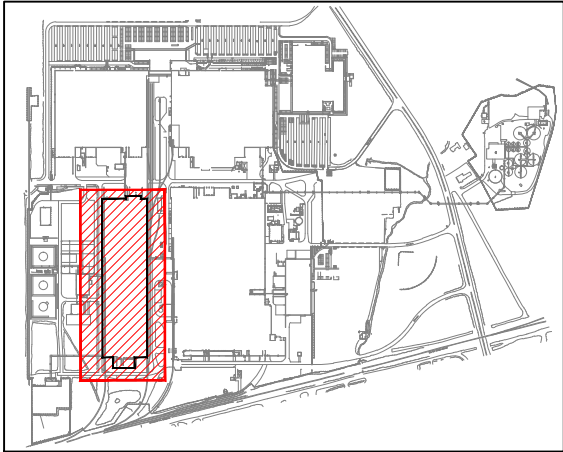
1. BASE MAP ADAPTED FROM A DRAWING PROVIDED BY DELPHI THERMAL AND INTERIOR SYSTEMS SEPT. 2007.
2. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.

**GZA GeoEnvironmental**  
**New York**

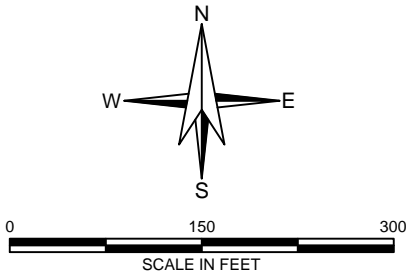
G:\36795\_GM LOCKPORT\CAD\36795-BLDG 10-09.DWG



- LEGEND:**
- APPROXIMATE LOCATION OF MONITORING WELL
  - APPROXIMATE LOCATION OF SOIL BORING
  - APPROXIMATE LOCATION OF AIR SAMPLE
  - ERM BORING LOCATION
  - APPROXIMATE LOCATION OF SOIL PROBES (GZA, OCTOBER 2010)
- NOTES:**
- THIS FIGURE IS BASED ON THE DRAWING PROVIDED BY DELPHI THERMAL AND INTERIOR SYSTEMS, DATED SEPTEMBER 2007.
  - THE LOCATIONS OF THE MONITORING WELLS WERE DETERMINED BY GEOENVIRONMENTAL OF NEW YORK. THE LOCATIONS OF MONITORING WELLS SHOULD BE CONSIDERED APPROXIMATE.
  - DATABOXES SHOWN IN MG/KG.
  - CHEMICALS SHOWN IN DATABOXES EXCEEDED CRITERIA FOR BUILDING.
  - RESULTS IN **RED** EXCEED CRITERIA:  
[A] - RESTRICTED INDUSTRIAL CRITERIA  
[B] - PROTECTION OF GROUNDWATER CRITERIA



SITE KEY: NOT TO SCALE



**HALEY & ALDRICH** GM COMPONENTS HOLDINGS, LLC.  
LOCKPORT FACILITY  
200 UPPER MOUNTAIN ROAD  
LOCKPORT, NEW YORK

SOIL ANALYTICAL RESULTS SUMMARY

SCALE: AS SHOWN  
NOVEMBER 2011

FIGURE 9





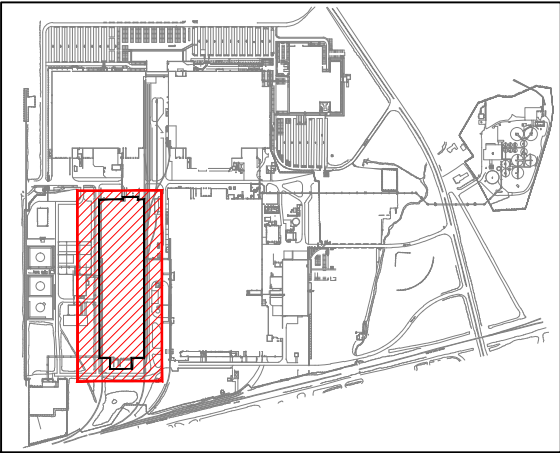
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10-VI-2	10-VI-2IA 1/18/2011	10-VI-2IA 1/20/2011
1,1,1-Trichloroethane	20 U/20 U	20 U
1,1-Dichloroethene	14 U/14 U	14 U
Carbon tetrachloride	11 U/11 U	11 U
cis-1,2-Dichloroethene	14 U/14 U	14 U
Tetrachloroethene	24 U/24 U	24 U
Trichloroethene	9.7 U/9.7 U	9.7 U
Vinyl chloride	9.2 U/9.2 U	9.2 U

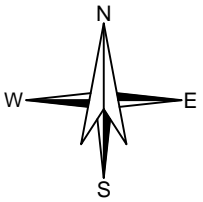
10-VI-1	10-VI-1IA 1/18/2011	10-VI-1IA 1/20/2011
1,1,1-Trichloroethane	38 U	8.2 U
1,1-Dichloroethene	28 U	5.9 U
Carbon tetrachloride	22 U	4.8 U
cis-1,2-Dichloroethene	28 U	5.9 U
Tetrachloroethene	47 U	10 U
Trichloroethene	19 U	4.6
Vinyl chloride	18 U	3.8 U

- LEGEND:**
- VAPOR INTRUSION SAMPLING POINT
  - ERM BORING LOCATION
  - APPROXIMATE LOCATION OF SOIL PROBES (GZA, OCTOBER 2010)

- NOTES:**
- THIS FIGURE IS BASED ON THE DRAWING PROVIDED BY DELPHI THERMAL AND INTERIOR SYSTEMS, DATED SEPTEMBER 2007.
  - THE LOCATIONS OF THE MONITORING WELLS WERE DETERMINED BY GEOENVIRONMENTAL OF NEW YORK. THE LOCATIONS OF MONITORING WELLS SHOULD BE CONSIDERED APPROXIMATE.
  - DATABOXES SHOWN IN UG/M3.
  - ONLY CHEMICALS WITH CRITERIA SHOWN IN BOXES.
  - RESULTS IN **RED** EXCEED CRITERIA.
  - DATA QUALIFIERS:  
U - RESULT WAS NOT DETECTED ABOVE REPORTING LIMIT.  
J - ESTIMATED RESULT



SITE KEY: NOT TO SCALE



0 150 300  
SCALE IN FEET

**HALEY & ALDRICH**

GM COMPONENTS HOLDINGS, LLC.  
LOCKPORT FACILITY  
200 UPPER MOUNTAIN ROAD  
LOCKPORT, NEW YORK

VAPOR INTRUSION RESULTS SUMMARY

SCALE: AS SHOWN  
NOVEMBER 2011

FIGURE 11