REMEDIAL INVESTIGATION REPORT GM COMPONENTS HOLDINGS, LLC 200 UPPER MOUNTAIN ROAD - BUILDING 7 LOCKPORT, NEW YORK BCP SITE #C932138

by

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TABLE OF CONTENTS

LIST OF TABLES LIST OF FIGURES		ii ii	
1.	INTI	RODUCTION	1
	1.1	Purpose	1
	1.2	Site and Surrounding Area Description	2
	1.3	Site History	2
	1.4	Previous Investigations	2
	1.5	Report Organization	4
2.	REM	MEDIAL INVESTIGATION ACTIVITIES	(
	2.1	Test Boring and Monitoring Well Installation	(
	2.2	Soil Probe Exploration	8
	2.3	Field Screening	8
	2.4	Soil Vapor Intrusion (SVI) Sampling	Ģ
	2.5	Hydraulic Conductivity Testing	11
	2.6	Groundwater Sampling	11
	2.7	Environmental Sampling	12
		2.7.1 Subsurface Soil Samples	12
		2.7.2 Groundwater Samples	12
		2.7.3 Soil Vapor Intrusion (SVI) Samples	12
	2.8	Building 7 Subsurface Utility Assessment	13
	2.9	Survey	15
3.	PHY	SICAL CHARACTERISTICS OF THE STUDY AREA	10
	3.1	Surface Features	16
	3.2	Meteorology	10
	3.3	Surface Water Hydrology	16
		3.3.1 Regional Surface Water Hydrology	16
		3.3.2 Site Surface Water Hydrology	17
	3.4	Regional Geology	17
	3.5	Site Geology	18
		3.5.1 Overburden	18
		3.5.2 Bedrock	18
	3.6	Regional Hydrogeology	18
	3.7	Site Hydrogeology	19
		3.7.1 Hydraulic Conductivity and Velocities	19
	3.8	Land Use and Demography	20
	3.9	Fish & Wildlife Resources Impact Analysis	20
4.	REMEDIAL INVESTIGATION RESULTS		22
	4.1	Date Validation Reports	22
	4.2	Comparative Criteria	22
	4 3	Contaminant Types	23



TABLE OF CONTENTS

	4.4	Source Areas	23
	4.5 Surface Soil Analytical Results		24
	4.6	Subsurface Soil Analytical Results	24
		4.6.1 Volatile Organic Compounds (VOC)	24
		4.6.2 Semi-Volatile Organic Compounds (SVOC)	24
		4.6.3 Polychlorinated Biphenyls (PCB)	24
		4.6.4 Metals	25
	4.7	Groundwater Analytical Results	25
		4.7.1 Volatile Organic Compounds (VOC)	25
	4.8	Soil Vapor Intrusion (SVI) Analytical Results	27
5.	CON	CEPTUAL SITE MODEL	29
	5.1	Contaminants of Concern (COC)	31
	5.2	Chemical Properties of Contaminants of Concern	32
	5.3	Qualitative Human Health Exposure Assessment	33
6.	CON	CLUSIONS & RECOMMENDATIONS	35
	6.1	Conclusions	35
	6.2	Recommendations	36
7.	REFERENCES		37
TABL			
FIGUI			
		A – Previous Site Investigation Data	
		B – Soil & Water Disposal Documentation	
		C - Test Boring/Monitoring Well & Soil Probe Logs	
		D - GMCH Provided Chemical Database	
		E – Air/Vapor Sampling Forms	
		F - Quality Assessment and Validation Reports C - Groundwater Colonlations - Hydraulia Conductivity	
		G – Groundwater Calculations – Hydraulic Conductivity H – NYSDEC Natural Heritage Program Letters	
		I – Outfalls D002 and D003 Analytical Data (Attached CD)	
ALLE.	ואועויו	1 - Outland D002 and D003 Analytical Data (Attached CD)	



TABLE OF CONTENTS

LIST OF TABLES

Table No.

IV

I Analytical Sample Summary TableII Soil Analytical Results

Title

·

III Building 7 Groundwater Analytical Results

V Vapor Intrusion Analytical Results

VI Summary of Groundwater Elevation Measurements

Site Wide Groundwater Analytical Results

VII Fate & Transport and Potential Exposure Pathways for Site Contaminants of

Concern

LIST OF FIGURES

Figure No.	Title
1	Project Locus
2	Site Plan
3	Sampling Location Plan
4	Building 7 Subsurface Piping Plan - Plan View (GZA)
5	Building 7 Subsurface Piping Plan - Cross-Section (GZA)
6	Facility Wide Subsurface Piping Plan - Plan View (GZA)
7	Facility Wide Subsurface Piping Plan - Cross-Section (GZA)
8	Groundwater Contour Plan (GZA)
9	Building 7 Soil Analytical Exceedance Summary
10	Site Wide Groundwater Analytical Results Summary
11	Building 7 Vapor Intrusion Results Summary
12	National Wetland Inventory Map



1. INTRODUCTION

This report presents the results of the Remedial Investigation (RI) performed at Building 7, GM Components Holdings (GMCH) Lockport Facility, located at 200 Upper Mountain Road, Lockport, New York. A Site Locus Plan is included as Figure 1 and a Site Plan is included as Figure 2. The investigation was conducted in accordance with the approved RI Work Plan (GZA, 2010) under the New York State Department of Environmental Conservation (NYSDEC), Brownfield Cleanup Program (BCP). The GMCH BCP Agreement for the Building 7 Site (NYSDEC Site C932138) was executed on May 20, 2010.

Three (3) separate BCP Sites are associated with the GMCH Lockport 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)
- GM Components Holdings, LLC Building 10, site ID #C932140 (Building 10)

This RI has been developed for the investigation activities associated with Building 7. Interpretations presented within this report are based primarily on the investigations described herein. Pertinent data from the previous investigations¹ (to be referred to as the "Previous Phase II Investigation") generated prior to entering into the BCP have been included within this report.

1.1 Purpose

The objectives of the RI is to determine the nature and extent of 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. We note that the investigations for the three BCP Sites at the Lockport facility were conducted concurrently.

In addition to the investigation activities to be conducted as part of the Building 7 BCP Site, 28 additional monitoring wells were sampled as part of other on-going monitoring events or the other BCP investigations. This groundwater data were used to assess facility-wide conditions.

The specific objectives of the RI are 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 &}quot;Field Investigation Report, West Lockport Complex, Lockport, NY" dated January 17, 2007. Prepared for Delphi Corporation by Environmental Resource Management.



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1.2 Site and Surrounding Area Description

The GMCH facility is located at 200 Upper Mountain Road in the City and Town of Lockport, Niagara County, New York. The portion of the facility which includes Building 7 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 7 constitutes approximately 31 of the 342 acres and is located in the southern central portion of the GMCH facility (see Figure 2). Across Upper Mountain Road, the Niagara Escarpment is located approximately one-half mile to the northeast. 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 the building 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 with the southern portion used by GMCH as a warehouse (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. Figure 1 shows the approximate location of GMCH and the surrounding areas.

1.3 Site History

GMCH currently owns and operates the 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 Site was developed as part of an expansion of the manufacturing operation, formerly located in downtown Lockport. Manufacturing operations began at the facility along Upper Mountain Road in 1939.

Building 7 was constructed in phases between 1937 and 1951 and has been utilized for manufacturing since its construction in 1937. It is the main manufacturing building at the GMCH facility.

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). A new company was created to purchase certain assets of MLC and the current name of that entity is General Motors LLC (GM). A GM subsidiary, known as GMCH, took title from Delphi of a portion of the facility including Building 7 in October 2009.

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).

After completion of the CCS, a field investigation was completed by ERM to assess soil and groundwater conditions at the 50 areas of interest (AOI), identified by the CCS (Previous Phase II



Investigations). A total of 144 soil borings were completed and nine (9) sediment and four (4) surface soil samples were collected. Six (6) monitoring wells were installed, but only five (5) produced sufficient groundwater for sampling and analysis. Over 400 soil and groundwater samples were collected from the 144 soil borings and analyzed for an extensive list of parameters, which included volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), metals and polychlorinated biphenyls (PCB). 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.

Ten (10) AOIs located within the Building 7 BCP Site footprint were investigated as part of the Previous Phase II Investigation. Approximately 58 soil probes were completed to assess the 10 AOIs discussed above. At each AOI, samples were analyzed for VOCs, SVOCs, PCBs, and metals. These AOIs are as follows.

- AOI-8 was a former tetrachloroethene (PCE) tank farm area located outside of Building 7 in the southwestern alleyway between Building 7 and Building 10.
- AOI-9 was a former metal plating (hexavalent chromium (Cr ⁶⁺)) operation in the central portion of Building 7.
- AOI-10 was a historic coal pile area located outside of Building 7 in the northeastern corner of the Building 7 BCP Site.
- AOI-12 was the eleven (11) former degreasing operation locations throughout Building 7.
- AOI-13 was a former underground storage tank (UST) located outside of Building 7 in the northeastern corner.
- AOI-14 is a waste oil storage area located outside of Building 7 in the northeastern corner.
- AOI-15 was a liquid flux storage room in the southern portion of Building 7.
- AOI-16 was an oil sewer location where PCBs were historically identified in this area, located in the northeastern corner of Building 7.
- AOI-17 was a historic train well and truck dock in the northwestern corner of Building 7.
- AOI-38 was the locations of former gasoline and kerosene USTs located near Garage Building 15 in the northeastern corner of the Building 7 BCP Site footprint.

The field investigations identified elevated levels of chlorinated solvents in soils beneath several former degreaser areas (AOI-12), as well as chlorinated solvents and SVOCs in groundwater immediately upgradient (west) of the building. The chlorinated solvents detected were below the NYSDEC BCP Part 375 Industrial Soil Cleanup Objectives (ISCO), with the exception of PCE, that was detected in three (3) soil samples (7-G-3-B, 6 to 8 ft bgs; 7-G-8-B, 8 to 10 ft bgs; and 7-G-8-C, 8 to 10.5 ft bgs) at concentrations above the PCE Part 375 industrial SCO of 300 ppm.

Additionally, SVOC were detected in soil samples from AOI-10 (7-C-2, 0 - 2 ft & 7-C-3, 2-4 ft), AOI-14 (7-M-2, 0 - 2 ft) and AOI-16 (7-R-1, 6 - 8 ft & 7-R-3, 6 - 7.5 ft). SVOC detected in samples from AOI-



14 and AOI-16 exceeded their respective ISCO, and SVOC detected in the samples from AOI-10 exceeded their respective Part 375 Commercial Soil Cleanup Objectives (CSCO).

Copper (Cu) was detected in a soil sample from AOI-16 (7-R-3, 6-7.5 ft) and PCBs were detected in a soil sample from AOI-14 (7-M-3, 6-7.8 ft) and AOI-12 (7-G-4-C, 8-10.7 ft) above their respective CSCOs. No other metals or PCB were detected at concentrations exceeding their respective CSCO. Data tables and figures from the Previous Phase II Investigation related to the Building 7 BCP Site are included in Appendix A.

No additional investigation activities have been completed in association with Building 7 in the time frame from the Previous Phase II Investigation to the current Building 7 BCP RI. Seven (7) soil probes were completed along the northeastern exterior portion of the building as part of the Building 7 BCP Site RI (see Figure 3). These soil probes were completed to assess the SVOCs, PCBs and metals identified during the Previous Phase II Investigation associated with AOIs-10, -14 and -16.

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 (SMP) to: (a) address residual contaminated soils that may be excavated from the site during future redevelopment, (b) evaluate the potential for soil 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 are discussed.

Section 2 Remedial Investigation: This section summarizes the fieldwork completed with respect to Building 7 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 (indoor and outdoor).

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 ACTIVITIES

RI 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 following tasks, as described in this RI report, were completed.

- Test borings and bedrock monitoring well installations;
- Soil probes completion; and
- Soil, groundwater and vapor intrusion sampling.

The RI and report were completed in general accordance with the following.

- The scope of work described in the "Revised Remedial Investigation Work Plan, GM Components Holdings, LLC, 200 Upper Mountain Road, Lockport, New York, Building 7 Site #932138" 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

Earth Dimensions Inc. (EDI) completed four (4) test borings and installed four (4) permanent monitoring wells from December 2010 to January 2011. Two (2) wells were installed at upgradient locations (MW-7-7 and MW-7-8) and two (2) at downgradient locations relative to Building 7 (MW-7-5 and MW-7-6) (see Figure 3). Additionally, monitoring well MW-7-1 (installed in October 2007) was abandoned by over-drilling the well using hollow stem augers (HSAs), the polyvinyl chloride (PVC) well riser and screen were removed from the boring and the resultant hole was filled with a mix of Portland cement and bentonite to ground surface. A new well, MW-7-1R, was installed about 80 feet southeast of the former location (see Figure 3) to provide groundwater quality data for this area of the Site.



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.) HSA. Overburden soil samples were collected continuously ahead of the HSA 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 HSA until auger refusal (suspected top of bedrock). Auger cuttings from each borehole 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 the 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 four (4) test borings. Soil samples were analyzed for VOCs. A summary of the samples collected and the analysis performed is shown on Table I. Analytical test results from the test boring 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 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 then used to core into bedrock. Bedrock cores recovered ranged from 8.8 feet to 14.3 feet in length. Following the completion of rock coring, the recovered water used during coring operations was containerized for subsequent disposal by GMCH (see Appendix B).

The rock core samples were logged including 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.) is included on the boring logs provided in Appendix C.

The bedrock monitoring wells were constructed of 2-inch I.D. flush-coupled Schedule 40 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 to 10 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 below ground surface (bgs). Outside of the steel casings, the boreholes were filled with cement and a protective steel road box was placed at ground surface.

Following installation, the wells were developed utilizing a centrifugal pump on the drill rig to evacuate the wells and remove cuttings and check 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.



Well Location	Volume Removed	One Well Volume	Number of Well Volumes Removed
			volumes Removed
MW-7-1R	8 gallons	3.4 gallons	2.4
MW-7-5	10.5 gallons	2.2 gallons	4.8
MW-7-6	9 gallons	2.3 gallons	3.9
MW-7-7	17 gallons	3.4 gallons	5
MW-7-8	5 gallons	3.1 gallons	1.6

One groundwater sample was collected from each of the four bedrock wells for VOC analysis only. 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 and Table IV and discussed in Section 4.7.

2.2 Soil Probe Exploration

Matrix Environmental Technologies, Inc. (Matrix) completed twelve (12) soil probes as part of the Building 7 RI in December 2010 (see Figure 3). These soil probes are designated as 7-SB-1 through 7-SB-12. The soil probe logs are provided in Appendix C.

Five (5) soil probes, 7-SB-1 through 7-SB-5, were completed in the eastern interior portion of Building 7 (see Figure 3). These soil probes were completed for general site coverage as the Previous Phase II Investigation did not assess the area located between the Acid Flux Room (AOI-15) and Historical PCB Area (AOI-16) (see Previous Phase II Investigation figure in Appendix A).

Seven (7) soil probes, 7-SB-6 through 7-SB-12, were completed on the northeastern exterior portion of Building 7 (see Figure 3). These soil probes were positioned to help assess the SVOCs, PCBs and metals identified during the Previous Phase II Investigation associated with AOI-10, -14 and -16 as discussed above.

Soil probes were advanced using direct push methodology via hydraulic hammer on a track mounted probe rig. Soil samples 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. Probes were pushed through fill material and native overburden soils to the top of bedrock and/or refusal, which ranged from approximately 2.5 feet (7-SB-1) to 13.5 feet bgs (7-SB-4).

One analytical soil sample was collected from each of the twelve (12) completed soil probes. Soil sample analysis included VOCs, SVOCs, PCBs and metals. A summary of the samples collected and the analysis performed is shown on Table I. 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

The 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 (PID) equipped with a 10.6 eV bulb. The OVM was calibrated daily in accordance with manufacturer's requirements, using a certified gas standard (Isobutylene). The split-spoon sampler and/or Geoprobe acetate liner were/was opened and the soil samples retrieved were screened immediately with the OVM by running the OVM over the top of the retrieved samples and splitting the samples cores open every 4



to 6 inches. The peak response per 2-foot screening interval was recorded on the boring and soil probe logs presented in Appendix C.

2.4 Soil Vapor Intrusion (SVI) Sampling

Soil vapor intrusion (SVI) sampling was completed within Building 7 on January 18, 2011 to assess if SVI is occurring within Buildings 7 and 7A. Eleven (11) indoor air, eleven (11) sub-slab samples and one (1) outdoor background sample (excluding Quality Control (QC) samples) were collected on January 18, 2011 (see Figure 3). The indoor air samples are designated with an "IA" (e.g., 7-VI-1I A), the sub-slab samples are designated with a "SS" (e.g., 7-VI-1SS) and the outdoor air samples was designated as 7-VI-OUT. Samples 7-VI-1IA, 7-VI-1SS, 7-VI-2IA and 7-VI-2SS were collected from inside Building 7A, which is used as an engineering office and not for manufacturing. During the SVI sampling event on January 18, 2011, sub slab sample 7-VI-6SS, expended its vacuum after about 1 hour. The IA sample at this location was allowed to run as it was the location of a duplicate sample. Another SS and corresponding IA sample were collected from this location on January 20, 2011.

GMCH maintains a database of approved chemicals and chemical products stored and used within Building 7. One product containing TCE, (Pangofol Black®, all-purpose liquid cement) was identified in the database, however it is unknown as to whether or not it was still actively used inside Building 7. A copy of the database was provided for review prior to completing the air sampling and is included in Appendix D.

During each SVI sampling event, observations of the chemicals and products present within approximately 25 to 30 feet of the sampling areas were noted. An OVM with a photo-ionization detector (PID), 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 SVI sampling locations and the corresponding OVM readings.

Sampling Location	Product Present	Field Screening Result	Background Field Screening	
			Result	
7-VI-1	No products present	Not applicable (NA)	5 ppb	
7-VI-2	No products present	NA	0 ppb	
7-VI-3	Disinfectant Cleaner (1 gal)	1,440 ppb	1,140 ppb	
7-VI-4	No products present	NA	1,784 ppb	
7-VI-5	DL-497 Oil (12 oz)	5,589 ppb	3,500 ppb	
7-VI-6	Oil Frig #150 (1 gal)	Not measured	0.45 mmls	
/-V1-0	Green Earth (16 oz)	800 ppb	845 ppb	
7-VI-7	Machine Lubricants	830 ppb	830 ppb	
7-VI-8	Green Earth (16 oz)	4,575 ppb	2,484 ppb	
7-VI-9	Used Insoluble Oil	8,000 ppb	4 000 nnh	
/-VI-9	(Four, 55 gal drums)		4,000 ppb	
7-VI-10	Green Earth (16 oz)	Not Measured	9 400 nnh	
/- VI-1U	Oily Material (One, 55 gal drum)	5,600 ppb	8,400 ppb	
7-VI-11	Toolmakers Ink (12 oz)	500 ppb	460 ppb	

Nine (9) IA samples were collected from within Building 7 and two (2) from within Building 7A (see Figure 3). These IA samples were collected from the breathing zone, approximately 4 feet above the



floor slab and designated as 7-VI-1IA through 7-VI-11IA. Polyethylene tubing was connected to the 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. Once a vacuum was established, the air pump would automatically shut down, due to the lack of air flow through the pump. The air pump would remain connected to the tubing and was allowed to sit for 1 minute. After 1 minute, the pump would be turned back on to check if the seal formed by the band clamp held the vacuum. Upon turning the pump back on, it would again shut down within 10 seconds indicating that the vacuum was still present and air was not infiltrating through the band clamp seal. See Air/Vapor Sampling Forms in Appendix E for documentation.

Nine (9) SS air samples were collected from within Building 7 and two (2) were collected from within Building 7A. The sub-slab samples were collected from under the slab-on-grade floor through an approximate 1/2-inch diameter hole drilled in a competent portion of the concrete floor away from cracks or drains. Clean, dedicated polyethylene tubing was placed into the hole to the base of the concrete slab and sealed at the floor surface with modeling clay. The sub-slab air samples were collected from within 10 feet of the indoor air sample locations (see Figure 3). Please note that for purposes of the samples discussion, the unique identifier, which is the date and time of sample (e.g., 7-VI-7SS-011811-0814) will not be used and the samples will be referred to by its location and type of samples (e.g., 7-VI-7SS).

Prior to collecting the sub-slab samples, helium gas was used as a tracer gas to check for surface air infiltration through the surface seal at each sampling point. A helium detector was used to measure helium concentrations in sub-slab air drawn up from the subsurface inside the polyethylene tubing. Helium was released into an enclosure (i.e., 5-gallon bucket modified to allow injection of helium and subsurface tubing to pass through the top) that was placed over the top of the surface seal to determine if the surface seal was sufficient. Helium was detected at concentrations that ranged from non-detect (7-VI-3SS and 7-VI-10SS) to 4.2% (7-VI-4) of the total air drawn up from the subsurface and screened by the helium detector (see Air/Vapor Sampling Form in Appendix E). This is considered satisfactory according to the October 2006 New York State Department of Health (NYSDOH) "Final Guidance for Evaluating Soil Vapor Intrusion in the State New York" (NYSDOH SVI Guidance) which allows for a tracer gas detection of up to 10%. Prior to removing the enclosure from over the top of the surface seals, a helium measurement was collected from inside the enclosure. Helium concentrations inside the enclosure ranged from 85% to 95%.

One (1) ambient outdoor air sample (7-VI-OUT) was collected from an exterior upwind location of Building 7. The outdoor air sample was collected from approximately 5 feet above the ground surface at the location shown of Figure 3, on the day of the indoor air sampling event.

The SVI sampling was completed using dedicated, laboratory-supplied flow regulators and SUMMA canisters set for approximate eight-hour duration (i.e., standard shift duration in a commercial/industrial facility). The samples were generally collected for about 7 to 8 hours. The sampling was generally stopped once the vacuum in the SUMMA canister had dropped to below -5 inches of mercury (in. Hg) and was shut down to maintain a vacuum on the canister (see Air/Vapor Sampling Form in Appendix E).



The SVI samples were analyzed for VOC via EPA Method TO-15 in general accordance with the NYSDOH SVI Guidance.

2.5 Hydraulic Conductivity Testing

The effective hydraulic conductivity of the five (5) bedrock monitoring wells installed as part of the Building 7 BCP Site RI were calculated via slug test methodologies using water levels measured by an electronic pressure transducer (Insitu MiniTroll). Prior to installing the slug, an electronic pressure transducer was placed into the monitoring well approximately 2 feet from the bottom of the well. The pressure transducer 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 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 sealed 5-foot long by 1.5-inch diameter section of sand-filled PVC pipe. 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 at least 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 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 Rice² as further discussed in Section 3.7.

2.6 Groundwater Sampling

In addition to the four (4) newly installed groundwater monitoring wells and one (1) replacement well (MW-7-1R), groundwater samples were also collected from seven (7) existing wells (MW-7-A-6, MW-7-P-1, MW-7-C-2, MW-7-1, MW-7-2, MW-7-3 and MW-7-4, see Figure 3) as part of the Building 7 BCP Investigation. These eleven (11) monitoring wells comprise the Building 7 BCP Site monitoring well network.

Thirty-nine (39) monitoring wells were sampled between April and May 2011 across the GMCH 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.

^{2 &}quot;The Bouwer and Rice Slug Test - An Update", Bouwer, H. Groundwater Journal, Vol. 27., No.3, May-June 1989.



Groundwater sampling was conducted utilizing 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 7 BCP Site 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 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 in December 2010 and January 2011.
- TestAmerica Buffalo Groundwater samples collected in April and May 2011.
- TestAmerica Knoxville VI air samples collected in January 2011.

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 QC duplicate and a matrix spike/matrix spike duplicate (MS/MSD) samples) were collected from the four (4) monitoring wells and twelve (12) soil probes completed as part of the RI. A duplicate soil sample was collected from 7-SB-4, 12 to 13.5 feet and MS/MSD for VOC; PCB and metals were collected from 7-SB-10, 2 to 4 feet; and the MS/MSD for SVOC was collected from 7-SB-3, 9.5 to 11.5 feet. A summary of samples collected for analytical testing and parameters as part of the RI is presented in Table II and the results are presented in Table II.

2.7.2 Groundwater Samples

Eleven (11) groundwater samples (excluding duplicate and MS/MSD samples) were collected from the 11 monitoring wells in the Building 7 BCP Site monitoring well network as part of the RI. A duplicate groundwater sample was collected from MW-7-5 and a MS/MSD was collected from MW-7-6. A summary of samples collected for analytical testing and the parameters is presented in Table I and the results are presented in Table III.

2.7.3 Soil Vapor Intrusion (SVI) Samples

Eleven (11) IA samples, eleven (11) SS samples, and one (1) ambient outdoor air sample were collected (excluding duplicates) from Building 7 BCP Site as part of the RI. A summary of samples collected for analytical testing and the parameters is presented in Table I and the results are presented in Table V.



2.8 Building 7 Subsurface Utility Assessment

A plan view of the subsurface piping for the Building 7 BCP Site is shown on Figure 4. The subsurface information from the drawings (i.e., pipe locations and inverts) was provided by GMCH and used to develop cross-sections of the various subsurface utilities along with investigation-derived information (i.e., depth to bedrock, groundwater elevation). The cross-section is shown on Figure 5.

There are four (4) types of sewers present beneath Building 7, 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 dark blue on Figures 4 and 5.
- Process Sewers These sewers contain non-contact cooling water that is brought to and from the cooling towers at the GMCH facility. The process sewers are identified in green on Figures 4 and 5.
- Sanitary Sewers These sewers contain sanitary sewage from the restrooms and sinks present throughout Building 7. 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 7. During low flow, the storm sewers discharge to the City of Lockport WWTP. During high flow, the storm sewer discharges to either the drainage swale at Outfall D002 (storm water from the northern portion of Building 7), operating under NYSDEC SPDES Permit Number NY 000 0558 or to D003 (storm water from the southern portion of the Building). The drainage swale at D002 connects to "The Gulf" stream (see Section 3.6 for description) east of Outfall D002. Outfall D003 discharges to stream in the southeastern portion of the GMCH facility, near where The Gulf stream enters onto the property. The stream flows northeast beneath Upper Mountain Road, and flows down into The Gulf at a location east of the GMCH facility and eventually to Eighteenmile Creek. The storm sewers are identified in light blue on Figures 4 and 5.

Based on a review of storm water flow data for the two outfalls from September 18, 2010 through September 17, 2011 high flow events occurred 57 times at Outfall D002 and 78 times at Outfall D003 (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) and greater than 100 gpm for Outfall D003. 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 flumes at each location prior to discharging to the drainage swale (D002) or The Gulf stream (D003)); 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 meters do 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.

Both Outfall D002 and D003 have 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-dichloroethlene (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.

Table I-2 in Appendix I is a summary table of the average annual analytical results for storm water sampling events for Outfall D003 from 1990 through 2010 for TCE, PCE and trans-1,2-DCE. TCE was discontinued by NYSDEC as a sampling parameter in 2002 and the PCE concentrations have been below method detection limits from 2002 through 2010. DCE concentrations have below the Class GA groundwater standard or below method detection limits since 2007. There are no quantitative discharge limits on the GMCH Facility SPDES permit for Outfall D003. Graphs depicting the PCE, TCE and trans-1,2-DCE analytical data from Outfall D003 are also provided in Appendix I.

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.

A portion of the treated sewer and sanitary sewers which are orientated in a west to east direction are present below the static groundwater table beneath the building. Some north-south orientated process, treated, storm and sanitary sewer pipes are also present beneath the groundwater table. The utility piping present beneath Building 7 appears to be within the overburden above the top of bedrock.

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. 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 flowing in a west to east direction. A significant portion of the subsurface piping in the central portion of the facility is 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 five (5) monitoring wells and seven (7) soil probes installed on the exterior of Building 7, by a licensed land surveyor (McIntosh & McIntosh, PC). The ground surface, road box and monitoring point elevations of the monitoring wells were measured and referenced to the National Geodetic Vertical Datum (NGVD). The exterior monitoring wells and soil probes were also measured horizontally and referenced to the NAD83/96, New York State Plane Coordinates, West Zone.

The five (5) interior soil probe surface elevations were determined using the floor elevation from within Building 7, Elevation 615.46. Detailed building drawings provided by GMCH were used to locate the interior sampling locations within the footprint of the building. The horizontal measurements of the soil and SVI samples collected within the building were measured from marked columns present throughout the building at 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 7 BCP Site occupies approximately 31 of the 342.25 acres that make up the GMCH facility. The majority of the Building 7 BCP Site consists of the footprint of Building 7, some smaller buildings located to the east and paved roadways and loading docks on the west and south sides (see Figure 2). The ground surface and building concrete floor slab are generally level surfaces and the concrete floor slab is approximately 4 to 5 feet higher than ground surface outside the building, with the exception of the south side of the building where the ground surface is close to interior elevation. The floor elevation within Building 7 is 615.46 feet above mean sea level.

North of the Building 7 BCP Site is a paved facility roadway and Building 8, beyond which are a paved parking lot and residential homes along Upper Mountain Road. To the east are Building 7A, a paved parking lot and Upper Mountain Road. To the south is a paved facility road, grass area and an equipment storage area, beyond which is a New York Central Railroad line. To the west is Building 10, some smaller maintenance buildings, a scrap storage area, beyond which is unused GMCH property and the Town of Lockport Industrial Park.

The Building 7 BCP Site is occupied by one large manufacturing building with an approximate 989,636 square-foot footprint and a few smaller facility buildings. Areas not occupied by the buildings include paved areas used as storage, parking, loading docks and a nitrogen generation plant. The building has been used for manufacturing since it was built in stages from 1937 to 1951.

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

The Niagara Escarpment, further discussed in Section 3.4, acts somewhat 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

A significant portion of the Building 7 BCP Site is covered by the building footprint, and 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 occur.

Surface water entering the storm sewer system from the northern portion of Building 7 flows to Outfall D002, located northeast of Building 7 (see Figure 2). 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 (i.e. flow rates greater than 300 gpm), storm water is discharged to the drainage swale east of Outfall D002, which flows east and connects with The Gulf stream, which enters the GMCH facility from the southern property boundary. The Gulf stream flows northeast beneath Upper Mountain Road, and flow down into The Gulf at a location east of the GMCH facility and eventually to Eighteenmile Creek.

Surface water entering the system from the southern portion of Building 7 flows to Outfall D003. During periods of low flow (i.e. flow rates less than 100 gpm) storm water at Outfall D003 is directed to the City of Lockport WWTP. During periods of high flow (i.e. flow rates greater than 100 gpm), Outfall D003 discharges to The Gulf stream in the southeastern portion of the GMCH facility, near where The Gulf stream enters onto the property.

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.

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

Regionally the stratigraphy from the ground surface consists of glacially derived soils comprised of lacustrine clays and silts which overlay 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 Grimsby 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, 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. High angle to vertical joints are common within the bedrock.



3.5 Site Geology

3.5.1 Overburden

Overburden soil conditions at the Building 7 BCP Site varied in depth and types of material. The subsurface soils along the western side of the building consisted of about 3 to 4 feet of clayey silt fill material overlying native soils (clayey silts to silty clays with lesser and varying amounts of sands and gravel). Bedrock was encountered at depths of 6 to 9 feet bgs.

The subsurface conditions beneath the interior of the building, consisted of about 4 to 8 feet of fill materials that were primarily non-cohesive soils (silts, sands and gravels) with varying amounts of cohesive soils (silts and clays). Native soils were similar to those encountered along the western portion of the building and bedrock was encountered at 11 to 13 feet below the building floor. However, the floor inside Building 7 is about 4 to 5 feet higher in elevation than the western portion of the building with the top of bedrock present close to the same elevation.

Along the eastern exterior of the building, the fill material was a mix of both cohesive and non-cohesive soils ranging in depth from 3 to 9 feet bgs. Native soils were similar to those encountered along the western portion and beneath the building. Bedrock was generally encountered between 9 to 13 feet bgs which is slightly deeper than beneath the building.

3.5.2 Bedrock

Bedrock underlying the GMCH facility is the Lockport Dolomite Formation. Five (5) shallow bedrock monitoring wells that were installed as part of the Building 7 BCP RI are screened within the Lockport Dolomite. The five (5) bedrock wells were advanced through the overburden soil and approximately 9 feet to 14 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 fair (rock quality designation (RQDs) values of 51 to 75 percent) to good (RQDs values of 76 to 90 percent) quality based on the RQDs obtained from the bedrock coring done and recorded on the test boring logs in Appendix C.

RQD values for bedrock cores obtained from the Building 7 BCP Site generally ranged from 73 to 100 percent, with the exception of the rock core from MW-7-5, 17 to 22 feet which was 47 percent. The average RQD value was about 80 percent. In general, the rock cored in the borings completed as part of the Building 7 BCP Site RI did not exhibit extensive fractures or jointing with the exception of rock core from MW-7-5, 17 to 22 feet and MW-7-6, 11.8 to 16.9 feet.

3.6 Regional Hydrogeology

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



3.7 Site Hydrogeology

Four (4) bedrock groundwater monitoring wells (see Figure 3) were installed and one (1) monitoring well was replaced (MW-7-1) with a new well (MW-7-1R) as part of the Building 7 BCP Site RI. Water levels in the bedrock wells range from about 1 to 9 feet below 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 based on the groundwater elevations measured at MW-7-7 located on the east side of Building 7, and MW-7-6 located on the west side of Building 7 (see Figure 8).

Groundwater beneath the entire GMCH facility (based on the measured groundwater elevations from 43 monitoring wells on May 2, 2011) flows generally from west to east with a gradient of about 0.009, based on the groundwater elevations measured at MW-9-101-A (south of Building 9) and MW-13 (along Upper Mountain Road on the eastern property line; see Figure 8).

Groundwater flow within the bedrock at the Building 7 BCP Site is generally controlled by fractures and joints within the rock mass. As discussed in Section 2.8 above, sewer lines are present that intercept groundwater. Groundwater flow may also be influenced in part by the sewer systems. The RQD values for the rock encountered during the coring obtained from the subsurface explorations associated with Building 7 BCP Site indicate that bedrock is generally not highly fractured or jointed.

3.7.1 Hydraulic Conductivity and Velocities

Estimated horizontal hydraulic conductivity values were calculated from rising head slug tests conducted in the five (5) bedrock monitoring wells. As shown in Appendix G, the effective hydraulic conductivity in the Building 7 BCP Site is relatively low and varies between approximately 1.6×10^{-6} centimeters/second (cm/s) (MW-7-8) and 5.2×10^{-4} cm/s (MW-7-5) or about 0.005 to 1.5 feet per day (fpd), with an average of about 0.47 fpd.

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

- Building 8 BCP RI Wells: 9.7x10⁻⁶ cm/s to 9.9x10⁻⁴ cm/s (0.03 to 2.8 fpd)
- Building 10 BCP RI Wells: 6.4x10⁻⁵ cm/s to 1.7x10⁻⁴ cm/s (0.2 to 0.5 fpd)
- Delphi Harrison Thermal Systems Site: 1.1x10⁻⁶ cm/s to 1.1x10⁻² cm/s (.003 to 31 fpd)

Groundwater flow velocities within the upper bedrock were calculated using Darcy's Law assuming 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 as estimates. The parameters required for this determination include hydraulic conductivity, gradient and porosity. The hydraulic conductivity and gradient were determined based on field measurements.

The porosity was estimated by assessing published values for fracture porosity. Snow³ 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

^{3 &}quot;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.



fractured bedrock with hydraulic conductivity on the order of 10° to 10° cm/s, Jumikis⁴ published values of secondary porosity ranges between about 5 and 20%. Freeze and Cherry⁵ estimated porosity in fractured rock to be between 0 and 10% and Fetter⁶ reported values from limestone and dolomite range from less than 1 percent to 30%. It is expected that the porosity ranges 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.

Utilizing a horizontal hydraulic gradient for Building 7 of 0.005, an average hydraulic conductivity of 172 feet per year (fpy) and assumed effective porosities of 0.005 and 0.05, the average linear velocity for groundwater ranges from 17.2 to 172 fpy, with an average of approximately 95 fpy (see Appendix G).

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

3.8 Land Use and Demography

The portion of the facility including Building 7 is located within 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 facility is located in an area of mixed residential, agricultural, commercial, and industrial settings along Upper Mountain Road. Across Upper Mountain Road, the Niagara Escarpment is located approximately one-half mile to the northeast. 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.

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 7 BCP Site (manufacturing 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 7 BCP Site because it is located within a larger manufacturing facility (GMCH facility) area (See Figure 2). There are no state or federal wetlands or streams with ¼ mile radius of the Building 7 BCP Site (see Figure 12).

 $^{6 \ \}hbox{``Applied Hydrogeology"} \ 3^{rd} \ Edition; \ Fetter, \ C.W.; \ MacMillan \ College \ Publishing \ Company, \ 1994.$



^{4 &}quot;Rock Mechanics"; Jumikis, A. R.; Trans Tech Publications, 1983.

^{5 &}quot;Groundwater"; Freeze, R.A., and Cherry, J.A.; Prentice Hall Inc, 1979.

Step #9 identified the following resources:

- 1. Any endangered, threatened or special concern species or rare pants or their habitat; Not Applicable (NA)
- 2. Any DEC designated significant habitats or rare NYS Ecological Communities; NA
- 3. Tidal or Freshwater wetlands; NA
- 4. Stream, creek or river; The Gulf stream is present east of Building 7 and receives storm water from the GMCH facility during high flow events.
- 5. Pond, lake, lagoon; NA
- 6. Drainage ditch or channel; A drainage ditch is present east of Building 8 and receives high flow storm water discharge from Outfall D002 and operated under NYSDEC SPDES Permit Number NY 000 0558. This drainage ditch discharges to The Gulf stream near the eastern property line of the GMCH facility.
- 7. Other surface water feature; NA
- 8. Other marine or freshwater habitat; NA
- 9. Forest; NA
- 10. Grassland or grassy field; NA
- 11. Parkland or woodland; NA
- 12. Shrubby area; NA
- 13. Urban wildlife habitat; NA
- 14. Other terrestrial habitat. NA

Additionally, the NYSDEC Natural Heritage Unit was contacted to review 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). A response for NYSDEC Natural Heritage Unit indicating 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).

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, in Niagara Falls, New York prepared data quality assessment and validation reports (QAVR) for the analytical data collected as part of the Building 7 BCP Site 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 7 Soils, GM-Lockport, Lockport, New York, December 2010 - January 2011" dated February 16, 2011.
- Memorandum from CRA "Data Quality Assessment and Validation, BCP Investigation, Building 7 Air, GM-Lockport, Lockport, New York, January 2011" dated March 22, 2011.
- Memorandum from CRA "Data Quality Assessment and Validation, BCP Investigation, Building 7 Groundwater, GM-Lockport, Lockport, New York, April 2011" dated July 7, 2011.

Copies of the three QAVRs, along with validated analytical data, qualifiers, 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 was 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 was 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 was 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

The comparative criteria used for assessment of the various media samples, to determine if a potential threat to human health or the environment exists, 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), Commercial Soil Cleanup Objectives (CSCO) and Industrial Soil Cleanup Objectives (ISCO) were used for comparison to the subsurface soil analytical data.

Groundwater

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

Soil Vapor Intrusion Samples

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

4.3 Contaminant Types

Discussions of laboratory analytical results for the various environmental media are presented by the chemical classes including VOC, SVOC, PCB and inorganics (metals) that were detected as part of the Building 7 BCP Site RI. Some compounds of these chemical classes were identified at concentrations exceeding applicable comparison criteria at a few locations. These exceedances are presented in the associated analytical tables. The principal contaminant of concern (COC) detected in the groundwater for the Building 7 BCP Site and throughout the GMCH facility are VOCs, primarily PCE, trichloroethene (TCE) and their breakdown products.

4.4 Source Areas

Five (5) soil probes completed inside Building 7 were installed for general site coverage to assess areas not investigated during the Previous Phase II Investigation. The seven (7) soil probes completed on the northeast exterior of Building 7 were to address SVOC detected in soil samples from AOI-10, AOI-14 and AOI-16; copper (Cu) detected in a soil sample from AOI-16; and PCB detected in a soil sample from AOI-14 and AOI-12 (former degreaser locations in the central portion of Building 7), as discussed in Section 1.4 (see Previous Phase II Investigation figure in Appendix A). Note that the eleven (11) former degreaser locations throughout Building 7 were all designated AOI-12.

Seven (7) soil samples were analyzed for VOCs, SVOCs, PCBs and metals from the seven (7) soil probes completed to address previous concerns identified at AOI-10, AOI-14 and AOI-16. No VOCs, SVOCs, PCBs were detected at concentrations exceeding the Part 375 Protection of Groundwater Soil Cleanup Objectives (PGWSCO). Metals detected were below their respective Part 375 PGWSCO and CSCO, with the exception of lead detected at 7-SB-10, 2 to 4 feet (1,620 ppm) which was above both its respective PGWSCO and CSCO but less than the ISCO. Therefore, SVOCs, PCBs and copper (Cu) soil contamination previously identified do not appear to be widespread in the soil. Two areas where soil contamination was identified previously are inside of Building 7. The previous Phase II Investigation identified elevated levels of chlorinated solvents in soils beneath two (2) of the eleven (11) former degreaser areas (AOI-12). These two (2) locations were located in the northwestern portion of the building and may be potential source areas. No additional source areas, or cause for releases of contaminants, were identified during the soil investigation.



4.5 Surface Soil Analytical Results

Surface soil samples were not collected as the majority of the Building 7 BCP Site footprint is either covered by the building footprint or surface cover (i.e., pavement, gravel or concrete).

4.6 Subsurface Soil Analytical Results

Sixteen (16) subsurface soil samples (excluding QC samples) were collected for analysis from twelve (12) soil probes and five (5) test borings completed as part of the Building 7 RI. Of the 16 samples collected:

- Sixteen (16) were analyzed for VOCs via SW-846 8260B;
- Twelve (12) were analyzed for SVOCs via SW-846 8270C;
- Twelve (12) were analyzed for PCBs via SW-846 881; and
- Twelve (12) 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. Analytical results are summarized on Table II and Figure 9.

4.6.1 Volatile Organic Compounds (VOC)

Sixteen (16) subsurface soil samples (excluding duplicate and MS/MSD samples) were analyzed from the twelve (12) soil probes and four (4) test borings completed as part of the Building 7 BCP Site RI for VOCs.

From these 16 soil samples, 11 different VOC were detected above method detection limits (see Table II). None of the VOCs detected were at concentrations exceeding their respective Part 375 PGWSCO.

4.6.2 Semi-Volatile Organic Compounds (SVOC)

Twelve (12) subsurface soil samples (excluding duplicate and MS/MSD samples) were analyzed from the twelve (12) soil probes completed as part of the Building 7 RI for SVOCs. No SVOC samples were collected from the monitoring well installations.

Fifteen (15) different SVOCs were detected above method detection limits in four (4) of the 12 samples tested (see Table II). None of the SVOCs detected were at concentrations exceeding their respective Part 375 PGWSCOs.

4.6.3 Polychlorinated Biphenyls (PCB)

Twelve (12) subsurface soil samples (excluding duplicate and MS/MSD samples) were analyzed for PCBs from the twelve (12) soil probes completed as part of the Building 7 RI. PCBs were not detected above method detection limits.



4.6.4 Metals

Twelve (12) subsurface soil samples (excluding duplicate and MS/MSD samples) were analyzed for metals from the twelve (12) soil probes completed as part of the Building 7 BCP Site RI. From these 12 soil samples, 22 different metals were detected above method detection limits (see Table II). Lead (Pb) was detected at 7-SB-12, at one to four feet below ground surface (BGS) at a concentration of 1,620 ppm, which exceeds its Part 375 CSCO (1,000 ppm) and Part 375 PGWSCO (450 ppm). None of the other metals were detected at concentrations above their respective Part 375 CSCOs or Part 375 PGWSCO.

4.7 Groundwater Analytical Results

Eleven (11) groundwater samples were collected as part of the Building 7 BCP Site RI for VOC analysis by EPA Method 8260B. The groundwater samples were collected from the four (4) newly installed wells (MW-7-5 through MW-7-8), one replacement monitoring well (MW-7-1R) and six (6) existing monitoring wells (MW-7-A-6, MW-P-1, MW-7-C-2, MW-7-2, MW-7-3 and MW-7-4).

Results of the groundwater sampling from the 11 monitoring wells sampled identified the presence of chlorinated solvents in the groundwater on the eastern and western side of the Building 7 BCP Site. Elevated levels of PCE were detected in monitoring well, MW-7-7 (on the western side of Building 7). Elevated levels of PCE, TCE and cis-DCE were also identified in a groundwater sample collected from monitoring well MW-7-A-6 on the western side of Building 7. This well is located in the vicinity of a former PCE fill port and storage tank area. In 1983, a delivery of PCE was pumped into the PCE fill port which was no longer in use and was released into the pump house located between Buildings 7 and 10. Chlorinated solvent contamination present in the groundwater in the southern portion of the GMCH facility between Buildings 7 and 10 may be attributed to this event.

Elevated levels of VOCs were also detected in monitoring well MW-7-5, which is located on the eastern side of Building 7, down-gradient of MW-7-A-6, discussed above. The concentrations of VOCs detected were approximately three to four orders of magnitude lower than observed on the western side of the Building 7 BCP Site.

It should be noted that the down-gradient VOCs groundwater concentrations east of Building 7 BCP Site at the GMCH facility property line were below the laboratory detection limits.

Figure 3 shows the locations of the monitoring wells sampled as part of the Building 7 BCP Site investigation. The groundwater analytical test results are summarized on Table III and Table IV and presented on Figure 10.

4.7.1 Volatile Organic Compounds (VOC)

Five (5) different VOCs (PCE, TCE, cis-1,2 DCE, trans-1,2 DCE and VC) were detected above method detection limits in eight (8) of the 11 groundwater samples collected (see Table III). VOCs were not detected above laboratory detection limits in the groundwater samples from monitoring wells, MW-7-1R, MW-7-2 and MW-7-3, located to the east of the Building 7 BCP Site. Both MW-7-2 and MW-7-3 are located along the eastern property line downgradient of the GMCH facility.



VOCs were detected at concentrations exceeding their respective Class GA criteria at the other eight (8) well locations. The total VOC concentrations detected ranged from 41 ppb (MW-7-P-1, located in the southern portion of Building 7) to 175,000 ppb (MW-7-A-6, located on the west side of Building 7). PCE was typically the compound detected at the highest concentration in the groundwater samples, with the exception of MW-7-P-1 and MW-7-3, which are crossgradient and down-gradient, respectively, from potential source areas.

At MW-7-P-1, PCE (0.57 ppb) and TCE (2.1 ppb) were detected, however, the detected concentration of cis-DCE (6.2 ppb), trans-DCE (4.9 ppb) and VC (27 ppb) indicate that natural attenuation is occurring as the concentrations of the breakdown products are higher than the parent compound (PCE and TCE) concentration.

At MW-7-3, neither PCE nor TCE were detected above method detection limits, but the natural attenuation breakdown products, cis-DCE (8.6 ppb) and VC (46 ppb), were detected.

Natural attenuation is defined as the biodegradation, dispersion, dilution, sorption, volatilization, and/or chemical or biological stabilization, transformation, or destruction of constituents in soil and groundwater, whereby constituent toxicity, mobility or volume is effectively reduced to levels that are protective of human health and the environment. Natural attenuation is likely occurring at the Building 7 BCP Site through intrinsic reductive dechlorination processes.

Reductive dechlorination is the replacement of a chlorine atom with a hydrogen atom on an organic compound, caused by microbial catalyzed reactions. In such a reaction, PCE and TCE are sequentially reduced to lower chlorinated ethenes, such as cis-DCE, VC and ultimately ethene.

The groundwater compound concentrations detected at monitoring well locations MW-7-P-1, MW-7-3, MW-7-5 and MW-7-C-2 are indicative of this process.

In addition to the eleven (11) groundwater samples collected for VOCs analysis as part of the Building 7 BCP Site RI, 28 other monitoring wells located throughout the GMCH facility were sampled for VOCs, as part of other BCP Site RIs and 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 RIs and other sampling completed, chlorinated VOCs are present in the groundwater throughout the GMCH facility. Source areas are likely present within Building 10, between Buildings 7 and 10, the southwestern corner of Building 8 and in the southeastern corner of Building 8 (Delphi Harrison Thermal System Site Registry Site No 932113).

However, groundwater contamination does not appear to be migrating from the GMCH facility as six (6) of the seven (7) monitoring wells along the down-gradient eastern property line for the GMCH facility do not show concentrations of VOCs above the laboratory detection limits. These six (6) wells (from north to south) include: MW-6-2, MW-6-1, MW-11, MW-13, MW-7-2 and MW-7-4. PCE (6.7 ppb) was detected slightly above its respective Class GA criteria (5 ppb) at MW-15, which is approximately 100 feet from the eastern property line.



VOCs detected in the groundwater at the GMCH facility are not considered to be a significant threat to human health via ingestion because the GMCH facility and the surrounding community are serviced by municipal supplied potable water.

4.8 Soil Vapor Intrusion (SVI) Analytical Results

Eleven (11) IA, 11 SS samples and one (1) outdoor air sample (excluding QC duplicates) were collected as part of the Building 7 RI for VOC analysis via TO-15. Results of the SVI sampling identified 34 different VOC that were detected in the air samples collected above method detection limits (see Table V). The results of the IA samples and the SS air samples were compared to the two decision matrices in the NYSDOH Guidance. Analytical data summaries are included on Table V and Figure 11. The following is a brief summary of the comparison.

- Based on the concentrations of TCE detected in the seven (7) IA samples and their corresponding seven (7) SS samples, the decision matrices indicate that mitigation is needed to minimize current or potential future exposures associated with SVI in Building 7 and 7A.
- Based on the concentrations of PCE detected in the five (5) IA samples and their corresponding five (5) SS samples, the decision matrices indicate that mitigation is needed to minimize current or potential future exposures associated with soil vapor intrusion in Building 7.
- Based on the concentration of cis-DCE in four (4) SS samples, and VC in two (2) SS samples, the NYSDOH decision matrices recommend mitigation to minimize potential exposures due to the elevated levels of VOC detected in sub slab vapor below the building slab.

TCE was detected in eight (8) IA samples at a concentration exceeding its respective NYSDOH Air Guideline Value (AGV) of 5 micrograms per cubic meter (ug/m³). PCE was detected in one (1) IA sample exceeding its respective NYSDOH AGV of 100 ug/m³.

The TCE concentrations detected and exceeding its respective AGV ranged from 5.6 ug/m³ (7-VI-6IA) to 53 ug/m³ (7-VI-8IA). The PCE concentration detected and exceeding its respective AGV was 230 ug/m³ at 7-VI-8IA. The AGV for TCE and PCE are considered low relative to the other regulatory and advisory values used by other agencies that govern chemical exposure in industrial work environments. By comparison, the Occupational Safety and Health Administration (OSHA) has established the following regulatory values for TCE.

- Permissible Exposure Limit (PEL) for TCE averaged over an 8-hour work shift is 100 ppm or 537,423 ug/m³;
- OSHA Short-term exposure limit (STEL) for a 5 minute exposure in any 2-hour period is 300 ppm or 1,612,270 ug/m³; and
- OSHA ceiling is 200 ppm or 1,074,847 ug/m³.

The National Institute for Occupational Safety and Health (NIOSH) has established the following advisory values for TCE.

- NIOSH time weighted average (TWA) for exposure to TCE is 25 ppm; and
- NIOSH immediate danger to life or health concentration (IDLH) is 1,000 ppm.



OSHA has established the following regulatory values for PCE.

- Permissible Exposure Limit (PEL) for PCE averaged over an 8-hour work shift is 100 ppm or 678,323 ug/m³;
- OSHA Short-term exposure limit (STEL) for a 5 minute exposure in any 3-hour period is 200 ppm or 1,356,646 ug/m³; and
- OSHA ceiling is 300 ppm or 2,034,969 ug/m³.

TCE and PCE have detected concentrations above their respective NYSDOH AGVs in IA samples, but are not considered a threat to worker health and safety when compared to the OSHA regulatory values that are typically used to govern exposure in work environments.



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 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 presence could constitute an exposure pathway currently or under the future intended land use scenarios. More specifically, the CSM addresses:

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

The Building 7 CSM has been prepared using information derived from the RI sampling and analytical testing program. These investigations document the following key factors concerning contaminant presence and mobility at the Building 7 BCP Site:

Site Features/Characteristics:

- The Building 7 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 gravel, sand and silt, ranging from approximately 1.5 to 9 feet below ground surface. Below the fill native clays and silts comprise the remaining overburden soils. Bedrock consisting of Lockport Dolomite was encountered between 6 and 13 feet below ground surface.
- Based on the most recent facility-wide groundwater elevation (El) data, the groundwater table across the entire 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 7 BCP Site, ranging from approximately El 610 on the western side of the Building 7 BCP Site to approximately El 602 on the eastern side of the Building 7 BCP Site.
- Groundwater is not utilized as a potable resource at the Building 7 BCP Site.



Site Data:

Soil:

Based on field investigations conducted prior to the RI in 2006 (refer to Appendix A), VOC, specifically PCE and SVOC compounds identified as polycyclic aromatic hydrocarbons (PAHs) were detected above ISCOs, CSCOs and/or PGWSCOs in select samples. The PCE detections were noted at depth intervals from approximately 6-10 feet bgs. It is possible that the soil samples incorporated contaminated groundwater resulting in the elevated detections. It should be noted that some exceedances for PAHs, were actually non-detect values in which the laboratory detection limit was abnormally high due to analytical dilutions.

PCB and copper (Cu) were also detected in one (1) sample each, but below the PGWSCOs. With the exception of three (3) samples, soil exhibiting detections above ISCOs and CSCOs were beneath the building slab. The results of the Previous Phase II investigation were used to develop the scope of the RI. The results of which are described in the bullets below.

- Based on the results of the Building 7 BCP Site RI soil investigation, metals, VOCs and SVOC were not detected above the PGWSCOs with the following exception:
 - One out of 13 samples contained a detection of lead (Pb) (1,620 mg/kg) greater than the PGWSCO and CSCO, but below the ISCO. This sample was collected from the top four feet of fill material, and it is not representative of a facility-wide condition.
- Overall, significant impacts to soil were not identified during the Building 7 BCP Site RI. All detections were below ISCOs and one (1) lead detection was noted above CSCOs. In addition, there did not appear to be substantial variation between the analytical data from fill soils versus native soils, indicating that historic fill is not anticipated to be a source of contamination at the Site. The isolated detection of lead (Pb) is anticipated to be a result of naturally occurring conditions and/or anomaly.

Groundwater:

Groundwater sample results were compared to the NYSDEC TOGS 1.1.1 Class GA criteria. During the Building 7 BCP Site RI activities, new and historical wells were sampled for VOCs, based on prior sampling results.

- Based on historical and recent groundwater sampling conducted, the primary contaminants of concern (COC) identified in groundwater include PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride, with the highest concentrations identified on the western (upgradient) side of the Building 7 BCP Site.
- VOC were not detected in downgradient wells east of the Building 7 BCP Site (MW-7-1, MW-7-2, and MW-7-4), indicating that contaminated groundwater has likely not migrated from the study area. Refer to Figure 10.
- As previously noted, groundwater is not currently used at the GMCH facility for potable 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.

Sub-slab Vapor/Indoor Air:

- Eleven (11) pairs of indoor air and sub-slab vapor samples were collected from various locations throughout the interior of Building 7. The comparison of the results to the NYSDOH SVI Guidance decision matrices indicate that the concentrations of VOCs detected in the sub-slab vapor and/or indoor air samples exceed their respective AGVs.
- The COCs identified in the sub-slab vapor and indoor air include PCE, TCE, cis-1,2-DCE, and vinyl chloride, which is both consistent with the COCs identified in the groundwater and chemicals historically used at the Building 7 BCP Site.

5.1 Contaminants of Concern (COC)

A summary of the Building 7 BCP Site COCs, potential source evaluation, and delineation of nature and extent has been distilled from Building 7 BCP Site explorations, sampling and testing completed as are described in detail in the preceding sections of this report.

Based on the investigation and analytical results as summarized above, the COCs have been identified based on the detection of any one of a broad suite of organic and inorganic substances that are related to the Building 7 BCP Site operations and are present at levels higher than the relevant standards, criteria, and guidelines (SCGs). Consistent with the approved RIWP, the Building 7 BCP Site RI Site data were evaluated on the basis of the SCGs as 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 NYSDOH decision matrices included in the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in New York State (2006) for soil vapor and indoor air. These SCGs represent risk-derived concentrations determined by the NYSDEC/NYSDOH to be fully protective of human health and the environment.

The COC identified in the Building 7 BCP Site soil, groundwater, and sub-slab vapor/indoor air data are summarized on Tables II through V, which identifies those substances that were detected at levels higher than the comparison criteria. The determination of COC was based on the following factors:

- COC substances have been consistently detected and in excess of screening criteria.
- COC substances can be linked to the Building 7 BCP Site and not to naturally occurring and/or ambient conditions surrounding the Building 7 BCP Site.
- COC substances have been detected at a frequency and at sufficient concentrations that the COC could present a reasonable potential for human or environmental exposure.

A detailed evaluation of the data set has resulted in identification of COC on the Building 7 BCP Site. The COC identified are as follows:



- 1. Primary COC include chlorinated solvents, specifically PCE, TCE, cis-1, 2-DCE, trans 1,2-DCE, and vinyl chloride in soil, groundwater, sub-slab vapor and indoor air. However, PCE was the only primary COC detected in the soil in excess of screening criteria.
- 2. Secondary COC include low levels of PAHs historically identified in onsite soils either related to fill materials and/or historical manufacturing activities.

These COC were 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 and CSCOs, lead (Pb), copper and PCBs in soil have not been included as COC due to the following reasons:

Due to only one incidence of lead (Pb), PCB (Aroclor 1248) and copper detected in soil samples at a concentration greater than the PGWSCOs and CSCOs during the RI investigation, it is anticipated that these detections are anomalous and not representative of Site-wide conditions. The detections are below their respective ISCOs and due to their low mobility characteristics, the presence of these compounds are not anticipated to impact groundwater and migrate from the Building 7 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 Site including chlorinated solvents and PAHs. These summaries provide 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 7 BCP Site. Potential exposure pathways are further described and form the basis of the QHHEA performed for the Building 7 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 7 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 TCE and can result from natural breakdown of PCE in soil and groundwater. PCE and TCE are both non-flammable liquids at room temperature and are characterized by their sweet odors. It is noted that historically, there were several degreasers at the Building 7 BCP Site that used chlorinated solvents including TCE.

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



Polycyclic Aromatic Hydrocarbons (PAHs):

PAHs are a group of more than 100 chemicals that are formed during incomplete burning of coal, oil, gas, wood, garbage, or other organic substances. PAHs occur both naturally and are manufactured. As a pure chemical, PAHs generally are colorless, white, or pale yellow-green and have a faint, pleasant odor. PAHs have a variety of uses in manufacturing (medicines, dyes, plastics, pesticides, etc.), and are also found contained in asphalt used in road construction, crude oil, coal, coal tar pitch, creosote, and roofing tar. They are found throughout the environment, typically in air adhered to dust particles, and in soil. PAHs do not readily dissolve in ground and surface water. In surface water, PAHs will adsorb to suspended particles and settle to the bottoms of rivers or lakes.

5.3 Qualitative Human Health Exposure Assessment

A QHHEA is an evaluation of the potential for a complete pathway to exist by which human receptors may be exposed to the Building 7 BCP Site COCs. The QHHEA process is used as an initial screening tool to assess the potential that any COC identified at the Building 7 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 Remedial Action program to mitigate human exposure and potential risk that may currently exist or which could exist in the future. The Building 7 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 7 BCP Site:

- Qualitatively evaluate actual or potential exposures to Building 7 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 7 BCP Site could potentially occur; and,
- If the QHHEA concludes that complete exposure pathways are potentially present, describe the nature of the population exposed, or potentially exposed, to contaminants that are present at the Building 7 BCP Site and provide recommendations on additional exposure analysis and/or for remedial actions appropriate to mitigate the exposure pathway.

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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 COC identified on the Building 7 BCP Site as are described above includes a positive determination that an exposure pathway is "complete" if <u>all</u> the following factors or conditions are identified:

- 1. Presence of a contaminant in a medium (soil, air, or water);
- 2. Receptor (i.e., a 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 7 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, soil vapor/air) on the Building 7 BCP Site, Table VII presents an assessment of whether COC 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 and Federal guidelines as referenced above and as appropriate for the Building 7 BCP Site.

The current and reasonably anticipated exposure settings for the Building 7 BCP Site are based on inadvertent ingestion, adsorption or inhalation of COC to the extent these substances have been identified as being contained within soil, groundwater or air/vapor at the Building 7 BCP Site. Exposed populations include workers under the current Building 7 BCP Site use scenario, and workers and occupants in future commercial or industrial use of the Building 7 BCP Site. The future Building 7 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 7 BCP Site exposure setting is further described on Table VII.

In summary, exposure pathways for soil and groundwater are currently incomplete at the Building 7 BCP Site because there are controls 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 defined in the relevant regulations of 6 NYCRR Part 375-1 including a surface cap, access restriction/control and lack of use of groundwater that prevent the potential for exposure to the COCs. With respect to air/vapor, a complete exposure pathway to the COC currently exists within Building 7. The remedial technology and engineering/institutional control options to address this pathway will be evaluated as part of an Alternatives Analysis Report (AAR) for the Building 7 BCP Site.

Assessment of future conditions assume that yet to be defined activities may occur at the Building 7 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 this scenario, the QHHEA process concludes that exposure pathways to certain receptor populations could potentially become temporarily complete. There is no complete exposure pathway given that groundwater is not currently used; however, a pathway could become complete as a result of exposure to impacted groundwater via excavation activities. The remedial technology and 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 7 BCP Site.



6. CONCLUSIONS & RECOMMENDATIONS

In accordance with the NYSDEC BCA for the Building 7 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 7 BCP Site and soil vapor intrusion within Building 7.

This Report provides the results of the RI and incorporates Previous Phase II investigation data and results in appendices. 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 is adequate to be used to evaluate if remedial actions are warranted at the Building 7 BCP Site to be protective of human health and the environment. GMCH anticipates that future use of the Building 7 BCP Site will be limited to commercial and/or industrial uses.

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 7 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 7 BCP Site consist of VOCs (PCE, TCE, trans-1,2-DCE, cis-1,2-DCE, and vinyl chloride) in soil, groundwater, soil vapor, and indoor air; and low levels of PAHs in soils.
- VOCs are currently impacting sub-slab vapor and indoor air within the Building 7 BCP Site buildings.
- 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.
- PCE, SVOCs, PCBs (Aroclor 1248) and lead were detected in a few soil samples collected from within the Building 7 BCP Site. The limited number of detections indicates that soil is not significantly impacted within the Building 7 BCP Site.
- COC contaminated groundwater is present within the Building 7 BCP Site and migrating in an easterly direction. 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 7 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 QHHEA for the Building 7 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 7 BCP Site could pose an existing or potential hazard to the exposed or potentially exposed populations.

Results of the QHHEA include:

- There are no complete human health exposure pathways identified at the Building 7 BCP Site under the current 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 COC in groundwater as groundwater is not, nor is planned to be, used for any purpose.
- There is a complete exposure pathway for indoor air/ soil vapor within Building 7. This pathway will require an evaluation and implementation of appropriate remedial technologies and/or engineering/institutional controls as part of the remedial action program.
- Future complete exposure pathways from inadvertent ingestion, dermal absorption, and inhalation of a COCs could potentially exist to the extent that the building foundations/pavement are removed and the soil and groundwater, and subsequently vapors become exposed at the ground surface; or if groundwater that 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 will be evaluated and implemented as part of the remedial program for the Building 7 BCP Site.
- Based on the RI results, remedial actions are warranted to mitigate the potential for complete human or environmental exposure pathways currently and in the future at the Building 7 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 7 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 7 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 7 BCP Site, and reduce the potential for contaminated groundwater to infiltrate the on-site sewer system.

Therefore, consistent with Section II.A.2 of the BCA, GMCH will prepare and submit an Alternatives Analysis Report (AAR) for the Building 7 BCP Site to document the remedial alternative screening process, and a Remedial Action Work Plan (RAWP) as appropriate to detail the scope and implementation process for the Building 7 BCP Site remediation/mitigation activities, if warranted.



7. REFERENCES

- 1. "Revised Remedial Investigation Work Plan, GM Components Holdings, LLC, 200 Upper Mountain Road, Lockport, New York, Building 8 Site #932139" dated October 2010;
- 2. "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;
- 3. "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;
- 4. "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;
- 5. "Technical Guidance for Site Investigation and Remediation", NYSDEC Division of Environmental Remediation DER-10, dated May 2010.
- 6. "Final Guidance for Evaluating Soil Vapor Intrusion in the State New York", New York State Department of Health (NYSDOH), dated October 2006.
- 7. "The Bouwer and Rice Slug Test An Update", Bouwer, H. Groundwater Journal, Vol. 27., No.3, May-June 1989.
- 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.
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Table I Analytical Sample Summary Table GMCH Lockport Facility Building 7 BCP Site Site #C932138

			Depth/		VOCs	SVOCs	PCBs	Metals		
Location	Sample Identifier	Date Collected	Interval	Matrix	Method	Method	Method	MethodSW-846 6010	EPA Method	Commets
			(ft bgs)		SW-846 8260B	SW-846 8270C	SW-846 8081	7000 Series	TO-15	
SOIL SAMPLES	7.00 4.400740.4000	40/07/40	11.05							
7-SB-1	7-SB-1-122710-1220	12/27/10	1 to 2.5	Soil	X	X	X	X		
7-SB-2	7-SB-2-122710-1340	12/27/10	10 to 12	Soil	X	X	X	X		140/1400 (0)/00
7-SB-3	7-SB3-122910-1530	12/29/10	9.5 to 11.5	Soil	X	X	X	X		MS/MSD for SVOCs
7-SB-4	7-SB-4-122710-1015	12/27/10	12 to 13.5	Soil	X	X	X	X		
7-SB-4	DUP-122710-0001	12/27/10	12 to 13.5	Soil	X	X	X	X		Dup of 7-SB-4-122710-1015
7-SB-5	7-SB-5-122710-1115	12/27/10	8 to 10	Soil	X	X	X	X		
7-SB-6	7-SB-6-010411-0915	01/04/11	10 to 11.5	Soil	X	X	X	X		
7-SB-7	7-SB-7-010411-1315	01/04/11	8 to 10	Soil	X	X	X	X		
7-SB-8	7-SB-8-010411-1030	01/04/11	10 to 12.5	Soil	X	X	X	X		
S-SB-9	7-SB-9-010411-1350	01/04/11	2 to 4	Soil	X	X	X	X		
7-SB-10	7-SB-10-010411-1440	01/04/11	2 to 4	Soil	X	X	X	X		MS/MSD for VOCs, PCBs & Metals
7-SB-11	7-SB-11-010411-1215	01/04/11	8 to 10	Soil	X	X	X	X		
7-SB-12	7-SB-12-010411-1100	01/04/11	1 to 4	Soil	X	X	X	X		
MW-7-5	MW-7-5-010411-0815	01/04/11	8 to 10	Soil	X					
MW-7-6	MW-7-6-010411-0845	01/04/11	4 to 5.5	Soil	X					
MW-7-7	MW-7-7-122110-1150	12/21/10	4 to 6	Soil	Х					
MW-7-8	MW-7-8-122210-1130	12/22/10	7 to 9	Soil	Х					
QA/QC	EB-122910-0003	12/29/10	NA	Soil	Х	Х	Х	Х		Equipment Blank
GROUNDWATER SAMPLES										
MW-7-1	MW-7-1-042711-1235	04/27/11	NA	GW	X					
MW-7-2	MW-7-2-042711-1410	04/27/11	NA	GW	X					
MW-7-3	MW-7-3-042711-1049	04/27/11	NA	GW	Х					
MW-7-4	MW-7-4-042711-1550	04/27/11	NA	GW	Х					
MW-7-5	MW-7-5-042811-1040	04/28/11	NA	GW	Х			1		
MW-7-5	DUP-042811-001	04/28/11	NA	GW	X					Dup of MW-7-5-042811-1040
MW-7-6	MW-7-6-042711-1500	04/27/11	NA	GW	X					MS/MSD
MW-7-7	MW-7-7-042811-1505	04/28/11	NA	GW	X					e,ez
MW-7-8	MW-7-8-042811-1035	04/28/11	NA NA	GW	X			+		
MW-7-A-6	MW-7-A-6-042811-1235	04/28/11	NA NA	GW	X			+		
MW-7-P-1	MW-7-P-1-042811-1340	04/28/11	NA NA	GW	X			+		
MW-7-C-2	MW-7-G2-042911-1610	04/28/11	NA NA	GW	.,			+		
Rinse Blank	BLDG-7-RINSE-042911-1630	04/29/11	NA NA	GW	X			+		Rinse Blank
QA/QC	TRIP BLANK	04/29/11	NA NA	GW	X					Trip Blank
VAPOR INTRUSION AIR SAI		04/21/11	IVA	OW	Λ					ттр Батк
7-VI-1IA	7-VI-1IA-011811-0748	01/18/11	NA	Indoor Air						
7-VI-1IA 7-VI-1IA			NA NA					+	X	Dup of 7 \/I 1IA 011911 0749
	7-VI-DUP2-011811-0747	01/18/11		Indoor Air						Dup of 7-VI-1IA-011811-0748
7-VI-1SS	7-VI-1SS-011811-0749	01/18/11	NA NA	Sub-slab					X	
7-VI-2IA	7-VI-2IA-011811-0744	01/18/11	NA NA	Indoor Air					X	
7-VI-2SS	7-VI-2SS-011811-0745	01/18/11	NA	Sub-slab					X	
7-VI-3IA	7-VI-3IA-011811-0918	01/18/11	NA	Indoor Air					X	
7-VI-3SS	7-VI-3SS-011811-0917	01/18/11	NA	Sub-slab				1	X	
7-VI-4IA	7-VI-4IA-011811-0759	01/18/11	NA	Indoor Air					X	
7-VI-4SS	7-VI-4SS-011811-0801	01/18/11	NA	Sub-slab					X	
7-VI-5IA	7-VI-5IA-011811-0805	01/18/11	NA	Indoor Air					Х	
7-VI-5SS	7-VI-5SS-011811-0806	01/18/11	NA	Sub-slab					X	
7-VI-6IA	7-VI-6IA-011811-0808	01/18/11	NA	Indoor Air					X	
7-VI-6IA	7-VI-DUP-011811-0809	01/18/11	NA	Indoor Air					X	Dup of 7-VI-6IA-011811-0808
7-VI-6SS	7-VI-6SS-011811-0810	01/18/11	NA	Sub-slab					X	
7-VI-7IA	7-VI-7IA-011811-0813	01/18/11	NA	Indoor Air					Х	
7-VI-7SS	7-VI-7SS-011811-0814	01/18/11	NA	Sub-slab					Х	
7-VI-6IA	7-VI-6-IA-012011-0816	01/20/11	NA	Indoor Air					Х	
7-VI-6SS	7-VI-6-SS-012011-0815	01/20/11	NA	Sub-slab					Х	
7-VI-8IA	7-VI-8IA-011811-0816	01/18/11	NA	Indoor Air					Х	
7-VI-8SS	7-VI-8SS-011811-0817	01/18/11	NA	Sub-slab					Х	
7-VI-9IA	7-VI-9IA-011811-0819	01/18/11	NA	Indoor Air					Х	
7-VI-9SS	7-VI-9SS-011811-0820	01/18/11	NA	Sub-slab				1	X	
7-VI-10IA	7-VI-10IA-011811-0823	01/18/11	NA	Indoor Air				1	X	
7-VI-10SS	7-VI-10SS-011811-0824	01/18/11	NA	Sub-slab	1			1	X	
7-VI-11IA	7-VI-11IA-011811-0826	01/18/11	NA	Indoor Air	<u> </u>			†	X	
7-VI-11SS	7-VI-11SS-011811-0827	01/18/11	NA NA	Sub-slab	<u> </u>			1	X	
		0 ., . 0,		242 0140	i	ı	i	ì	. ^	<u> </u>
7-VI-OUT	7-VI-OUT-011811-0730	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 Assurence/Quality Control Sample
 10. EB = Equipment Blank
 11. Dup = Duplicate Sample

21.0056546.00 Page 1 of 1

TABLE II
SOIL ANALYTICAL RESULTS - BUILDING 7
GMCH LOCKPORT FACILITY
LOCKPORT, NEW YORK
BCP SITE #C932138

BUILDING				Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7
LOCATION	Protection of	Restricted	Restricted	7-SB-1	7-SB-2	7-SB-3	7-SB-4	7-SB-4	7-SB-5	7-SB-6	7-SB-7	7-SB-8	7-SB-9
DATE	Groundwater		Industrial	12/27/2010	12/27/2010	12/29/2010	12/27/2010	12/27/2010	12/27/2010	1/4/2011	1/4/2011	1/4/2011	1/4/2011
DEPTH	SCOs	SCOs	SCOs	1 - 2.5 ft BGS	10 - 12 ft BGS	9.5 - 11.5 ft BGS	12 - 13.5 ft BGS	12 - 13.5 ft BGS	8 - 10 ft BGS	10 - 11.5 ft BGS	8 - 10 ft BGS	10 - 12.5 ft BGS	2 - 4 ft BGS
SAMPLE TYPE	(PGWSCOs)	(CSCOs)	(ISCOs)	N	N	N	FD	N	N	N	N	N	N
Metals (mg/kg)													
Aluminum	-	-	-	9640	5630	5040 J	9860	10100	13100	6700	5520	5140	15000
Antimony	-	-	-	0.96 U	1.1 U	1.0 UJ	1.1 U	1.2 U	1.1 U	1.1 UJ	0.96 UJ	1.0 UJ	1.1 UJ
Arsenic	16	16	16	3	2.7	2.8	3.1	4.4	3.9	3.3	2.2	2.9	5.3
Barium	820	400	10000	96.3	66.8	45.3 J	87	105	110	78.6	62.6	76.4	103
Beryllium	47	590	2700	1.1	0.41 J	0.41 U	0.66	0.65	0.88	0.41 J	0.35 J	0.34 J	0.77
Cadmium	7.5	9.3	60	0.079 J	0.53 U	0.16 J	0.53 U	0.59 U	0.55 U	0.29 J	0.51	0.20 J	0.39 J
Calcium	_	_	-	33600	44100	47200 J	32900	40200	14600	51400	69800	34100	4360
Chromium	_	1500	6800	11.5	9.3	7.6 J	16	15.9	19.9	10.8	7.3	8.1	21.4
Cobalt		-	0000	5.1	6	5.5	6.7	8.7	9.7	6.7	5.3	6	9.9
	4700		40000		-							-	
Copper	1720	270	10000	34.9	13.7	16.8 J	14.2	15.9	19.5	20.5	16.5	20	19
Iron	-	-	-	14600	14100	11300 J	17700	21300	23100	16100	15500	12900	29200
Lead	450	1000	3900	6.9	3.6	3.8	5.1	6	6.8	4.4	4.4	4.6	5.6
Magnesium	-	-	-	3930	7030	7130 J	7330	9730	5700	12800	13500	5900	6270
Manganese	2000	10000	10000	1450	525	484 J	529	517	800	694	547	485	226
Mercury	0.73	2.8	5.7	0.015 J	0.037 U	0.037 U	0.039 U	0.039 U	0.040 U	0.037 U	0.037 U	0.037 U	0.040 U
Nickel	130	310	10000	11	12.2	12	15.9	19.8	24	13.3	9.1	11.6	25.6
Potassium	-		-	947	1110	976	1290	1710	1430	1330	1050	941	1730
Selenium	4	1500	6800	0.48 U	0.53 U	0.51 U	0.53 U	0.59 U	0.55 U	0.55 U	0.48 U	0.50 U	0.56 U
Silver	8.3	1500	6800	0.48 J	0.13 J	0.51 U	0.14 J	0.39 U	0.22 J	0.33 U	0.097 J	0.095 J	0.56 U
Sodium	0.5	1300	0000	192 J	55.6 J	114 J	143 J	129 J	66.6 J	190 J	621	171 J	217 J
	-	-	-										
Thallium	-	-	-	0.96 U	1.1 U	1.0 U	1.1 U	1.2 U	1.1 U	1.1 U	0.96 U	1.0 U	1.1 U
Vanadium	-	-	-	15.9	15	12.2 J	20.2	23.3	25.9	15.9	13.3	14.2	28.9
Zinc	2480	10000	10000	81.6	27.2	40.5 J	40.5 J	70.4 J	41.9	34.3 J	110 J	27.5 J	55.7 J
PCBs (mg/kg)													
Aroclor-1016 (PCB-1016)	3.2	1	25	0.018 U	0.018 U	0.018 U	0.02 U	0.02 U	0.02 U	0.019 U	0.019 U	0.019 U	0.02 U
Aroclor-1221 (PCB-1221)	3.2	1	25	0.018 U	0.018 U	0.018 U	0.02 U	0.02 U	0.02 U	0.019 U	0.019 U	0.019 U	0.02 U
Aroclor-1232 (PCB-1232)	3.2	1	25	0.018 U	0.018 U	0.018 U	0.02 U	0.02 U	0.02 U	0.019 U	0.019 U	0.019 U	0.02 U
Aroclor-1242 (PCB-1242)	3.2	1	25	0.018 U	0.018 U	0.018 U	0.02 U	0.02 U	0.02 U	0.019 U	0.019 U	0.019 U	0.02 U
Aroclor-1248 (PCB-1248)	3.2	1	25	0.018 U	0.018 U	0.018 U	0.02 U	0.02 U	0.02 U	0.019 U	0.019 U	0.019 U	0.02 U
Aroclor-1254 (PCB-1254)	3.2	1	25	0.018 U	0.018 U	0.018 U	0.02 U	0.02 U	0.02 U	0.019 U	0.019 U	0.019 U	0.02 U
Aroclor-1260 (PCB-1260)	3.2	1	25	0.018 U	0.018 U	0.018 U	0.02 U	0.02 U	0.02 U	0.019 U	0.019 U	0.019 U	0.02 U
A10Cl01-1200 (1 GB-1200)	3.2	'	20	0.010 0	0.010 0	0.010 0	0.02 0	0.02 0	0.02 0	0.019 0	0.019 0	0.019 0	0.02 0
Semi-Volatile Organic Compounds (mg/kg)													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	_		_	0.072 U	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
		-	-										
2,4,5-Trichlorophenol	0.1	=	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
2,4,6-Trichlorophenol	-	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
2,4-Dichlorophenol	0.4	-	-	0.072 U	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
2,4-Dimethylphenol	-	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
2,4-Dinitrophenol	0.2	-	-	1.8 U	1.9 U	1.9 U	2 U	2 U	2 U	1.9 U	1.9 U	1.9 U	2 U
2,4-Dinitrotoluene	-	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
2,6-Dinitrotoluene	0.17	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
2-Chloronaphthalene	-	_	-	0.072 U	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
2-Chlorophenol	_	_	_	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
2-Methylnaphthalene	36.4	_		0.072 U	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.4 U
' '		- -	1000										
2-Methylphenol	0.33	500	1000	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
2-Nitroaniline	0.4	-	-	1.8 U	1.9 U	1.9 U	2 U	2 U	2 U	1.9 U	1.9 U	1.9 U	2 U
2-Nitrophenol	0.3	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
3,3'-Dichlorobenzidine	-	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
3-Nitroaniline	0.5	-	-]	1.8 U	1.9 U	1.9 U	2 U	2 U	2 U	1.9 U	1.9 U	1.9 U	2 U
4,6-Dinitro-2-methylphenol	-	-	-	1.8 U	1.9 U	1.9 U	2 U	2 U	2 U	1.9 U	1.9 U	1.9 U	2 U
4-Bromophenyl phenyl ether	_	_	_	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
4-Chloro-3-methylphenol	_	_	_	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
4-Chloroaniline	0.22		[0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
		-	-	0.36 U									
4-Chlorophenyl phenyl ether	-	-	4000	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
4-Methylphenol	0.33	500	1000	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
4-Nitroaniline	-	-	-	1.8 U	1.9 U	1.9 U	2 U	2 U	2 U	1.9 U	1.9 U	1.9 U	2 U

TABLE II
SOIL ANALYTICAL RESULTS - BUILDING 7
GMCH LOCKPORT FACILITY
LOCKPORT, NEW YORK
BCP SITE #C932138

BUILDING LOCATION	Protection of	Restricted	Restricted	Building 7 7-SB-1	Building 7 7-SB-2	Building 7 7-SB-3	Building 7 7-SB-4	Building 7 7-SB-4	Building 7 7-SB-5	Building 7 7-SB-6	Building 7 7-SB-7	Building 7 7-SB-8	Building 7 7-SB-9
DATE	Groundwater		Industrial	12/27/2010	12/27/2010	12/29/2010	12/27/2010	12/27/2010	12/27/2010	1/4/2011	1/4/2011	1/4/2011	1/4/2011
DEPTH	SCOs	SCOs	SCOs	1 - 2.5 ft BGS	10 - 12 ft BGS	9.5 - 11.5 ft BGS	12 - 13.5 ft BGS	12 - 13.5 ft BGS	8 - 10 ft BGS	10 - 11.5 ft BGS	8 - 10 ft BGS	10 - 12.5 ft BGS	2 - 4 ft BGS
SAMPLE TYPE	(PGWSCOs)	(CSCOs)	(ISCOs)	N	N	N	FD	N	N	N	N	N	N
4-Nitrophenol	0.1	-	-	1.8 U	1.9 U	1.9 U	2 U	2 U	2 U	1.9 U	1.9 U	1.9 U	2 U
Acenaphthene	98	500	1000	0.072 U	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Acenaphthylene	107	500	1000	0.072 U	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Acetophenone	-	500	1000	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
Anthracene	1000	500	1000	0.04 J	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Atrazine	-	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
Benzaldehyde	-	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
Benzo(a)anthracene	1	5.6	11	0.11	0.074 U	0.074 U	0.028 J	0.02 J	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Benzo(a)pyrene	22	1	1.1	0.09	0.074 U	0.074 U	0.024 J	0.02 J	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Benzo(b)fluoranthene	1.7	5.6	11	0.14	0.074 U	0.074 U	0.035 J	0.031 J	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Benzo(g,h,i)perylene	1000	500	1000	0.042 J	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Benzo(k)fluoranthene	1.7	56	110	0.072 U	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Biphenyl (1,1-Biphenyl)	-	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
bis(2-Chloroethoxy)methane	-	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
bis(2-Chloroethyl)ether	-	-	-	0.072 U	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
bis(2-Ethylhexyl)phthalate (DEHP)	435	-	-	0.72 U	0.74 U	0.74 U	0.79 U	0.79 U	0.8 U	0.75 U	0.75 U	0.76 U	0.8 U
Butyl benzylphthalate (BBP)	122	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
Caprolactam	-	-	-	1.8 U	1.9 U	1.9 U	2 U	2 U	2 U	1.9 U	1.9 U	1.9 U	2 U
Carbazole	-	-	-	0.012 J	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Chrysene	1	56	110	0.084	0.074 U	0.074 U	0.026 J	0.019 J	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Dibenz(a,h)anthracene	1000	0.56	1.1	0.011 J	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Dibenzofuran	6.2	500	1000	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
Diethyl phthalate	7.1	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
Dimethyl phthalate	27	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
Di-n-butylphthalate (DBP)	8.1	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
Di-n-octyl phthalate (DnOP)	120	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
Fluoranthene	1000	500	1000	0.21	0.074 U	0.074 U	0.02 J	0.014 J	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Fluorene	386	500	1000	0.072 U	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Hexachlorobenzene	1.4	6	12	0.072 U	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Hexachlorobutadiene	-	-	-	0.072 U	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Hexachlorocyclopentadiene	-	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
Hexachloroethane	-	-	-	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
Indeno(1,2,3-cd)pyrene	8.2	5.6	11	0.042 J	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Isophorone	4.4	-	4000	0.36 U	0.37 U	0.37 U	0.39 U	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.4 U
Naphthalene	12	500	1000	0.072 U	0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Nitrobenzene	0.17	69	140	0.72 U	0.74 U	0.74 U	0.79 U	0.79 U	0.8 U	0.75 U	0.75 U	0.76 U	0.8 U
N-Nitrosodi-n-propylamine	-	_	- I	0.072 U 0.36 U	0.074 U	0.074 U	0.079 U 0.39 U	0.079 U 0.39 U	0.08 U	0.075 U	0.075 U	0.076 U 0.37 U	0.08 U
N-Nitrosodiphenylamine Pentachlorophenol	0.8	6.7	- 55	0.36 U 0.36 U	0.37 U 0.37 U	0.37 U 0.37 U	0.39 U 0.39 U	0.39 U 0.39 U	0.39 U 0.39 U	0.37 U 0.37 U	0.37 U 0.37 U	0.37 U 0.37 U	0.4 U 0.4 U
Pentachiorophenoi Phenanthrene	1000	5.7 500	1000	0.36 U 0.14	0.37 U 0.074 U	0.37 U 0.074 U	0.39 U 0.079 U	0.39 U 0.079 U	0.39 U 0.08 U	0.37 U 0.075 U	0.37 U 0.075 U	0.37 U 0.076 U	0.4 U 0.08 U
Phenol	0.33	500	1000	0.14 0.072 U	0.074 U 0.074 U	0.074 U	0.079 U	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Pyrene	1000	500	1000	0.072 0 0.17	0.074 U	0.074 U	0.079 U 0.022 J	0.079 U	0.08 U	0.075 U	0.075 U	0.076 U	0.08 U
Total Solids (%)													
Total solids	-	-	-	92.9	89.4	90.4	84.5	84.4	83.1	89.8	88.8	88.1	82.7
 Volatile Organic Compounds (mg/kg)													
1,1,1-Trichloroethane	0.68	500	1000	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
1,1,2,2-Tetrachloroethane	0.6	-	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
1,1,2-Trichloroethane	-	-	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
1,1-Dichloroethane	0.27	240	480	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
1,1-Dichloroethene	0.33	500	1000	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
1,2,4-Trichlorobenzene	3.4	-	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
1,2-Dibromo-3-chloropropane (DBCP)	-	-	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 UJ	0.006 U
1,2-Dibromoethane (Ethylene dibromide)	-	-	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
1,2-Dichlorobenzene	1.1	500	1000	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
1,2-Dichloroethane	0.02	30	60	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
1,2-Dichloroethene (total)	-	-	-	-	-	-	-	-	-	-	-	-	-
	ij	1	. "	1									

TABLE II SOIL ANALYTICAL RESULTS - BUILDING 7
GMCH LOCKPORT FACILITY
LOCKPORT, NEW YORK
BCP SITE #C932138

LOCATION DATE DEPTH SAMPLE TYPE	Protection of Groundwater SCOs		Restricted	7-SB-1	7-SB-2	7 00 0							
DEPTH	SCOs		ا مشهد بام ما			7-SB-3	7-SB-4	7-SB-4	7-SB-5	7-SB-6	7-SB-7	7-SB-8	7-SB-9
			Industrial	12/27/2010	12/27/2010	12/29/2010	12/27/2010	12/27/2010	12/27/2010	1/4/2011	1/4/2011	1/4/2011	1/4/2011
SAMPLE TYPE	(DC)()(CC)	SCOs	SCOs	1 - 2.5 ft BGS	10 - 12 ft BGS	9.5 - 11.5 ft BGS	12 - 13.5 ft BGS	12 - 13.5 ft BGS	8 - 10 ft BGS	10 - 11.5 ft BGS	8 - 10 ft BGS	10 - 12.5 ft BGS	2 - 4 ft BGS
	(PGWSCOs)	(CSCOs)	(ISCOs)	N	N	N	FD	N	N	N	N	N	N
1,2-Dichloropropane	-	-	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
1,3-Dichlorobenzene	2.4	280	560	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
1,4-Dichlorobenzene	1.8	130	250	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
2-Butanone (Methyl ethyl ketone) (MEK)	0.3	500	1000	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0076	0.28 UJ	0.006 U
2-Hexanone	-	-	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 UJ	0.006 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1	-	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 UJ	0.006 U
Acetone	0.05	500	1000	0.022 U	0.022 U	0.022 U	0.024 U	0.024 U	0.024 U	0.022 U	0.029	1.1 UJ	0.024 U
Benzene	0.06	44	89	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Bromodichloromethane	-	-	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Bromoform	-	-	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Bromomethane (Methyl bromide)	-	-	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Carbon disulfide	2.7	-	-	0.00096 J	0.0056 U	0.0055 UJ	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Carbon tetrachloride	0.76	22	44	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Chlorobenzene	1.1	500	1000	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Chloroethane	1.9	350	700	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 UJ	0.006 U
Chloroform (Trichloromethane)	0.37	-	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Chloromethane (Methyl chloride)	-	_	_	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 UJ	0.006 U
cis-1,2-Dichloroethene	0.25	500	1000	0.0039 J	0.0088	0.043	0.001 J	0.0079	0.0029 J	0.0056 U	0.0056 U	0.28 U	0.0067
cis-1,3-Dichloropropene	-	_	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Cyclohexane	_	_	_	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Dibromochloromethane	_	_	_	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Dichlorodifluoromethane (CFC-12)	_	_	_	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 UJ	0.006 U
Ethylbenzene	1	390	780	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.16 J	0.006 U
Isopropyl benzene	2.3	-	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.087 J	0.006 U
Methyl acetate	-	_	_	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 UJ	0.006 U
Methyl cyclohexane	_	_	_	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.1 J	0.006 U
Methyl tert butyl ether (MTBE)	0.93	500	1000	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Methylene chloride	0.05	500	1000	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Styrene	- 0.00	-	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Tetrachloroethene	1.3	150	300	0.0004 J	0.0056 U	0.0022 J	0.0044 J	0.0027 J	0.0068	0.0056 U	0.0056 U	0.39	0.006 U
Toluene	0.7	500	1000	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
trans-1,2-Dichloroethene	0.19	500	1000	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
trans-1,3-Dichloropropene	0.13	300	-	0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Trichloroethene	0.47	200	400	0.0054 U	0.00085 J	0.0033 U	0.0059 U	0.0039 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Trichlorofluoromethane (CFC-11)	0.47	200	400	0.0054 U	0.0056 U	0.002 J 0.0055 U	0.0059 U	0.0013 0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 UJ	0.006 U
Trifluorotrichloroethane (Freon 113)	6	_	[0.0054 U	0.0056 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Vinyl chloride	0.02	13	27	0.0054 U	0.0036 U	0.0055 U	0.0059 U	0.0059 U	0.006 U	0.0056 U	0.0056 U	0.28 U	0.006 U
Xylenes (total)	1.6	500	1000	0.0054 U 0.016 U	0.0011 J 0.017 U	0.0055 U 0.017 U	0.0059 U 0.018 U	0.0059 U 0.018 U	0.006 U 0.018 U	0.0056 U 0.017 U	0.0056 U 0.017 U	0.28 U 0.85 U	0.006 U 0.018 U
Ayichics (total)	0.1	300	1000	0.016 0	0.017 0	0.017 0	0.016 0	0.018 0	0.016 0	0.017 0	0.017 0	U.60.U	0.018 0

Notes and Abbreviations:

- Results shown in red exceed the following criteria:

 [A]: Protection of Groundwater Criteria

 - [B]: Restricted Commercial Criteria
 [C]: Restricted Industrial Criteria
- 2. 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 7
GMCH LOCKPORT FACILITY
LOCKPORT, NEW YORK
BCP SITE #C932138

BUILDING				Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7
LOCATION	Protection of	Restricted	Restricted	7-SB-10	7-SB-11	7-SB-12	MW-7-5	MW-7-6	MW-7-7	MW-7-8
DATE	Groundwater	Commercial	Industrial	1/4/2011	1/4/2011	1/4/2011	1/4/2011	1/4/2011	12/21/2010	12/22/2010
DEPTH	SCOs	SCOs	SCOs	2 - 4 ft BGS	8 - 10 ft BGS	1 - 4 ft BGS	8 - 10.5 ft BGS	4 - 5.5 ft BGS	4 - 6 ft BGS	7 - 9 ft BGS
SAMPLE TYPE	(PGWSCOs)	(CSCOs)	(ISCOs)	N	N	N	N	N	N	N
Matala (mar/kg)										
Metals (mg/kg)				13600	6680	10600				
Aluminum	-	-	-				-	-	-	-
Antimony	-	-	-	1.2 UJ	1.1 UJ	0.95 J	-	-	=	-
Arsenic	16	16	16	14.3	2.4	3.8	-	-	=	-
Barium	820	400	10000	99.1	58.7	69.8	-	-	-	-
Beryllium	47	590	2700	0.57	0.49	0.65	-	-	-	-
Cadmium	7.5	9.3	60	1.2	0.40 J	0.53 J	-	-	=	-
Calcium	-	-	-	2850	44200	37000	-	-	=	-
Chromium	-	1500	6800	28.9	10.2	43.9	-	-	-	-
Cobalt	-	-	-	9.7	6.7	7.2	-	-	=	-
Copper	1720	270	10000	121	16.4	98.2	-	-	-	-
Iron	-	-	-	21000	14100	18400	-	-	-	-
Lead	450	1000	3900	41.3	4.8	1620 [AB]	-	-	=	=
Magnesium	_	-	-	3720	7470	10300	_	_	_	_
Manganese	2000	10000	10000	303	506	580	_	_	_	_
Mercury	0.73	2.8	5.7	0.034 J	0.038 U	0.073	_	_	_	_
Nickel	130	310	10000	20.3	12.9	32.3	-	_		-
Potassium	-	310	10000	1490	1000	1320	-	-	-	-
		4500	-				-	-	-	-
Selenium	4	1500	6800	0.87	0.53 U	0.56 U	-	-	-	-
Silver	8.3	1500	6800	0.11 J	0.080 J	0.66	-	-	=	-
Sodium	-	-	-	114 J	110 J	1510	-	-	-	-
Thallium	-	-	-	1.2 U	1.1 U	1.1 U	-	-	=	-
Vanadium	-	-	-	33.9	17	21.4	-	-	-	-
Zinc	2480	10000	10000	54.7 J	138 J	93.0 J	-	-	=	-
PCBs (mg/kg)										
Aroclor-1016 (PCB-1016)	3.2	1	25	0.02 U	0.019 U	0.02 U	-	-	-	-
Aroclor-1221 (PCB-1221)	3.2	1	25	0.02 U	0.019 U	0.02 U	_	-	_	-
Aroclor-1232 (PCB-1232)	3.2	1	25	0.02 U	0.019 U	0.02 U	_	_	_	-
Aroclor-1242 (PCB-1242)	3.2	1	25	0.02 U	0.019 U	0.02 U	_	_	_	_
Aroclor-1248 (PCB-1248)	3.2		25	0.02 U	0.019 U	0.02 U	_	_	_	_
Aroclor-1254 (PCB-1254)	3.2		25	0.02 U	0.019 U	0.02 U	_	_	_	_
Aroclor-1260 (PCB-1260)	3.2		25	0.02 U	0.019 U	0.02 U		_	_	_
A100101-1200 (1 CB-1200)	5.2	l l	20	0.02 0	0.019 0	0.02 0				-
Semi-Volatile Organic Compounds (mg/kg)										
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	_	-	-	0.082 U	0.077 U	0.082 U	-	-	=	=
2,4,5-Trichlorophenol	0.1	_	_	0.41 U	0.38 U	0.41 U	_	_	_	_
2,4,6-Trichlorophenol	-	_	_	0.41 U	0.38 U	0.41 U	_	_	_	_
2,4-Dichlorophenol	0.4	_	_	0.082 U	0.077 U	0.082 U	_	_	_	_
	0.4	_	_	0.41 U	0.38 U	0.41 U	-	-	-	-
2,4-Dimethylphenol	-	-	-				-	-	-	-
2,4-Dinitrophenol	0.2	-	-	2.1 U	1.9 U	2.1 U	-	-	-	-
2,4-Dinitrotoluene	- 0.47	-	-	0.41 U	0.38 U	0.24 J	-	-	-	-
2,6-Dinitrotoluene	0.17	-	-	0.41 U	0.38 U	0.41 U	-	-	-	-
2-Chloronaphthalene	-	-	-	0.082 U	0.077 U	0.082 U	-	-	-	-
2-Chlorophenol	-	-	-	0.41 U	0.38 U	0.41 U	-	-	-	=
2-Methylnaphthalene	36.4	-	-	0.045 J	0.077 U	0.034 J	-	-	-	-
2-Methylphenol	0.33	500	1000	0.41 U	0.38 U	0.41 U	-	-	-	-
2-Nitroaniline	0.4	-	-	2.1 U	1.9 U	2.1 U	-	-	-	-
2-Nitrophenol	0.3	-	-	0.41 U	0.38 U	0.41 U	-	-	-	-
3,3'-Dichlorobenzidine	-	_	-	0.41 U	0.38 U	0.41 U	-	-	-	-
3-Nitroaniline	0.5	_	_	2.1 U	1.9 U	2.1 U	_	_	-	_
4,6-Dinitro-2-methylphenol	0.5	_	_	2.1 U	1.9 U	2.1 U	_	_	_	_
4-Bromophenyl phenyl ether	-			0.41 U	0.38 U	0.41 U	=	=	-	-
	 	-	-				-	-	-	-
4-Chloro-3-methylphenol	0.00	-	-	0.41 U	0.38 U	0.41 U	-	-	-	-
4-Chloroaniline	0.22	-	-	0.41 U	0.38 U	0.41 U	-	-	-	-
4-Chlorophenyl phenyl ether	-	-	-	0.41 U	0.38 U	0.41 U	-	-	=	-
4-Methylphenol	0.33	500	1000	0.41 U	0.38 U	0.41 U	-	-	-	-
4-Nitroaniline	-	-	-	2.1 U	1.9 U	2.1 U	-	-	-	-

TABLE II
SOIL ANALYTICAL RESULTS - BUILDING 7
GMCH LOCKPORT FACILITY
LOCKPORT, NEW YORK
BCP SITE #C932138

BUILDING LOCATION DATE DEPTH SAMPLE TYPE	Protection of Groundwater SCOs (PGWSCOs)	Restricted Commercial SCOs (CSCOs)	Restricted Industrial SCOs (ISCOs)	Building 7 7-SB-10 1/4/2011 2 - 4 ft BGS N	Building 7 7-SB-11 1/4/2011 8 - 10 ft BGS N	Building 7 7-SB-12 1/4/2011 1 - 4 ft BGS N	Building 7 MW-7-5 1/4/2011 8 - 10.5 ft BGS N	Building 7 MW-7-6 1/4/2011 4 - 5.5 ft BGS N	Building 7 MW-7-7 12/21/2010 4 - 6 ft BGS N	Building 7 MW-7-8 12/22/2010 7 - 9 ft BGS N
4-Nitrophenol	0.1	-	-	2.1 U	1.9 U	2.1 U	_	_	_	_
Acenaphthene	98	500	1000	0.082 U	0.077 U	0.082 U	-	-	_	-
Acenaphthylene	107	500	1000	0.082 U	0.077 U	0.082 U	-	-	_	_
Acetophenone	-	500	1000	0.41 U	0.38 U	0.41 U	-	-	_	_
Anthracene	1000	500	1000	0.082 U	0.077 U	0.018 J	-	=	_	=
Atrazine	-	-	-	0.41 U	0.38 U	0.41 U	-	-	-	-
Benzaldehyde	-	-	-	0.41 U	0.38 U	0.41 U	-	-	-	=
Benzo(a)anthracene	1	5.6	11	0.028 J	0.077 U	0.095	-	-	-	-
Benzo(a)pyrene	22	1	1.1	0.03 J	0.077 U	0.087	-	-	-	-
Benzo(b)fluoranthene	1.7	5.6	11	0.049 J	0.077 U	0.14	-	-	-	-
Benzo(g,h,i)perylene	1000	500	1000	0.082 U	0.077 U	0.063 J	-	=	-	=
Benzo(k)fluoranthene	1.7	56	110	0.082 U	0.077 U	0.082 U	-	-	-	-
Biphenyl (1,1-Biphenyl)	-	-	-	0.41 U	0.38 U	0.41 U	-	-	-	-
bis(2-Chloroethoxy)methane	-	-	-	0.41 U	0.38 U	0.41 U	-	-	-	-
bis(2-Chloroethyl)ether	-	-	-	0.082 U	0.077 U	0.082 U	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	435	-	-	0.82 U	0.77 U	0.82 U	-	-	-	-
Butyl benzylphthalate (BBP)	122	-	-	0.41 U	0.38 U	0.41 U	-	=	-	=
Cartagada	-	-	-	2.1 U	1.9 U	2.1 U	-	-	-	-
Carbazole Chrysene	1	- 56	- 110	0.082 U 0.03 J	0.077 U 0.077 U	0.082 U 0.09	-	-	-	-
Dibenz(a,h)anthracene	1000	0.56	1.1	0.03 J 0.082 U	0.077 U	0.09 0.016 J	-	-	-	=
Dibenzofuran	6.2	500	1000	0.062 U 0.41 U	0.38 U	0.41 U	-	<u>-</u>	-	=
Diethyl phthalate	7.1	500	1000	0.41 U	0.38 U	0.41 U	-	<u>-</u>	-	=
Dimethyl phthalate	27	-	_	0.41 U	0.38 U	0.41 U	-	<u>-</u>	-	=
Di-n-butylphthalate (DBP)	8.1	-	_	0.41 U	0.38 U	0.41 U	_	-	_	-
Di-n-octyl phthalate (DnOP)	120	_	_	0.41 U	0.38 U	0.41 U	- -	<u>-</u>	_	_
Fluoranthene	1000	500	1000	0.039 J	0.077 U	0.14	_	_	_	_
Fluorene	386	500	1000	0.082 U	0.077 U	0.082 U	-	<u>-</u>	<u>-</u>	<u>-</u>
Hexachlorobenzene	1.4	6	12	0.082 U	0.077 U	0.082 U	-	_	_	_
Hexachlorobutadiene	-	-	-	0.082 U	0.077 U	0.082 U	-	-	_	_
Hexachlorocyclopentadiene	-	_	-	0.41 U	0.38 U	0.41 U	-	-	-	=
Hexachloroethane	-	-	-	0.41 U	0.38 U	0.41 U	-	-	-	-
Indeno(1,2,3-cd)pyrene	8.2	5.6	11	0.082 U	0.077 U	0.051 J	-	-	-	-
Isophorone	4.4	-	-	0.41 U	0.38 U	0.41 U	-	-	-	=
Naphthalene	12	500	1000	0.035 J	0.077 U	0.025 J	-	-	-	-
Nitrobenzene	0.17	69	140	0.82 U	0.77 U	0.82 U	-	-	-	-
N-Nitrosodi-n-propylamine	-	-	-	0.082 U	0.077 U	0.082 U	-	-	-	-
N-Nitrosodiphenylamine	=	-	-	0.41 U	0.38 U	0.41 U	-	=	-	=
Pentachlorophenol	0.8	6.7	55	0.41 U	0.38 U	0.41 U	-	=	-	=
Phenanthrene	1000	500	1000	0.037 J	0.077 U	0.095	-	-	-	-
Phenol	0.33	500	1000	0.082 U	0.077 U	0.082 U	-	-	-	-
Pyrene	1000	500	1000	0.034 J	0.077 U	0.13	=	=	-	=
Total Solids (%)										
Total solids	-	-	-	81.3	86.6	81.5	86.3	90.6	90.8	91
Volatile Organia Compounds (malles)										
Volatile Organic Compounds (mg/kg) 1,1,1-Trichloroethane	0.60	500	1000	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
1,1,2,2-Tetrachloroethane	0.68 0.6	500	1000	0.0061 U 0.0061 U	0.0058 U 0.0058 U	0.0061 U	0.0058 U 0.0058 U	0.0055 U 0.0055 U	0.0055 U 0.0055 U	0.0055 U 0.0055 U
1,1,2-Trichloroethane	0.0	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U 0.0055 U	0.0055 U
1,1-Dichloroethane	0.27	240	480	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
1,1-Dichloroethane	0.27	500	1000	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
1,2,4-Trichlorobenzene	3.4	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
1,2-Dibromo-3-chloropropane (DBCP)	-	_	_	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
1,2-Dibromoethane (Ethylene dibromide)	_	_	_	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
1,2-Dichlorobenzene	1.1	500	1000	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
1,2-Dichloroethane	0.02	30	60	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
1,2-Dichloroethene (total)	-			-	-	-	-	-	-	-

TABLE II SOIL ANALYTICAL RESULTS - BUILDING 7
GMCH LOCKPORT FACILITY
LOCKPORT, NEW YORK
BCP SITE #C932138

BUILDING				Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7
LOCATION	Protection of	Restricted	Restricted	7-SB-10	7-SB-11	7-SB-12	MW-7-5	MW-7-6	MW-7-7	MW-7-8
DATE	Groundwater		Industrial	1/4/2011	1/4/2011	1/4/2011	1/4/2011	1/4/2011	12/21/2010	12/22/2010
DEPTH	SCOs	SCOs	SCOs	2 - 4 ft BGS	8 - 10 ft BGS	1 - 4 ft BGS	8 - 10.5 ft BGS	4 - 5.5 ft BGS	4 - 6 ft BGS	7 - 9 ft BGS
SAMPLE TYPE	(PGWSCOs)	(CSCOs)	(ISCOs)	N	N	N	N	N	N	N
1,2-Dichloropropane	-	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
1,3-Dichlorobenzene	2.4	280	560	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
1,4-Dichlorobenzene	1.8	130	250	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
2-Butanone (Methyl ethyl ketone) (MEK)	0.3	500	1000	0.0069	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
2-Hexanone	-	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	1	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Acetone	0.05	500	1000	0.023 J	0.023 U	0.0064 J	0.023 U	0.022 U	0.022 U	0.022 U
Benzene	0.06	44	89	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Bromodichloromethane	=	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Bromoform	=	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Bromomethane (Methyl bromide)	=	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Carbon disulfide	2.7	-	-	0.00079 J	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Carbon tetrachloride	0.76	22	44	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Chlorobenzene	1.1	500	1000	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Chloroethane	1.9	350	700	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Chloroform (Trichloromethane)	0.37	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Chloromethane (Methyl chloride)	=	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
cis-1,2-Dichloroethene	0.25	500	1000	0.0018 J	0.0058 U	0.0021 J	0.0058 U	0.0055 U	0.0017 J	0.0055 U
cis-1,3-Dichloropropene	-	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Cyclohexane	-	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Dibromochloromethane	-	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Dichlorodifluoromethane (CFC-12)	-	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Ethylbenzene	1	390	780	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Isopropyl benzene	2.3	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Methyl acetate	-	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Methyl cyclohexane	-	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Methyl tert butyl ether (MTBE)	0.93	500	1000	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Methylene chloride	0.05	500	1000	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Styrene	-	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Tetrachloroethene	1.3	150	300	0.0061 U	0.0058 U	0.042	0.0058 U	0.0055 U	0.13	0.0055 U
Toluene	0.7	500	1000	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
trans-1,2-Dichloroethene	0.19	500	1000	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
trans-1,3-Dichloropropene		-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Trichloroethene	0.47	200	400	0.0061 U	0.0058 U	0.0083	0.0058 U	0.0055 U	0.0026 J	0.0055 U
Trichlorofluoromethane (CFC-11)	-	-	-	0.0061 U	0.0058 U	0.0025 J	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Trifluorotrichloroethane (Freon 113)	6	-	-	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Vinyl chloride	0.02	13	27	0.0061 U	0.0058 U	0.0061 U	0.0058 U	0.0055 U	0.0055 U	0.0055 U
Xylenes (total)	1.6	500	1000	0.018 U	0.017 U	0.018 U	0.017 U	0.017 U	0.017 U	0.016 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
- 2. 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.

LOCKPORT, NEW YORK BCP SITE #C932138

BUILDING	Class GA	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7
LOCATION	TOGS 1.1.1	MW-7-1	MW-7-2	MW-7-3	MW-7-4	MW-7-5	MW-7-5	MW-7-6	MW-7-7	MW-7-8	MW-7-A-6	MW-7-C-2	MW-7-P-1
DATE		4/27/2011	4/27/2011	4/27/2011	4/27/2011	4/28/2011	4/28/2011	4/27/2011	4/28/2011	4/28/2011	4/28/2011	4/29/2011	4/28/2011
SAMPLE TYPE	ug/L	N	N	N	N	FD	N	N	N	N	N	N	N
Volatile Organic Compounds (ug/l)													
cis-1,2-Dichloroethene (ug/L)	5	1.0 U	1.0 U	8.6 ^[A]	1.0 U	640 ^[A]	680 ^[A]	350 ^[A]	200 U	29 [A]	16000 ^[A]	230 ^[A]	6.2 ^[A]
Tetrachloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	8800 [A]	8900 ^[A]	470 [A]	26000 [A]	290 ^[A]	140000 ^[A]	1.0 U	0.57 J
trans-1,2-Dichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	200 U	7.4 ^[A]	2.7	200 U	4.0 U	2000 U	1.0 U	4.9
Trichloroethene	5	1.0 U	1.0 U	1.0 U	1.0 U	870 ^[A]	890 ^[A]	240 ^[A]	200 U	100 ^[A]	19000 ^[A]	1.0 U	2.1
Vinyl chloride	2	1.0 U	1.0 U	46 [A]	1.0 U	200 U	5.8 ^[A]	35 ^[A]	200 U	4.0 U	2000 U	12 ^[A]	27 ^[A]

Notes and Abbreviations:

- 1. Results shown in red exceed:
- [A]: Indicates result is greater than TOGS 1.1.1

 2. Results shown in **bold** were detected.
- 3. U Results not detected above shown reporting limit.
- J Estimated result
- 4. Sample Types: N Normal Sample, FD- Field Duplicate
- 5. 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	Class GA TOGS 1.1.1	Building 6 MW-6-1 11/30/2007	Building 6 MW-6-1 2/20/2008	Building 6 MW-6-1 8/14/2008	Building 6 MW-6-1 4/27/2011	Building 6 MW-6-2 11/29/2007	Building 6 MW-6-2 2/20/2008	Building 6 MW-6-2 4/15/2008	Building 6 MW-6-2 8/14/2008	Building 6 MW-6-2 4/27/2011	Building 6 MW-6-F-7 8/13/2008	Building 6 MW-6-F-7 11/5/2008	Building 6 MW-6-F-8 8/13/2008	Building 6 MW-6-F-8 11/5/2008	Building 6 MW-6-F-8 4/27/2011	Building 6 MW-6-F-9 8/13/2008	Building 6 MW-6-F-9 11/5/2008	Building 7 MW-7-1 11/30/2007	Building 7 MW-7-1 2/20/2008	Building 7 MW-7-1 4/27/2011
SAMPLE TYPE	ug/L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Metals (ug/l)																				
Calcium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron (dissolved)	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	35000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium (dissolved) Manganese	300 300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese (dissolved)	300		-	-	-		-	-	-	-		-	-	-	-	-	-	_	-	-
Potassium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium (dissolved)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	20000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium (dissolved)	20000	-		-	-	-	-	<u>-</u>	-	<u> </u>	-	-	-	-	-	-	-	-	-	-
Miscellaneous (ug/l)																				
Total organic carbon (TOC)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Natural Attenuation Parameters (ug/l)																				
Alkalinity, total (as CaCO3) Ammonia	-	_	-	-	-		-	-	-	-	_	-	-	-	-		-		-	-
Ammonia-N	2000	_	-	-	-	_	-	-	-	-	_	-	-	-	-	_	-		-	-
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N) Nitrite (as N)	10000 10000	-	-	-	-		-	-	-	-		-	-	-	-		-]	-	
Sulfate	250000	-	-	-	-	_	-	-	-	-	_	-	-	-	-	-	-	_	-	-
Sulfide	50	-	<u> </u>	<u> </u>	-	-	<u> </u>	<u> </u>	<u> </u>		-	<u> </u>	<u>-</u>	<u> </u>	<u> </u>	-	<u> </u>	-	-	
Semi-Volatile Organic Compounds (ug/l)	20																			
Acenaphthene Anthracene	20 50	_	-	-	-		-	-	-	-	_	-	-	-	-		-]	-	-
Benzo(a)pyrene	-	-	- -	- -	-	-	- -	- -	-	- -	_	-	-	-	- -	-	-	_	-	=
Benzo(b)fluoranthene	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate Chrysene	5 0.002	-	-	-	-	_	-	-	_	-	_	-	-	-	-	_	-	_	_	-
Dibenz(a,h)anthracene	-	-	-	-	-	-	_	-	-	-	-	-	-	_	-	-	-	-	_	-
Fluoranthene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene Phenanthrene	10 50	-	-	-	-	_	-	-	-	-	-	-	-	-	-	_	-	-	-	-
Pyrene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (ug/l)	_	0.11	0.11	0.11		0.11	0.11	6.11	6.11		0.11	0.11	6.11	6.11		0.11	0.11	0.11	0.11	
1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane	5 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 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 1,2-Dibromo-3-chloropropane (DBCP)	5 0.04	-	- -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,2-Dibromoethane (Ethylene dibromide)	0.006	-	-	-	-	-	-	-	-	-	_	-	-	-	-	-	-	-	-	-
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 ^[A]	2 U	-
1,2-Dichloropropane 1,3-Dichlorobenzene	3	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 -	<u>-</u>	2 U -	2 U	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 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 Acrolein	50 5	10 U	10 U -	2 U -	-	10 U	10 U -	10 U	2 U -	- -	2 U -	2 U -	2 U -	2 U -	-	2 U -	2 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 ^[A]	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	-

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

LOCATION DESCRIPTION	Class GA	Building 6	Building 7	Building 7	Building 7															
LOCATION	TOGS 1.1.1	MW-6-1	MW-6-1	MW-6-1	MW-6-1	MW-6-2	MW-6-2	MW-6-2	MW-6-2	MW-6-2	MW-6-F-7	MW-6-F-7	MW-6-F-8	MW-6-F-8	MW-6-F-8	MW-6-F-9	MW-6-F-9	MW-7-1	MW-7-1	MW-7-1
DATE		11/30/2007	2/20/2008	8/14/2008	4/27/2011	11/29/2007	2/20/2008	4/15/2008	8/14/2008	4/27/2011	8/13/2008	11/5/2008	8/13/2008	11/5/2008	4/27/2011	8/13/2008	11/5/2008	11/30/2007	2/20/2008	4/27/2011
SAMPLE TYPE	ug/L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	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	2.4	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	211	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	7 [A]	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	211	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	25 [A]	2 U	4	2 U	1.0 U	2 U	2 U	2 U	2 U	1.0 U	2 U	2 U	110 ^[A]	56 ^[A]	1.0 U
Trichlorofluoromethane (CFC-11)	5		-	-	-		-	-	-	-		-	-	-	-		-	1	-	-
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	211	2 U	2 U	1.0 U	2 U	2 U	2 U	2 U	1.0 U	211	2 U	2 U	2 U	1.0 U	2 U	2 U	2 U	2 U	1.0 U
Xylenes (total)	5	20	2 U	2 U	1.0 0	20	2 U	2 U	2 U	1.00	211	6 U	2 U	6 U	1.0 0	2 U	6 U		2 U	1.00
Aylelles (lotal)	5	_	2 0	20	-	1 -	2 0	20	20	-	20	0.0	20	0.0	-	20	0.0	_	2 0	-

Notes and Abbreviations:

- Notes and Abbreviations:

 1. Results shown in red exceed:

 [A]: Indicates result is greater than TOGS 1.1.1

 2. Results shown in bold were detected.

 3. U Results not detected above shown reporting limit.

 J Estimated result

 4. Sample Types: N Normal Sample, FD- Field Duplicate

 5. Compounds compared to the NYSDEC Technical and

 Operational Guidance Series Glass GA Standards & Guidance

 (TOGS 1.1.1), June 1998 (Amended April 2000)

Haley & Aldrich, Inc.

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

Decomposition 1968/000 2	LOCATION DESCRIPTION LOCATION	Class GA TOGS 1.1.1	Building 7 MW-7-2	Building 7 MW-7-2	Building 7 MW-7-2	Building 7 MW-7-2	Building 7 MW-7-3	Building 7 MW-7-3	Building 7 MW-7-3	Building 7 MW-7-4	Building 7 MW-7-4	Building 7 MW-7-5	Building 7 MW-7-5	Building 7 MW-7-6	Building 7 MW-7-7	Building 7 MW-7-8	Building 7 MW-7-A-6	Building 7 MW-7-C-2	Building 7 MW-7-P-1	Building 8 MW-8-003-B
March Color	DATE	1003 1.1.1																		4/28/2011
Geschen	SAMPLE TYPE	ug/L	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N	N
Manuscription																				
The control of the co		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maging the standing Maging			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magneting (Fine Property) Magneting (Fin	Magnesium		-	-	-	-	_	-	-	_	-	_	-	-	_	_	_	_		-
Marginage Marg			_	- -	-	-	_	-	-	_	-	_	_	-	_	_	_	_	_	_
Processor Proc	Manganese		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Processor Proc	Manganese (dissolved)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Section Sect	Potassium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Settle Michaelment (198)		-	=	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manual Antonium Prameters (pg)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trail agrantion of CPC	Sodium (dissolved)	20000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trail agrantion of CPC	Miscellaneous (ug/l)																			
Name Aller		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Absorber (purple (a GCO2)																				
Amounts 100 1 1 1 1 1 1 1 1	Natural Attenuation Parameters (ug/l)																			
American's N. 2001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Circide		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manaria		2000	-	-	-	=	-	-	-	-	-	-	-	-	-	-	-	-	-	- [
Mahasia		-	-	-	-	-		-	-			-	-			1 -	1 -	_	-	<u> </u>
Nituse (is N) 10000				-	-	-	-	-	-			-	-	-	-] -] -	-	I -	_ [
Nettic (ps. 4) 10000 1 1 1 1 1 1 1 1		10000	_	-	-	-	_	_	_	_	_	_	_	_		_	_	_	_	_
Sulfide	Nitrite (as N)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfide			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acentapidene 20	Sulfide		-	=	-	=	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acentapidene 20																				
Anthresione 50 Sensicyliphysine																				
Bernote (playment			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzio (Junzamiene 0.002		50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzick Julper	Benzo(b)fluoranthone	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BenzigNuismithere 0.002		0.002	_	-	-	-	_	-	-	_	-	_	-	-		_	_	_		-
Bas/CertifyNexy (ghthwaist)		0.002	_	- -	-	-	_	-	-	_	-	_	-	-	_	_	_	_	_	_
Chrysne			-	-	-	-	_	-	-	-	-	-	_	-	_	-	-	-	-	-
Fluoranthene			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene 50 - - - - - - - - -	Dibenz(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Independ 1,3-oilly protein 1,3-oilly pro			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthelene			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pénanthree 50			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fyrene			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (ugit)			-	-	-	-	-	-	-	-	-	-	-	-			-		-	
1,1-1 Trichforcethane	rylelle	30	-	<u>-</u>	<u>-</u>	<u> </u>	_	<u> </u>	<u>-</u>	-		-		-	_	-	-	-	-	-
1,1,1-Trichloroethane	Volatile Organic Compounds (ug/l)																			
1 2 U 2 U 2 U 2 U 2 U 2 U - 2 U - 2 U	1,1,1-Trichloroethane	5	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
1.1-Dichloroethane		5		2 U		-		2 U	-		-	-	-	-	-	-	-	-	-	-
1.1-Dichloroethene		1 _							-			-	-	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene									-			-		-		-	-		-	
1.2Tirchlorobenzene			20						-			-	-	-	-		-		-	-
1.2-Dichloroperpane (DBCP) 1.2-Dichlorobenzene 3		_	-						-			_	-		[_		_	<u> </u>
1,2-Dichloroethane (Ethylene dibromide)									-			-		-] -	
1,2-Dichlorobenzene									-			_		-		_			_	
1,2-Dichloroethane									-			_		-		-			-	
1,2-Dichlorogethere (total) 1,2-Dichlorogethere (total) 1,2-Dichloropenane 1,2-Dichloropenane 1,2-Dichloropenane 1,3-Dichlorobenzene 3,3 2,U 2,U 2,U - 2,U	1,2-Dichloroethane					-			-			-	-	-	-	-	-	-	-	-
1.2 Dichloropropane 1.2 D 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U	1,2-Dichloroethene (total)					-			-		-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene 3 2 U 2 U 2 U	1,2-Dichloropropane			2 U	2 U	-		2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK) 50 - 10 U 2 U - 10 U 2 U - 2 U 2 U 2 U - 10 U - 2 U - 10 U - 2 U - 2 U 2 U - 2 U				-	-	-			-	-	-	-	-	-	-	-	-	-	-	-
2-Chloroethyl vinyl ether 2-Hexanore 4-Methyl-2-pentanore (Methyl isobutyl ketone) (MIBK Accorden Acrylonitrile Benzene 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2									-			-	-	-	-		-		-	-
2-Hexanone 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK 50 - 10 U 2 U - 10 U 2 U - 2 U - 10 U - 1	2-Butanone (Methyl ethyl ketone) (MEK)								-			-	-	-	-		-		-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK Acetone Acetone Acrolein Acrylonitrile Benzene - 10 U 2 U 10 U 2 U 10 U - 2 U 10 U												-	-	-						
Acetone 50 - 10 U 2 U - 10 U - 2 U -<												_		- -						
Acrolein 5 10 U 10 U																			I [
Acrylonitrile 0.07 10 U -									-] -	-	-] - [-] -	
Benzene 1 2U 2U 2U - 2U 2U - 2U									_			_	_	_			_		_	
	Bromodichloromethane	50	2 U	2 U	2 U	-	2 U	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-

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

LOCATION DESCRIPTION	Class GA	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 8						
LOCATION	TOGS 1.1.1	MW-7-2	MW-7-2	MW-7-2	MW-7-2	MW-7-3	MW-7-3	MW-7-3	MW-7-4	MW-7-4	MW-7-5	MW-7-5	MW-7-6	MW-7-7	MW-7-8	MW-7-A-6	MW-7-C-2	MW-7-P-1	MW-8-003-B
DATE		11/29/2007	2/20/2008	8/13/2008	4/27/2011	11/29/2007	2/20/2008	4/27/2011	8/14/2008	4/27/2011	4/28/2011	4/28/2011	4/27/2011	4/28/2011	4/28/2011	4/28/2011	4/29/2011	4/28/2011	4/28/2011
SAMPLE TYPE	ug/L	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N	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 Ü	2 Ü	2 U	-	2 Ü	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 ^[A]	2 U	1.0 U	640 ^[A]	680 ^[A]	350 ^[A]	200 U	29 ^[A]	16000 ^[A]	230 [A]	6.2 ^[A]	190 [A]
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	[A] 0088	8900 ^[A]	470 [A]	26000 ^[A]	290 [A]	140000 ^[A]	1.0 U	0.57 J	300 ^[A]
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 ^[A]	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 ^[A]	890 ^[A]	240 ^[A]	200 U	100 [A]	19000 ^[A]	1.0 U	2.1	110 ^[A]
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 [A]	2 U	1.0 U	200 U	5.8 ^[A]	35 ^[A]	200 U	4.0 U	2000 U	12 ^[A]	27 ^[A]	19 ^[A]
Xylenes (total)	5	-	2 U	2 U	-	-	2 U	-	2 U	-	-	-	-	-	-	-	-	-	-
Aylonoo (total)			2.0	2.0			20		2.0										

- Notes and Abbreviations:

 1. Results shown in red exceed:
 [A]: Indicates result is greater than TOGS 1.1.1

 2. Results shown in bold were detected.

 3. U Results not detected above shown reporting limit.
 J Estimated result

 4. Sample Types: N Normal Sample, FD- Field Duplicate

 5. 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	Class GA TOGS 1.1.1	Building 8 MW-8-1	Building 8 MW-8-2	Building 8 MW-8-3	Building 8 MW-8-3	Building 8 MW-8-4	Building 9 MW-9-101-A	Building 9 MW-9-12	Building 9 MW-9-4	Building 10 BLDG10	Building 10 MW-10-2	Building 10 MW-10-3	Building 10 MW-10-3	Sitewide MW-1	Sitewide MW-4	Sitewide MW-4	Sitewide MW-4	Sitewide MW-7	Sitewide MW-7	Sitewide MW-7
DATE	1003 1.1.1	4/29/2011	4/29/2011	5/2/2011	5/2/2011	5/2/2011	4/29/2011	8/14/2008	8/14/2008	4/29/2011	4/29/2011	4/29/2011	4/29/2011	7/19/2007	7/20/2009	4/22/2011	4/22/2011	10/25/2006	11/29/2007	11/5/2008
SAMPLE TYPE	ug/L	N	N	FD	N	N	N	N	N	N	N	FD	N	N	N	FD	N	N	N	N
Metals (ug/l)																				
Calcium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	493000	476000	-	-	327000
Iron	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3100 ^[A]	3100 ^[A]	230	580 ^[A]	6060 ^[A]
Iron (dissolved)	300	-	-	-	-	-	-	-	-	-	-	-	-	-	3210 ^[A]	400000[0]	400000[0]	440000[0]		
Magnesium	35000	-	-	-	-	-	-	-	-	-	-	-	-	-	402000 [A]	139000 ^[A]	138000 ^[A]	112200 [A]	98500 ^[A]	74000 ^[A]
Magnesium (dissolved) Manganese	300 300	_	_	_	-	_	_	_	_	_	-	_	_	-	193000 ^[A]	1600 ^[A]	1600 ^[A]	20	50	2280 ^[A]
Manganese (dissolved)	300	_	_	_	-		_	_		_	_	_	_	-	2640 ^[A]	1000	1000**	-	-	2200
Potassium	-	-	-	-	-	_	-	-	-	-	-	-	-	-	-	17800	17300	19400	20700	4390
Potassium (dissolved)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50500	-	-	-	-	-
Sodium	20000	-	-	-	-	-	-	-	-	-	-	-	-	-		1420000 ^[A]	1390000 ^[A]	237000 ^[A]	278000 ^[A]	277000 ^[A]
Sodium (dissolved)	20000	-	-	-	-	-	-	-	-	-	-	-	-	-	2100000 ^[A]	-	=	-	=	-
Miscellaneous (ug/l)																				
Total organic carbon (TOC)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13000	600 J	540 J	27600	14000	4400
· · ·																				
Natural Attenuation Parameters (ug/l)																				
Alkalinity, total (as CaCO3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	330000	342000	343000	367000	322000	348000
Ammonia Ammonia-N	2000	_	-	-	-	-	-	-	-		_	-	-	-	3830 ^[A]	1900	1900	1330	1140	80
Chloride	2000	I :] -]	-		1 [I] -	[[1 -	-	5320000	3260000	3130000	600000	430000	980000
Methane	_	-	_	-	-	_	_	_	_	_	_	-	_	-	5280	2000	2000	60	130	110
Methane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-
Nitrate (as N)	10000	-	-	-	-	-	-	-	-	-	-	-	-	-	600 U	50 U	50 U	50 U	50 U	50 U
Nitrite (as N)	10000	-	-	-	-	-	-	-	-	-	-	-	-	-	600 U	50 U	50 U	50 U	50 U	50 U
Sulfate Sulfide	250000 50	-	-	-	-	-	-	-	-	-	-	-	=	-	295000 ^[A] 2000 ^[A]	370000 ^[A] 100 U	341000 ^[A] 100 U	470000 ^[A]	519000 ^[A] 800 ^[A]	23000
Suilide	50	-	-	-	-	-	-	-	-	-	-	-	-	-	2000**	100 0	100 0	100 U	800**	100 U
Semi-Volatile Organic Compounds (ug/l)																				
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 Benzo(k)fluoranthene	0.002	_	_	_	-	_		2 U 2 U	73 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 ^[A]	-	-	-	-	-	-	-	-	-	-	-
Fluorene	50	-	-	-	-	-	-	2 U	73 U	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene Naphthalene	0.002 10	_	-	_	-	_	_	2 U 2 U	73 U 73 U	_	_	_	_	-	_	-	-	_	-	-
Phenanthrene	50	_		-	-	_		2 U	7970 ^[A]	_	_	_	-	_	_	-	-	_	-	-
Pyrene	50	-	-	-	-	-	-	2 U	73 U	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (ug/l)	_																			
1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane	5 5	· -	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
1,1,2-Trichloroethane	1	I -]	-		1 -	I			-	-	I -	2 U] [-	-] [-	-
1,1-Dichloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	2 U	-	-	-	_	-	-
1,1-Dichloroethene	5	-	-	-	-	-	-	-	-	-	-	-	-	480 ^[A]	-	-	-	-	-	-
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) 1,2-Dichlorobenzene	0.0006 3		-]	-			_			-			2 U 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) 2-Chloroethyl vinyl ether	50 -	-	-		-	-	-	-	-		-	_	-	10 U		-	-	[-	-
2-Hexanone	50	I -	-	-	-					-	-	-	-	10 U] -	- -	-] [-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK	50	-	-	-	-	-	-	-	-	-	-	-	-	59 ^[A]	-	-	-	-	-	-
Acetone	50	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-
Acrolein	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrylonitrile	0.07	-	=	-	-	-	-	-	-	-	-	-	-	- FA1	-	-	-	-	-	-
Benzene Bromodichloromothono	1	-	-	-	-	-	-	-	-	-	-	-	-	5 ^[A]	-	-	-	-	-	-
Bromodichloromethane	50	, -	-	-	-	-	1 -	-	-	-	-	ı -	-	2 U	-	-	-	-	-	-

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

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

- Notes and Abbreviations:

 1. Results shown in red exceed:
 [A]: Indicates result is greater than TOGS 1.1.1

 2. Results shown in bold were detected.

 3. U Results not detected above shown reporting limit.
 J Estimated result

 4. Sample Types: N Normal Sample, FD- Field Duplicate

 5. 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	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	MW-13	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	11/28/2007	11/5/2008
SAMPLE TYPE	ug/L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	_																			
Metals (ug/l)																				
Calcium	-	193000	-	121000	-	220000	-	392000	-	281000	-		92500	-	-	269000	227000 B	-		196000
Iron	300	90	-	200	-	120		34 J	-	750 ^[A]	800 ^[A]	740 ^[A]	140	7500 ^[A]	6680 ^[A]	11500 ^[A]	6600 ^[A]	9210 ^[A]	7830 ^[A]	7600 ^[A]
Iron (dissolved)	300	-	30	-	28	-	10 U	-	78	-	-		-	-		-	-		-	-
Magnesium	35000	86700 ^[A]	-	60100 ^[A]	-	102000 ^[A]		94900 ^[A]	-	77300 ^[A]	30700	42100 ^[A]	30800	44800 ^[A]	46000 ^[A]	81700 ^[A]	65100 ^[A]	53700 ^[A]	50800 ^[A]	52300 ^[A]
Magnesium (dissolved)	300	-	84900 ^[A]	-	102000 ^[A]	E20[A]	117000 ^[A]	-	103000 ^[A]	0400 D [A]	-	-	- 00 D	-	4440[4]	-	7400[4]		4050[4]	E 400 [A]
Manganese (dispalyed)	300	40	-	25	395 [A]	530 [A]	313 [A]	110	2570 ^[A]	2100 B ^[A]	80	80	86 B	6020 ^[A]	4440 [A]	8600 ^[A]	7100 ^[A]	6030 ^[A]	4950 ^[A]	5400 ^[A]
Manganese (dissolved)	300	14200	32	12000		- 7000		-		-	7600	12200	5700	4500	3900	- 5100	2700	0100	-	11000
Potassium Potassium (dissolved)	-	14200	24100	13800	15700	7900	19000	6900	20600	6900	7600	12300	5700	4500	3900	5100	3700	9100	9600	11000
Sodium	20000	213000 ^[A]	-	3290000 ^[A]	13700	355000 ^[A]	-	1710000 ^[A]	20000	1760000 [A]	84700 ^[A]	234000 ^[A]	119000 ^[A]	684000 ^[A]	666000 ^[A]	1060000 ^[A]	958000 ^[A]	1210000 ^[A]	1250000 ^[A]	1430000 ^[A]
Sodium (dissolved)	20000	213000	230000 [A]	3230000 -	246000 ^[A]	-	1600000 ^[A]	1710000	1950000 ^[A]	-	-	234000	-	004000	- -	-	- -	1210000	1230000	1430000
Couldin (discorred)	20000																			
Miscellaneous (ug/l)																				
Total organic carbon (TOC)	-	-	28000	9200	22000	1000 U	17000	1000 U	9100	4100	1900	3000	2800	6500	4000	-	3300	8400	7000	3800
Natural Attenuation Parameters (ug/l)	1				1													1		
Alkalinity, total (as CaCO3)	-	270000	310000	223000	300000	244000	290000	233000	320000	277000	341000	230000	294000	333000	274000	270000	272000	431000	420000	410000
Ammonia	-	-	-	530	-	300	-	110	-	110	-	-	38	-	-	-	1100	-	-	-
Ammonia-N	2000	980	1280	-	760	-	260	-	270	-	120	370	-	1550	1470	1890	-	1350	1740	1570
Chloride	-	410000	452000	267000	457000	683000	3100000	3410000	4260000	3230000 B	108000	410000	170000 B	1300000	1300000	2300000	1880000 B	2200000	2200000	2000000
Methane	-	40	72	15	86	18	32	6.9	348	64	8	8	7.1	24	12	870	42	160	3	21
Methane	-	-	-	50.11	-	E0.11	-	225	-	F0.1:	-	-	225	-	-	-	E0.11	-	-	-
Nitrate (as N)	10000	50 U	600 U	50 U	600 U	50 U	600 U	390 50 U	600 U	50 U 50 U	160	160 50 U	320	50 U	50 U	50 U	50 U	50 U	50 50 U	50 U
Nitrite (as N) Sulfate	10000	50 U 430000 ^[A]	600 U 460000 ^[A]	50 U 463000 ^[A]	600 U 588000 ^[A]	50 U 562000 ^[A]	900	362000 ^[A]	600 U 265000 ^[A]	1 75000	50 U	1 44000	50 U 53500	50 U	50 U	50 U	50 U	50 U 98000		50 U
Sulfide	250000 50	100 U	2400 [A]	100 U	2000 [A]	100 U	379000 ^[A] 1200 ^[A]	100 U	800 [A]	100 U	66000 100 U	1000 [A]	100 U	110000 100 U	79000 40 U	140000 100 U	108000 100 U	100 U	95000 400 [A]	91000 100 U
Sunde	30	100 0	2400**	100 0	2000**	100 0	1200**	100 0	800**	100 0	100 0	1000**	100 0	100 0	40 0	100 0	100 0	100 0	400**	100 0
Semi-Volatile Organic Compounds (ug/l)																				
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 50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene Pyrene	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fyrene	30	-	-	<u> </u>	-	<u>-</u>	-		-	<u> </u>	-	<u> </u>	<u> </u>	-	<u>-</u>	-	-	-	-	<u> </u>
Volatile Organic Compounds (ug/l)																				
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			-	-	1 -	-	-	-	-	-	-	-	-	-	-	-	-	1 -	-	-
	0.6	-				-	i -	-	_	-	Ī .	-	-	_	-	-	-	· -	-	-
1,2-Dichloroptopage	0.6 5	-	-	-	-					-		-	-	1 -	-	-	-	1 -	-	-
1,2-Dichloropropane	5 1	- - -	- - -	- - -	-	-	-	-	_	_	_	_	-	_	-	_	_	_	-	-
1,2-Dichloropropane 1,3-Dichlorobenzene	5 1 3	- - -	- - -	- - -	-	- - -	- - -	- - -	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene	5 1 3 3	- - - -	- - - -	- - - -	- - - -	- - -	- - -	- - -	-	- - -	- - -	- - -	- - -	-	- - -	-	- - -	- - -	-	-
1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone (Methyl ethyl ketone) (MEK)	5 1 3	- - - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	-	- - -	- - -	- - -	-	-	- - -	- - -	- - -	- - -	- - -	- - -
1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone (Methyl ethyl ketone) (MEK) 2-Chloroethyl vinyl ether	5 1 3 3 50	- - - - -	- - - - - -	- - - - -	- - - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -
1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone (Methyl ethyl ketone) (MEK) 2-Chloroethyl vinyl ether 2-Hexanone	5 1 3 3 50 - 50	- - - - - - -	- - - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - -	- - - - -	-	- - - -	- - - -	- - - - -	- - - - -	- - - -	- - - -	- - - -	- - - - -	- - - -	- - - -	- - - -
1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone (Methyl ethyl ketone) (MEK) 2-Chloroethyl vinyl ether	5 1 3 3 50	-	- - - - - - -	- - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -	-	- - - - -	- - - - - -	- - - - - -	- - - - -	- - - - -	- - - - - -	- - - - -	- - - - - -	- - - - - -	- - - - -	- - - - -
1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone (Methyl ethyl ketone) (MEK) 2-Chloroethyl vinyl ether 2-Hexanone 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK	5 1 3 3 50 - 50 50	- - - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	-	- - - - - - -	-	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - - -	- - - - - -	- - - - - -
1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone (Methyl ethyl ketone) (MEK) 2-Chloroethyl vinyl ether 2-Hexanone 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK Acetone	5 1 3 3 50 - 50 50 50	- - - - - - - - - -	- - - - - - - - -	- - - - - - - -	- - - - - - - - -	- - - - - - -	-	- - - - - - -	-	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	-	- - - - - - -	-	- - - - - - -	- - - - - - -	-	-
1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone (Methyl ethyl ketone) (MEK) 2-Chloroethyl vinyl ether 2-Hexanone 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK Acetone Acrolein	5 1 3 3 50 - 50 50 50 50 50	-	- - - - - - - - - - - -	- - - - - - - - -	- - - - - - - - - -	- - - - - - - -	-	- - - - - - - - -	-	- - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	-	- - - - - - - -	-	-	- - - - - - - -	-	-

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	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	MW-13	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	11/28/2007	11/5/2008
SAMPLE TYPE	ug/L	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	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 ^[A]	58200 ^[A]	42000 [A]	859 [A]	810 ^[A]	1670 ^[A]	1100 ^[A]	248 ^[A]	230 ^[A]	2 U	2	1.0 U	15 [A]	11 ^[A]	150 ^[A]	96 ^[A]	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 [A]	112 ^[A]	5000 U	5.4 ^[A]	7.7 ^[A]	186 ^[A]	180 ^[A]	115 ^[A]	67 ^[A]	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 ^[A]	107 ^[A]	5000 U	6.3 ^[A]	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 ^[A]	618000 ^[A]	680000 B ^[A]	50.2 ^[A]	78 B [A]	3290 ^[A]	2300 B ^[A]	74.6 ^[A]	88 ^[A]	2 U	2 U	1.0 U	2 U	2 U	5.5 [A]	1.2	2	2 U	2 U
Trichlorofluoromethane (CFC-11)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	3600 J ^[A]	2450 ^[A]	5000 U	98.1 ^[A]	120 ^[A]	50 U	32 ^[A]	43.5 [A]	27 [A]	2 U	2	1.0 U	33 ^[A]	14 ^[A]	81 ^[A]	37 ^[A]	2 U	2 U	2 U
Xylenes (total)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1		II			1		1		1		1			1				1		

- Notes and Abbreviations:

 1. Results shown in red exceed:
 [A]: Indicates result is greater than TOGS 1.1.1

 2. Results shown in bold were detected.

 3. U Results not detected above shown reporting limit.
 J Estimated result

 4. Sample Types: N Normal Sample, FD- Field Duplicate

 5. Compounds compared to the NYSDEC Technical and
 Operational Guidance Series Glass GA Standards & Guidance
 (TOGS 1.1.1), June 1998 (Amended April 2000)

LOCATION DESCRIPTION LOCATION DATE	Class GA TOGS 1.1.1	Sitewide MW-13 4/21/2011	Sitewide MW-14 10/24/2006	Sitewide MW-14 11/29/2007	Sitewide MW-14 2/24/2009	Sitewide MW-14 4/21/2011	Sitewide MW-15 10/24/2006	Sitewide MW-15 11/28/2007	Sitewide MW-15 4/21/2011	Sitewide TK-1 5/10/2011	Sitewide TK-2 5/17/2011	Sitewide TK-3 5/18/2011	Sitewide TK-4 5/18/2011	Sitewide TK-5 5/18/2011	Sitewide TK-6 5/18/2011	Sitewide TK-DUP 5/18/2011
SAMPLE TYPE	ug/L	N	N	N	N	-72172011 N	N	N	-7/21/2011 N	N	N	N	N	N	N	FD
Metals (ug/l) Calcium	_	210000	_	_	165000	149000	-	-	217000	_	_					_
Iron	300	7400 ^[A]	150	440 [A]	60	52	20 U	140	19 J	_	_	-	_	_		_
Iron (dissolved)	300	7400	-	440	-	-	-	-	190	_	_	_	_	_	_	_
Magnesium	35000	53200 ^[A]	94900 [A]	111000 ^[A]	79800 [A]	68000 ^[A]	62300 ^[A]	71700 ^[A]	55500 ^[A]	_	_	-	_	_	_	_
Magnesium (dissolved)	300	-	04000		-	-	02000		-	_	_	_	_	_	_	_
Manganese	300	6300 B [A]	200	250	180	190 B	270	390 ^[A]	240 B	_	-	_	-	-	_	_
Manganese (dissolved)	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	-	8300	8000	10500	7300	5400	4700	4900	3700	-	-	-	-	-	-	-
Potassium (dissolved)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	20000	1320000 ^[A]	831000 ^[A]	777000 ^[A]	833000 ^[A]	875000 ^[A]	311000 ^[A]	455000 ^[A]	390000 ^[A]	-	-	-	-	-	-	-
Sodium (dissolved)	20000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous (ug/l)																
Total organic carbon (TOC)	-	5800	3300	4000	_	2800	3600	2000	3500	-	-	_	-	-	-	-
· · ·																
Natural Attenuation Parameters (ug/l)																
Alkalinity, total (as CaCO3)	-	368000	336000	371000	299000	339000	434000	346000	394000	-	-	-	-	-	-	-
Ammonia	-	940	-	-	-	140	-	-	20 U	-	-	-	-	-	-	-
Ammonia-N	2000		250	530	230	- 1750000 B	90	1030	-	-	-	-	-	-	-	-
Chloride Methane	-	2090000 B 58	1700000 310	1800000 160	1500000 150	1750000 B 16	660000 2 U	1100000 2 U	895000 B 1.0 U	-		-	-	-	-	-
Methane		30	310	160	150	10	2 U -	2 U -	1.0 0			-		-] [-
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 ^[A]	100 U	100 U	100 U	40 U	100 U	-	-	-	-	-	-	-
2																
Semi-Volatile Organic Compounds (ug/l)	20															
Acenaphthene Anthracene	20 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 [A]	10 U	10 U	10.1 [A]	10 U	10 U	22.2 [A]
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 Phenanthrene	10 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
Tyrono	- 55									- 00	- 00			- 00	- 00	- 00
Volatile Organic Compounds (ug/l)																
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 5	-	-	-	-	-	-	-	-	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	E			-	-	- -	-	-	-	2 U	2 U	2 U	2 U	2 U	2 U	2 U
,	5	-		and the second s		-	-	-	-		-	-				1 -
1,2,3-Trichlorobenzene	5	- - -	- -	-	-	_	_	-		I -		-	I -	_	I -	_
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene	5 5	-	- - -	- -	-	-	-	-	_	_	-	_	-	-	-	
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane (DBCP)	5 5 0.04	-	- - -	- - -	- - -	- - -	- -	- - -	- -	-	-	-	-	-	-	_
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene	5 5	- - -	- - - -	- - - -	- - - -	-	- - -	- - -	-	- - 2 U	- - 2 U	- - 2 U	- - 2 U	- - 2 U	- - 2 U	- 2 U
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane (DBCP) 1,2-Dibromoethane (Ethylene dibromide)	5 5 0.04 0.0006	- - -	- - - -	- - - -	- - - -	- -	- - - -	- - - -	- -	- - 2 U 2 U	-	- - 2 U 2 U	- - 2 U 2 U	- - 2 U 2 U	- - 2 U 2 U	-
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane (DBCP) 1,2-Dibromoethane (Ethylene dibromide) 1,2-Dichlorobenzene	5 5 0.04 0.0006 3	- - - -	- - - - -	- - - - -	- - - - -	- - -	- - - -	- - - - -	- - -		- 2 U					- 2 U
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane (DBCP) 1,2-Dibromoethane (Ethylene dibromide) 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethene (total) 1,2-Dichloropropane	5 5 0.04 0.0006 3 0.6 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 - 2 U
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane (DBCP) 1,2-Dibromoethane (Ethylene dibromide) 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethene (total) 1,2-Dichloropropane 1,3-Dichlorobenzene	5 5 0.04 0.0006 3 0.6 5 1 3	- - - -	-	- - - - - - -	- - - - - -	- - -	- - - - -	- - - - - -	- - - -	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 2 U	2 U - 2 U 2 U	- 2 U 2 U - 2 U 2 U
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane (DBCP) 1,2-Dibromoethane (Ethylene dibromide) 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethene (total) 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene	5 5 0.04 0.0006 3 0.6 5 1 3	- - - -	-	- - - - - - - -	- - - - - - -	- - - -	-	-	- - - - -	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 - 2 U
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane (DBCP) 1,2-Dibromoethane (Ethylene dibromide) 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethene (total) 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone (Methyl ethyl ketone) (MEK)	5 5 0.04 0.0006 3 0.6 5 1 3	- - - - - -	-	- - - - - - - - -	- - - - - - - - -	- - - - -	-	-	- - - - -	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 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 2 U
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane (DBCP) 1,2-Dibromoethane (Ethylene dibromide) 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethene (total) 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone (Methyl ethyl ketone) (MEK) 2-Chloroethyl vinyl ether	5 5 0.04 0.0006 3 0.6 5 1 3 3 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 - 2 U 2 U	2 U - 2 U 2 U	- 2 U 2 U - 2 U 2 U
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane (DBCP) 1,2-Dibromoethane (Ethylene dibromide) 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethene (total) 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone (Methyl ethyl ketone) (MEK) 2-Chloroethyl vinyl ether 2-Hexanone	5 5 0.04 0.0006 3 0.6 5 1 3 3 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 - 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 2 U - 3 U
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane (DBCP) 1,2-Dibromoethane (Ethylene dibromide) 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethene (total) 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone (Methyl ethyl ketone) (MEK) 2-Chloroethyl vinyl ether 2-Hexanone 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK	5 5 0.04 0.0006 3 0.6 5 1 3 3 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 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 2 U - 3 U -
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane (DBCP) 1,2-Dibromoethane (Ethylene dibromide) 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethene (total) 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone (Methyl ethyl ketone) (MEK) 2-Chloroethyl vinyl ether 2-Hexanone 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK Acetone	5 5 0.04 0.0006 3 0.6 5 1 3 3 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 - 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 2 U 2 U 2 U - 3 U -
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane (DBCP) 1,2-Dibromoethane (Ethylene dibromide) 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethene (total) 1,2-Dichloropropane 1,3-Dichloropropane 1,3-Dichlorobenzene 2-Butanone (Methyl ethyl ketone) (MEK) 2-Chloroethyl vinyl ether 2-Hexanone 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK Acetone Acrolein	5 5 0.04 0.0006 3 0.6 5 1 3 50 - 50 50 50 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 - 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 2 U 2 U 3 U - - -
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane (DBCP) 1,2-Dibromoethane (Ethylene dibromide) 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethene (total) 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone (Methyl ethyl ketone) (MEK) 2-Chloroethyl vinyl ether 2-Hexanone 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK Acetone Acrolein Acrylonitrile	5 5 0.04 0.0006 3 0.6 5 1 3 3 50 - 50 50 50 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 - - - - -	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 2 U 2 U 2 U 2 U 2 U - 3 U - - -
1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane (DBCP) 1,2-Dibromoethane (Ethylene dibromide) 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene (total) 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone (Methyl ethyl ketone) (MEK) 2-Chloroethyl vinyl ether 2-Hexanone 4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK Acetone Acrolein	5 5 0.04 0.0006 3 0.6 5 1 3 50 - 50 50 50 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 - 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 2 U 2 U 3 U - - -

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

LOCATION DESCRIPTION LOCATION	Class GA TOGS 1.1.1	Sitewide MW-13	Sitewide MW-14	Sitewide MW-14	Sitewide MW-14	Sitewide MW-14	Sitewide MW-15	Sitewide MW-15	Sitewide MW-15	Sitewide TK-1	Sitewide TK-2	Sitewide TK-3	Sitewide TK-4	Sitewide TK-5	Sitewide TK-6	Sitewide TK-DUP
DATE	1003 1.1.1	4/21/2011	10/24/2006	11/29/2007	2/24/2009	4/21/2011	10/24/2006	11/28/2007	4/21/2011	5/10/2011	5/17/2011	5/18/2011	5/18/2011	5/18/2011	5/18/2011	5/18/2011
SAMPLE TYPE	ug/L	N	N	N	N	-7/21/2011 N	N	N	-7/21/2011 N	N	N	N	N	N	N	FD
O/WII EE TTT E	ug/L	IN .	IN .	14	11	- IN	111	IN .		- 1	- 11		- 11	1	.,	
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 ^[A]	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 ^[A]	7 ^[A]	6.7 ^[A]	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 ^[A]	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		I	1												1	1 1

- Notes and Abbreviations:

 1. Results shown in red exceed:
 [A]: Indicates result is greater than TOGS 1.1.1

 2. Results shown in bold were detected.

 3. U Results not detected above shown reporting limit.
 J Estimated result

 4. Sample Types: N Normal Sample, FD- Field Duplicate

 5. 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 VAPOR INTRUSION ANALYTICAL RESULTS - BUILDING 7 GMCH LOCKPORT FACILITY LOCKPORT, NEW YORK BCP SITE #C932138

BUILDING	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7	Building 7
LOCATION	7-VI-10IA	7-VI-10SS	7-VI-11IA	7-VI-11SS	7-VI-1ĬA	7-VI-1ŠS	7-VI-2ÏA	7-VI-2ŠS	7-VI-3ĬA	7-VI-3ŠS	7-VI-4ÏA	7-VI-4ŠS	7-VI-5ĬA	7-VI-5SS
DATE	1/18/2011	1/18/2011	1/18/2011	1/18/2011	1/18/2011	1/18/2011	1/18/2011	1/18/2011	1/18/2011	1/18/2011	1/18/2011	1/18/2011	1/18/2011	1/18/2011
SAMPLE TYPE	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Volatile Organic Compounds (ug/m3)														
1,1,1-Trichloroethane	4.4 U	2.2 U	0.87 U	1.1 U	4.4 U	4.4 U	2.2 U	53 U	1.1 U	1.1 U	0.87 U	8.7 U	1.1 U	230 U
1,1,2,2-Tetrachloroethane	5.5 U	2.7 U	1.1 U	1.4 U	5.5 U	5.5 U	2.7 U	67 U	1.4 U	1.4 U	1.1 U	11 U	1.4 U	300 U
1,1,2-Trichloroethane	4.4 U	2.2 U	0.87 U	1.1 U	4.4 U	4.4 U	2.2 U	53 U	1.1 U	1.1 U	0.87 U	8.7 U	1.1 U	230 U
1,1-Dichloroethane	3.2 U	1.6 U	0.65 U	0.81 U	3.2 U	3.2 U	1.6 U	39 U	0.81 U	0.81 U	0.65 U	6.5 U	0.81 U	170 U
1,1-Dichloroethene	3.2 U	1.6 U	0.63 U	0.79 U	3.2 U	3.2 U	1.6 U	41	0.79 U	0.79 U	0.63 U	6.3 U	0.79 U	170 U
1,2,4-Trichlorobenzene	5.9 U	3.0 U	1.2 U	1.5 U	5.9 U	5.9 U	3.0 U	72 U	1.5 U	1.5 U	1.2 U	12 U	1.5 U	320 U
1,2,4-Trimethylbenzene	3.9 U	9.2	3.6	10	3.9 U	4.3	2.0 U	48 U	5.3	2.2	5.4	7.9 U	4	210 U
1,2-Dibromoethane (Ethylene dibromide)	6.1 U	3.1 U	1.2 U	1.5 U	6.1 U	6.1 U	3.1 U	75 U	1.5 U	1.5 U	1.2 U	12 U	1.5 U	330 U
1,2-Dichlorobenzene	4.8 U	2.4 U	0.96 U	1.2 U	4.8 U	4.8 U	2.4 U	58 U	1.2 U	1.2 U	0.96 U	9.6 U	1.2 U	260 U
1,2-Dichloroethane	3.2 U	1.6 U	0.65 U	0.81 U	3.2 U	3.2 U	1.6 U	39 U	0.81 U	0.81 U	0.65 U	6.5 U	0.81 U	170 U
1,2-Dichloropropane	3.2 U	1.8 U	0.03 U 0.74 U	0.81 U	3.7 U	3.7 U	1.8 U	45 U	0.81 U	0.92 U	0.03 U 0.74 U	7.4 U	0.81 U	200 U
1,2-Dichlorotetrafluoroethane (CFC 114)	5.6 U	2.8 U	1.1 U	1.4 U	5.6 U	5.6 U	2.8 U	68 U	1.4 U	1.4 U	1.1 U	11 U	1.4 U	300 U
1,3,5-Trimethylbenzene	3.9 U	2.6 U 3.4	1.9	3.6	3.9 U	3.9 U	2.0 U	48 U	2.4	1.4 U	2.3	7.9 U	1.7	210 U
1,3-Dichlorobenzene	3.9 U 4.8 U	3.4 2.4 U	0.96 U	3.6 1.2 U	3.9 U 4.8 U	3.9 U 4.8 U	2.0 U 2.4 U	48 U 58 U	2.4 1.2 U	1.4 3.2	0.96 U	7.9 U 9.6 U	1.7 1.2 U	210 U 260 U
1,3-Dichlorobenzene	4.8 U	2.4 U 23	13	1.2 U 24	4.8 U	4.8 U	2.4 U 2.4 U	58 U	1.2 0	3.2 1.2 U	19	9.6 U	6.7	260 U
1,4-Dioxane	4.8 U 7.2 U	23 3.6 U	1.4 U	24 1.8 U	4.8 U 7.2 U	4.8 U 7.2 U	2.4 U 3.6 U	58 U 86 U	1.8 U	1.2 U 21	1.4 U	9.6 U 14 U	1.8 U	400 U
	7.2 U 9.3 U	3.6 U 4.7 U	1.4 U 6	1.8 U 2.5	7.2 U 9.3 U	7.2 U 9.3 U	3.6 U 4.7 U	86 U 110 U	1.8 U 4.9		1.4 U 4.2	14 U 19 U	1.8 U 2.3 U	400 U 510 U
2,2,4-Trimethylpentane						9.3 U 92	4.7 U 4.7 U		4.9 42	2.3 U 43	36	65		
2-Butanone (Methyl ethyl ketone) (MEK)	69	18 7	80	23 J	31		_	120 U					21 J	500 UJ
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	8.2 U	•	18	9	20	20	4.1 U	98 U	11	34	9.1	16 U	7.6	450 U
Benzene	2.6 U	2.1	1.6	2.1	2.6 U	2.6 U	1.6	31 U	1.7	5.5	2	13	1.1	140 U
Benzyl chloride	8.3 U	4.1 U	1.7 U	2.1 U	8.3 U	8.3 U	4.1 U	98 U	2.1 U	2.1 U	1.7 U	17 U	2.1 U	450 U
Bromodichloromethane	5.4 U	2.7 U	1.1 U	1.3 U	5.4 U	5.4 U	2.7 U	65 U	1.3 U	21	1.1 U	11 U	1.3 U	290 U
Bromoform	8.3 U	4.1 U	1.7 U	2.1 UJ	8.3 U	8.3 U	4.1 U	100 U	2.1 U	2.1 U	1.7 U	17 U	2.1 UJ	440 UJ
Bromomethane (Methyl bromide)	3.1 U	1.6 U	0.62 U	0.78 U	3.1 U	3.1 U	1.6 U	38 U	0.78 U	0.78 U	0.62 U	6.2 U	0.78 U	170 U
Carbon tetrachloride	2.5 U	1.3 U	0.59	0.7	2.5 U	2.5 U	1.3 U	31 U	0.63 U	1.7	0.61	5.0 U	0.63 U	130 U
Chlorobenzene	3.7 U	1.8 U	0.74 U	0.92 U	3.7 U	3.7 U	1.8 U	45 U	0.92 U	0.92 U	0.74 U	7.4 U	0.92 U	200 U
Chloroethane	2.1 U	1.1 U	0.42 U	0.53 U	2.1 U	2.1 U	1.1 U	26 U	0.53 U	0.53 U	0.42 U	4.2 U	0.53 U	110 U
Chloroform (Trichloromethane)	3.9 U	4.2	0.78 U	0.98 U	3.9 U	3.9 U	2.0 U	47 U	0.98 U	100	0.78 U	13	0.98 U	210 U
Chloromethane (Methyl chloride)	4.1 UJ	2.1 UJ	1.6 J	1.0 U	4.1 U	4.1 U	2.1 U	50 U	1.8 J	1.5 J	1.5	8.3 U	1.0 U	230 U
cis-1,2-Dichloroethene	3.2 U	1.6 U	0.63 U	6.4	3.2 U	15	1.6 U	410	1.2	0.79 U	2.3	1700	0.86	310
cis-1,3-Dichloropropene	3.6 U	1.8 U	0.73 U	0.91 U	3.6 U	3.6 U	1.8 U	44 U	0.91 U	0.91 U	0.73 U	7.3 U	0.91 U	200 U
Cyclohexane	6.9 U	3.4 U	1.4 U	2.5	6.9 U	6.9 U	3.4 U	83 U	1.7 U	5.1	1.4 U	14	1.7 U	380 U
Dibromochloromethane	6.8 U	3.4 U	1.4 U	1.7 U	6.8 U	6.8 U	3.4 U	83 U	1.7 U	1.7 U	1.4 U	14 U	1.7 U	370 U
Dichlorodifluoromethane (CFC-12)	4.0 UJ	3.1 J	3.5 J	2.9	37	4.0 U	3.6	48 U	3.9 J	2.8 J	3.7	7.9 U	2.7	3600
Ethanol	15 U	7.5 U	6.4	27	97	18	7.9	180 U	19	360	130	75	110	810 U
Ethylbenzene	28	19	22	19	3.5 U	32	1.7 U	42 U	20	2.5	18	21	15	190 U
Hexachlorobutadiene	8.5 U	4.3 U	1.7 U	2.1 U	8.5 U	8.5 U	4.3 U	100 U	2.1 U	2.1 U	1.7 U	17 U	2.1 U	460 U
Hexane	7.0 U	6	2.2	6.7	7.0 U	7.0 U	3.5 U	85 U	2.3	12	1.9	47	1.8 U	390 U
m&p-Xylenes	85	71	70	74	3.5 U	97	2.5	59	69	5.7	59	70	56	190 U
Methyl tert butyl ether (MTBE)	5.8 U	2.9 U	1.2 U	1.4 U	5.8 U	5.8 U	2.9 U	69 U	1.4 U	1.4 U	1.2 U	12 U	1.4 U	310 U
Methylene chloride	6.9 U	3.5 U	4.1	1.7 U	3.5 U	6.9 U	3.5 U	83 U	1.9	1.7 U	2	14 U	1.7 U	380 U
o-Xylene	13	20	14	18	3.5 U	15	1.7 U	42 U	16	2.2	14	14	12	190 U
Styrene	3.4 U	5	2.9	4.4	3.4 U	3.4 U	1.7 U	41 U	4.2	0.85 U	4.5	6.8 U	3.1	180 U
tert-Butyl alcohol	27	14	27	19	66	29	4.9 U	120 U	15	72	12	34	18	520 U
Tetrachloroethene	13	110	8.2	200	5.4 U	39	5	2200	7.3	290	6.7	280	6.5	760
Toluene	19	210	19	150	99	190	92	83	21	77	21	170	15	170
trans-1,2-Dichloroethene	3.2 U	1.6 U	0.63 U	0.79 U	3.2 U	3.2 U	1.6 U	88	0.79 U	0.79 U	0.63 U	20	0.79 U	170 U
trans-1,3-Dichloropropene	3.6 U	1.8 U	0.73 U	0.91 U	3.6 U	3.6 U	1.8 U	44 U	0.91 U	0.91 U	0.73 U	7.3 U	0.91 U	200 U
Trichloroethene	7.9	17	6.5	15	3	9.9	2.7	10000	6.9	63	7.3	2300	4.8	480
Trichlorofluoromethane (CFC-11)	4.5 U	2.2 U	2.3	1.7	4.5 U	4.5 U	2.2 U	54 U	2.1	1.8	3.3	9.0 U	7.1	240 U
Trifluorotrichloroethane (Freon 113)	6.1 U	4.8	1.2 U	1.5 U	6.1 U	6.1 U	3.1 U	74 U	1.5 U	1.5 U	1.2	12 U	1.5 U	62000
Vinyl chloride	2.0 U	1.0 U	0.41 U	0.51 U	2.0 U	2.0 U	1.0 U	25 U	0.51 U	0.51 U	0.41 U	46	0.51 U	310

Green = Take reasonable and practical actions to identify sources

Yellow = Monitor

Notes and Abbreviations:
1. Results shown in bold were detected.
2. U - Results not detected above shown reporting limit.

J - Estimated result

3. Sample Types: N - Normal Sample, FD- Field Duplicate

4. The results were compared against the October 2006 Soil Vapor/Indoor Air Matrices included in the NYSDOH Guidance for evaluating soil vapor intrusion in the state of New York. Color coding is as follows:

White = No Further Action

Orange = Monitor/Mitigate
Red = Mitigate
5. Only bolded analytes have applicable comparison criteria.

TABLE V
VAPOR INTRUSION ANALYTICAL RESULTS - BUILDING 7
GMCH LOCKPORT FACILITY
LOCKPORT, NEW YORK
BCP SITE #C932138

BUILDING	Building 7									
LOCATION	7-VI-6ÏA	7-VI-6ÏA	7-VI-6SS	7-VI-7ÏA	7-VI-7SS	7-VI-8ÏA	7-VI-8SS	7-VI-9ÏA	7-VI-9SS	7-VI-OUT
DATE	1/18/2011	1/20/2011	1/20/2011	1/18/2011	1/18/2011	1/18/2011	1/18/2011	1/18/2011	1/18/2011	1/18/2011
SAMPLE TYPE	N	N	N	N	N	N	N	N	N	N
Volatile Organic Compounds (ug/m3)										
1,1,1-Trichloroethane	2.2 U	0.87 U	0.87 U	1.1 U	10000 U	2.3 U	220 U	0.44 U	20 U	0.87 U
1,1,2,2-Tetrachloroethane	2.7 U	1.1 U	1.1 U	1.4 U	13000 U	3.0 U	280 U	0.55 U	25 U	1.1 U
1,1,2-Trichloroethane	2.2 U	0.87 U	0.87 U	1.1 U	10000 U	2.3 U	220 U	0.44 U	20 U	0.87 U
1,1-Dichloroethane	1.6 U	0.65 U	0.65 U	0.81 U	7700 U	1.7 U	170 U	0.32 U	25	0.65 U
1,1-Dichloroethene	1.6 U	0.63 U	0.63 U	0.79 U	7900	1.7 U	160 U	0.32 U	130	0.63 U
1,2,4-Trichlorobenzene	3.0 U	1.2 U	1.2 U	1.5 U	14000 U	3.2 U	300 U	0.59 U	27 U	1.2 U
1,2,4-Trimethylbenzene	3	0.98	0.79 U	7.6	9300 U	11	200 U	0.39 U	18 U	0.79 U
1,2-Dibromoethane (Ethylene dibromide)	3.1 U	1.2 U	1.2 U	1.5 U	15000 U	3.3 U	320 U	0.61 U	28 U	1.2 U
1,2-Dichlorobenzene	2.4 U	0.96 U	0.96 U	1.2 U	11000 U	2.6 U	250 U	0.48 U	22 U	0.96 U
1,2-Dichloroethane	1.6 U	0.65 U	0.65 U	0.81 U	7700 U	1.7 U	170 U	0.32 U	15 U	0.65 U
1,2-Dichloropropane	1.8 U	0.74 U	0.74 U	0.92 U	8800 U	2.0 U	190 U	0.37 U	17 U	0.74 U
1,2-Dichlorotetrafluoroethane (CFC 114)	2.8 U	1.1 U	1.1 U	1.4 U	13000 U	3.0 U	290 U	0.56 U	25 U	1.1 U
1,3,5-Trimethylbenzene	2.0 U	0.79 U	0.79 U	3.4	9300 U	5	200 U	0.39 U	18 U	0.79 U
1,3-Dichlorobenzene	2.4 U	0.96 U	0.96 U	1.2 U	11000 U	2.6 U	250 U	0.48 U	22 U	0.96 U
1,4-Dichlorobenzene	4	0.96 U	0.96 U	17	11000 U	46	250 U	0.48 U	22 U	0.96 U
1,4-Dioxane	3.6 U	1.4 U	1.4 U	1.8 U	17000 U	4.0 U	360 U	0.72 U	33 U	1.9
2,2,4-Trimethylpentane	4.7 U	1.9 U	1.9 U	7.5	22000 U	7.2	470 U	1.1	43 U	1.9 U
2-Butanone (Methyl ethyl ketone) (MEK)	47 J	1.9 U	18 J	90	23000 UJ	110	470 U	0.94 U	70	13
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	2.0 U	1.6 U	1.6 U	17	20000 U	25	410 U	0.82 U	37 U	6.2
Benzene	1.6	1.9	1	2.3	6100 U	3.6	130 U	1.7	12 U	0.87
Benzyl chloride	4.1 U	1.7 U	1.7 U	2.1 U	20000 U	4.5 U	420 U	0.83 U	38 U	1.7 U
Bromodichloromethane	2.7 U	1.1 U	1.1 U	1.3 U	13000 U	2.9 U	270 U	0.54 U	24 U	1.1 U
Bromoform	4.1 UJ	1.7 U	1.7 UJ	2.1 U	20000 UJ	4.4 U	420 U	0.83 U	37 U	1.7 U
Bromomethane (Methyl bromide)	1.6 U	0.62 U	0.62 U	0.78 U	7400 U	1.7 U	160 U	0.31 U	14 U	0.62 U
Carbon tetrachloride	1.3 U	0.51	0.50 U	0.63 U	6000 U	1.4 U	130 U	0.51	11 U	0.50 U
Chlorobenzene	1.8 U	0.74 U	0.74 U	0.92 U	8700 U	2.0 U	190 U	0.37 U	17 U	0.74 U
Chloroethane	1.1 U	0.42 U	0.42 U	0.53 U	5000 U	4.2	110 U	2.3	9.5 U	0.42 U
Chloroform (Trichloromethane)	2.0 U	0.78 U	0.78 U	0.98 U	9300 U	2.1 U	890	0.39 U	210	0.78 U
Chloromethane (Methyl chloride)	3	1.8 J	0.83 U	1.7 J	9900 U	5.0 J	210 U	2.5 J	19 UJ	1.6
cis-1,2-Dichloroethene	1.6 U	1.2	2	1.3	2400000	34	2000	1.9	1000	0.63 U
cis-1,3-Dichloropropene	1.8 U	0.73 U	0.73 U	0.91 U	8600 U	2.0 U	190 U	0.36 U	16 U	0.73 U
Cyclohexane	3.4 U	1.4 U	1.4 U	1.7 U	17000 U	3.8 U	340 U	0.69 U	31 U	1.4 U
Dibromochloromethane	3.4 U	1.4 U	1.4 U	1.7 U	16000 U	3.7 U	350 U	0.68 U	31 U	1.4 U
Dichlorodifluoromethane (CFC-12)	4.2	4.0 J	2.6	4.2 J	9400 U	3.3	200 U	3.1 J	29 J	2.8
Ethanol	510	3.1	21	74	36000 U	1000	770 U	1.7	68 U	220
Ethylbenzene	22	1.6	0.69 U	39	8300 U	39	180 U	1.1	27	0.69 U
Hexachlorobutadiene	4.3 U	1.7 U	1.7 U	2.1 U	20000 U	4.6 U	440 U	0.85 U	38 U	1.7 U
Hexane	3.5 U	5.1	2.9	7	17000 U	17	350 U	2	32 U	1.8
m&p-Xylenes	73	4.7	1.2	120	8300 U	140	180 U	2	89	0.69 U
Methyl tert butyl ether (MTBE)	2.9 U	1.2 U	1.2 U	1.4 U	14000 U	3.1 U	290 U	0.58 U	26 U	1.2 U
Methylene chloride	3.5 U	1.4 U	14	2.5	17000 U	5.8	350 U	1.5	32 U	1.4 U
o-Xylene	14	1.4	0.69 U	23	8300 U	31	180 U	0.35 U	16 U	0.69 U
Styrene	2.8	0.68 U	0.68 U	6.2	8100 U	6	170 U	0.34 U	15 U	0.68 U
tert-Butyl alcohol	29	1.9 U	6.2	34	23000 U	21	490 U	0.97 U	45 U	19
Tetrachloroethene	9.6	4.7	12	16	7600000	230	70000	5.4	11000	1.3
Toluene	19	13	3.9	27	7200 U	35	150 U	4	95	27
trans-1,2-Dichloroethene	1.6 U	0.63 U	0.63 U	0.79 U	16000	1.7 U	450	0.32 U	1300	0.63 U
trans-1,3-Dichloropropene	1.8 U	0.73 U	0.73 U	0.91 U	8600 U	2.0 U	190 U	0.36 U	16 U	0.73 U
Trichloroethene	7.2	3.5	160	10	1800000	53	16000	5.8	1300	1
Trichlorofluoromethane (CFC-11)	12	11	4.9	10	11000 U	4.4	230 U	2.8	20 U	1.4
Trifluorotrichloroethane (Freon 113)	3.1 U	1.2 U	7.6	1.5 U	15000 U	3.3 U	310 U	0.75	56	1.2 U
Vinyl chloride	1.0 U	0.41 U	0.41 U	0.51 U	24000	1.1 U	100 U	0.24	16	0.41 U
						1				1

- Notes and Abbreviations:

 1. Results shown in bold were detected.
 2. U Results not detected above shown reporting limit.
- J Estimated result

 3. Sample Types: N Normal Sample, FD- Field Duplicate

 4. The results were compared against the October 2006 Soil Vapor/Inc
 White = No Further Action

Green = Take reasonable and practical actions to identify sources
Yellow = Monitor

Orange = Monitor/Mitigate
Red = Mitigate
5. Only bolded analytes have applicable comparison criteria.

Table VI Summary of Groundwater Elevation Measurements GMCH Lockport Facility Building 7 BCP Site

	Monitoring	5/2/2011	5/2/2011
	Point	Groundwater	Groundwater
Monitoring Point	Elevation	Depth	Elevation
	(feet)	(feet)	(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:

- Elevations shown were calculated based on measurements made by GZA on May 2, 2011.
 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 7 BCP SITE REMEDIAL INVESTIGATION PROGRAM GENERAL MOTORS COMPONANTS HOLDINGS LOCKPORT, NEW YORK

Media	Constituents of Concern (COCs)	Fate & Transport	Potentially Affected Populations	Ingestion 1	Exposure Pathy Absorption	vays Inhalation	Potential Exposure Setting & Mechanism
Soil	 Polycyclic Aromatic Hydrocarbons (PAHs) Chlorinated Solvents (PCE, TCE, 1,1-DCE, 	 PAHs are confined to the soil layer. These COCs are relatively-immobile and have not impacted groundwater. Chlorinated solvents are primarily encountered in deeper soils, likely as a result of impact from contaminated groundwater. The Site is largely covered with building foundations and pavement, with access 	 Current Site Workers Future Site Workers/ Occupants 	Incomplete	Incomplete	Incomplete	Ingestion: 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. Absorption: 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
	1,2-DCE, cis-1,2-DCE, Vinyl Chloride)	 and pavelient, with access controlled which precludes direct exposure to impacted soil. PAHs could be present in dust potentially generated during excavation activities within the soil. Chlorinated solvents in soil could become present in air if the soil is disturbed during a future excavation scenario. 	■ Future Construction Workers (if the Site is re- developed or excavation is to occur)	Potentially Complete	Potentially Complete	Potentially Complete	exposed during excavation and contacts skin. Inhalation: 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, and dust particles are generated. Inhalation of COCs via vapor/air originating from soil contamination is possible. Refer to discussion below.

GMCH LOCKPORT BUILDING 7 BCP SITE REMEDIAL INVESTIGATION PROGRAM GENERAL MOTORS COMPONANTS HOLDINGS

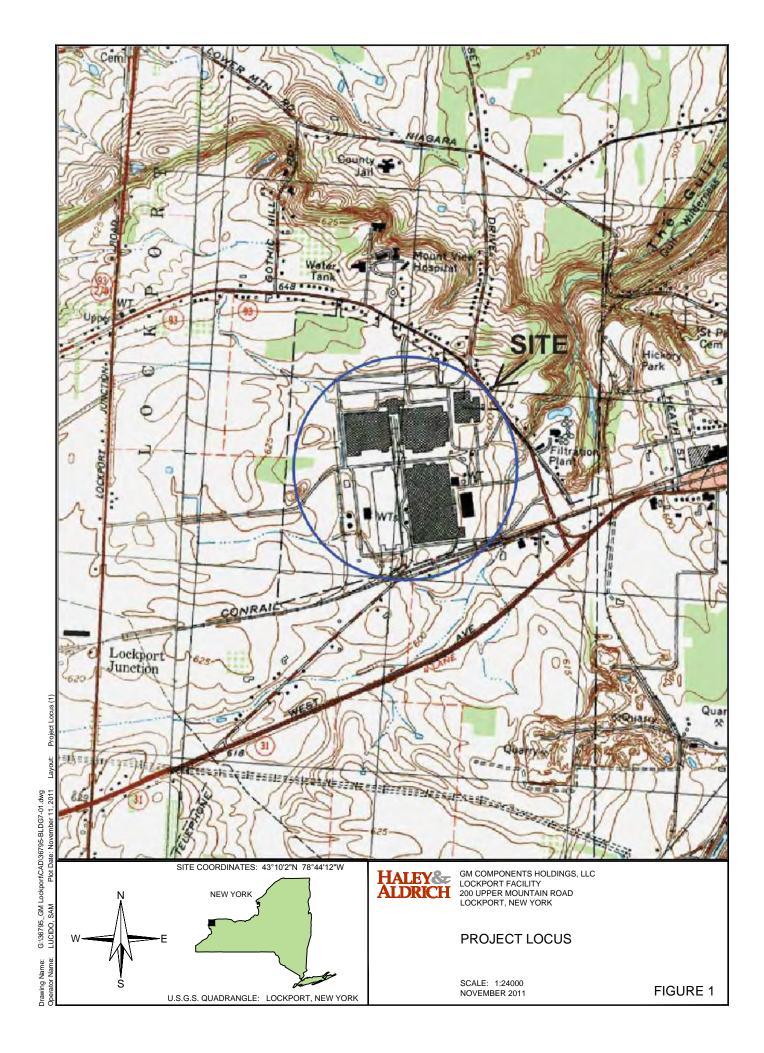
LOCKPORT, NEW YORK

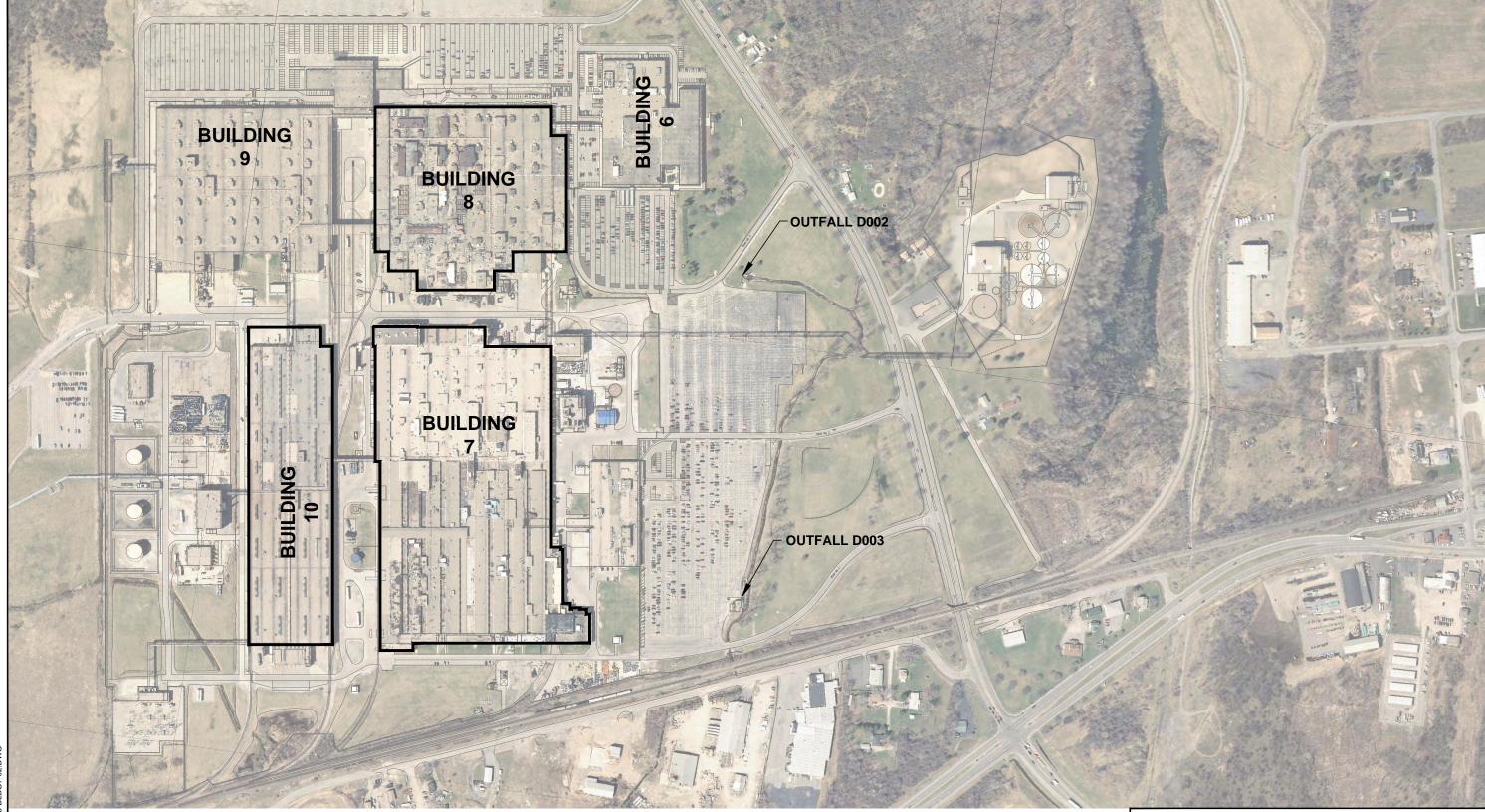
Media	Constituents of Concern (COCs)	Fate & Transport	Potentially Affected Populations	Ingestion E	Exposure Pathw Absorption	ays Inhalation	Potential Exposure Setting & Mechanism
		 Groundwater is not currently, nor is it intended to be used for drinking water purposes, nor is it 	 Current Site Workers Future Site Workers/ Occupants under current use scenario 	Incomplete	Incomplete	Not Applicable	Ingestion: 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. Absorption: No current pathway. Could be a future potential
Groundwater	■ Chlorinated Solvents (PCE, TCE, 1,1-DCE, 1,2-DCE, cis-1,2-DCE, Vinyl Chloride)	used for industrial pumping purposes. Groundwater flow direction is towards the east, and there is a potential for contaminated groundwater to migrate to the eastern portion of the Site and offsite without mitigation. Volatilization of chlorinated solvents from groundwater could be emitted into ambient air.	■ Future Construction Workers (if the Site is re-developed or excavation is to occur) or site occupants under another use scenario	Incomplete	Potentially Complete	Not Applicable	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 processpipes, tanks, drums, etc.). Inhalation: 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.

GMCH LOCKPORT BUILDING 7 BCP SITE REMEDIAL INVESTIGATION PROGRAM GENERAL MOTORS COMPONANTS HOLDINGS

LOCKPORT, NEW YORK

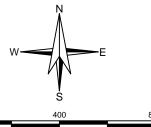
Media	Constituents of Concern (COCs)	Fate & Transport	Potentially Affected Populations	Ingestion E	Exposure Pathw Absorption	v ays Inhalation	Potential Exposure Setting & Mechanism
			Current Site WorkersFuture Site Workers/ Occupants	Not Applicable	Not Applicable	Complete	Ingestion: Not an applicable pathway. Absorption: Not an applicable pathway.
Soil Vapor/Air	■ Chlorinated Solvents (PCE, TCE, 1,1-DCE, 1,2-DCE, cis-1,2-DCE, Vinyl Chloride)	 Based on sub-slab vapor and indoor air testing conducted within the Site building as part of the RI, COC-impacted vapor and air have been identified that will require mitigation per NYSDOH guidance. 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. 	■ Future Construction Workers (if the Site is re-developed or excavation is to occur)	Not Applicable	Not Applicable	Potentially Complete	Inhalation: Currently a complete exposure pathway exists within Building 7. 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. 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.





NOTES:

- 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.



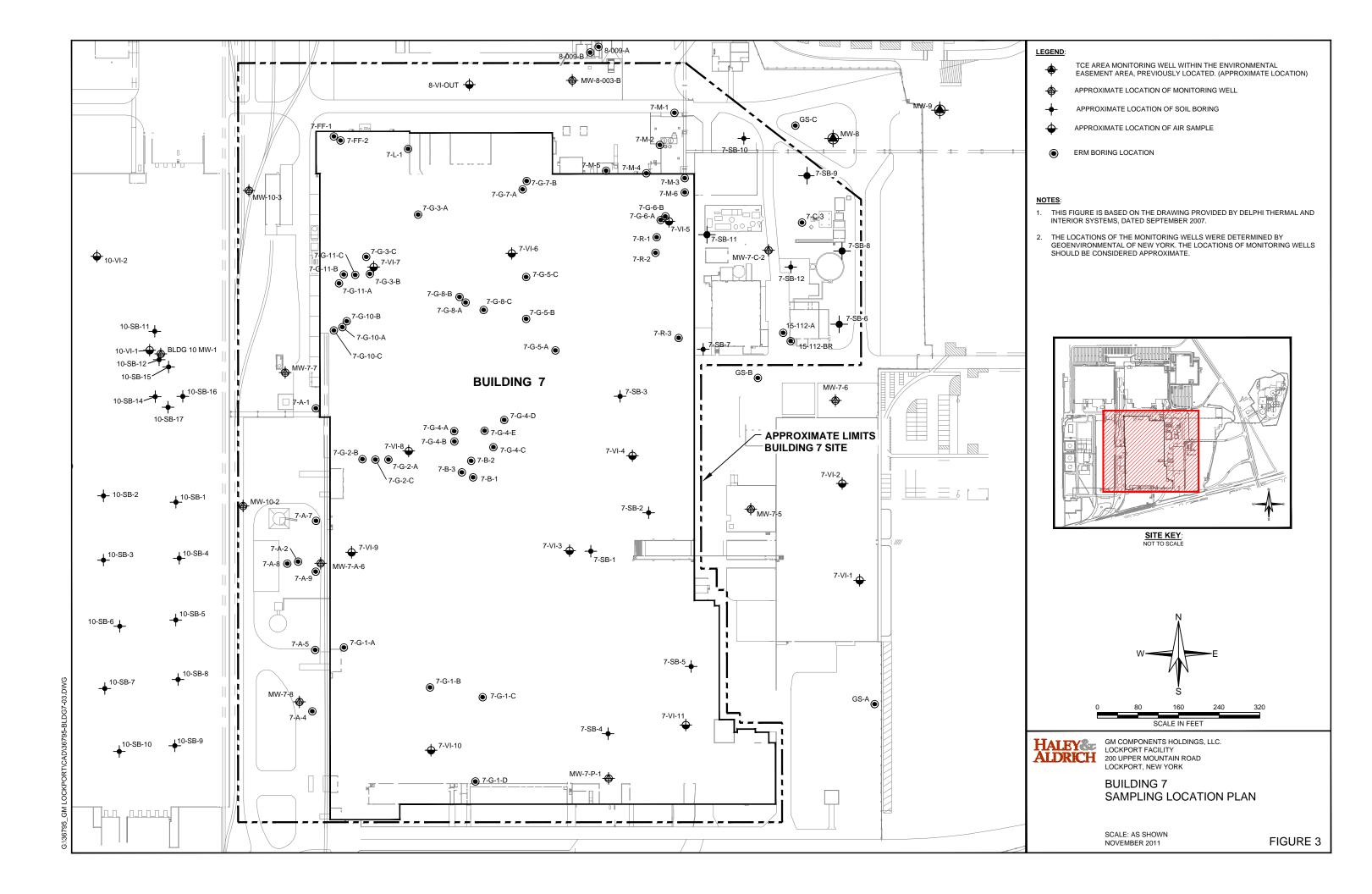
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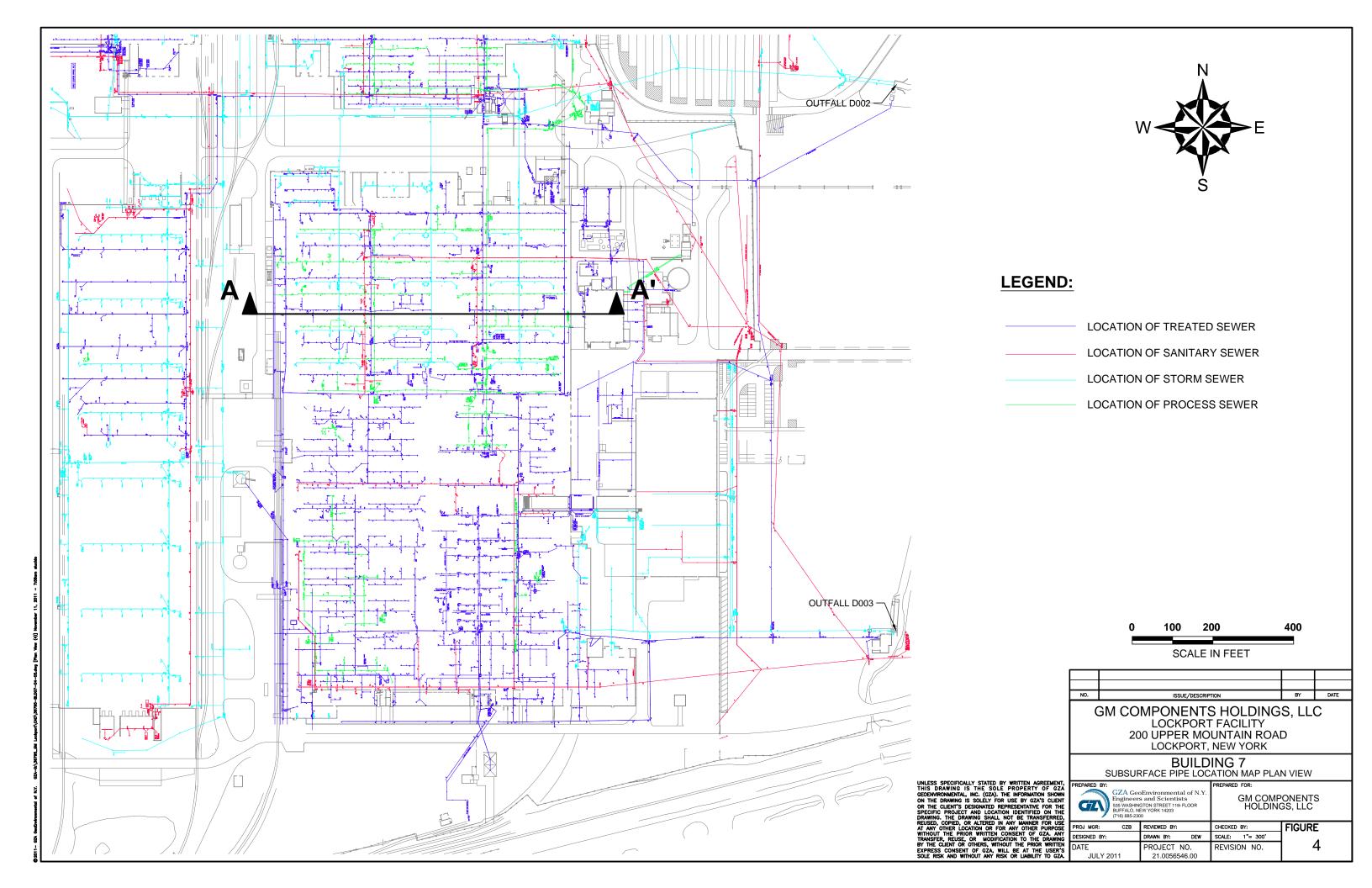
HALFY GM COMPONENTS HOLDINGS, LLC. LOCKPORT FACILITY
200 UPPER MOUNTAIN ROAD LOCKPORT, NEW YORK

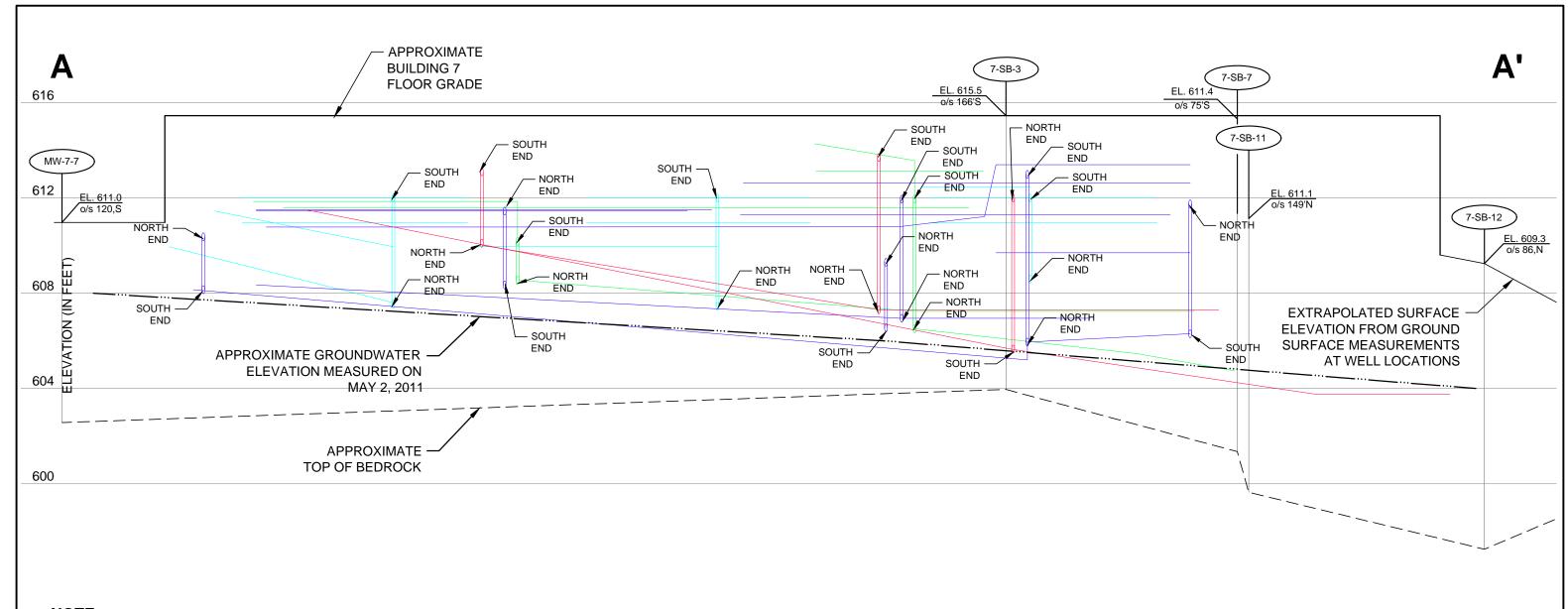
SITE PLAN

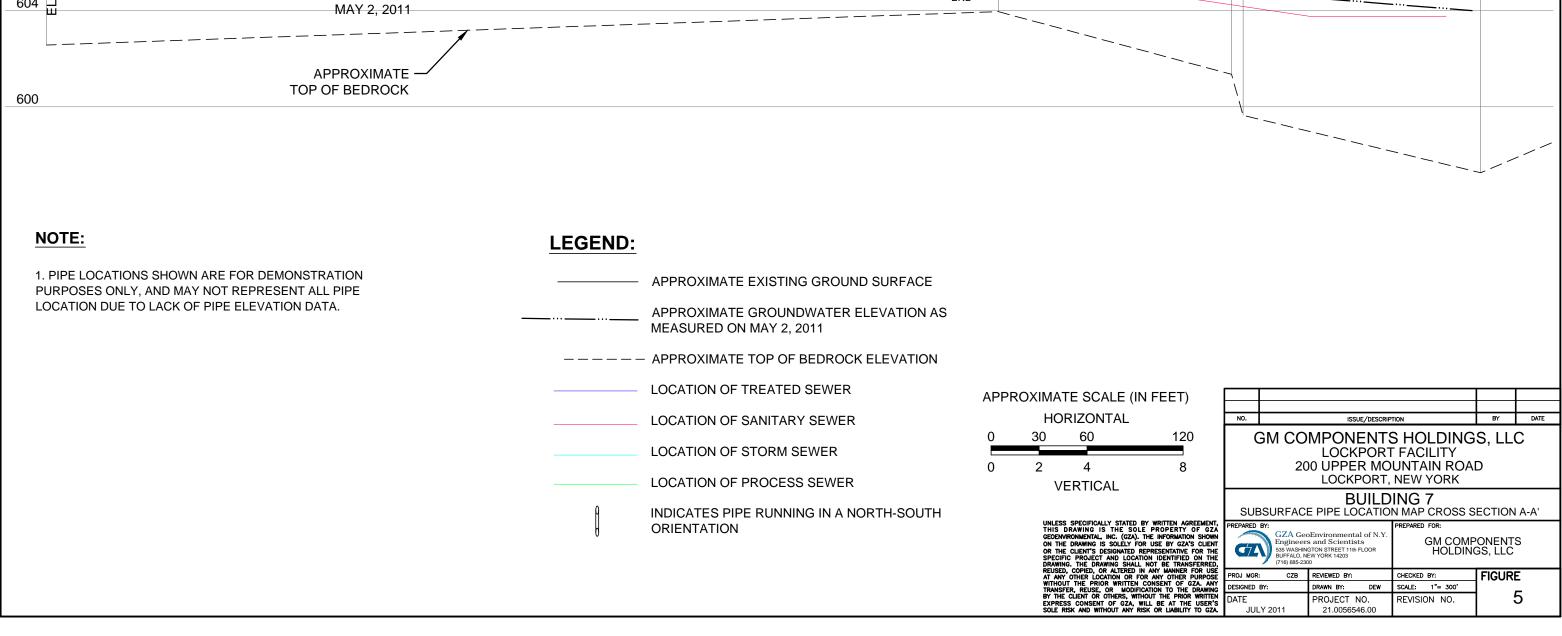
SCALE: AS SHOWN NOVEMBER 2011

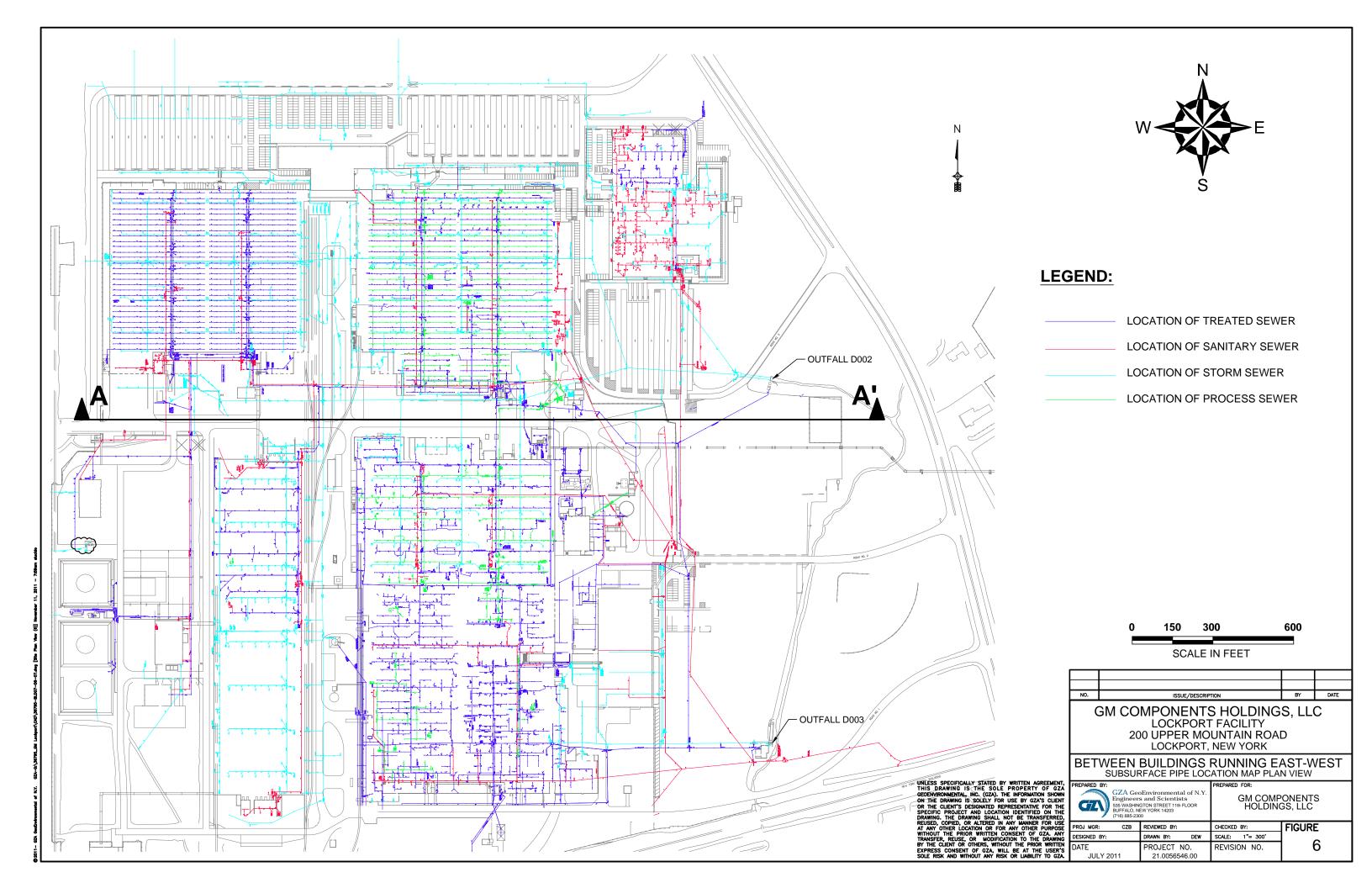
FIGURE 2

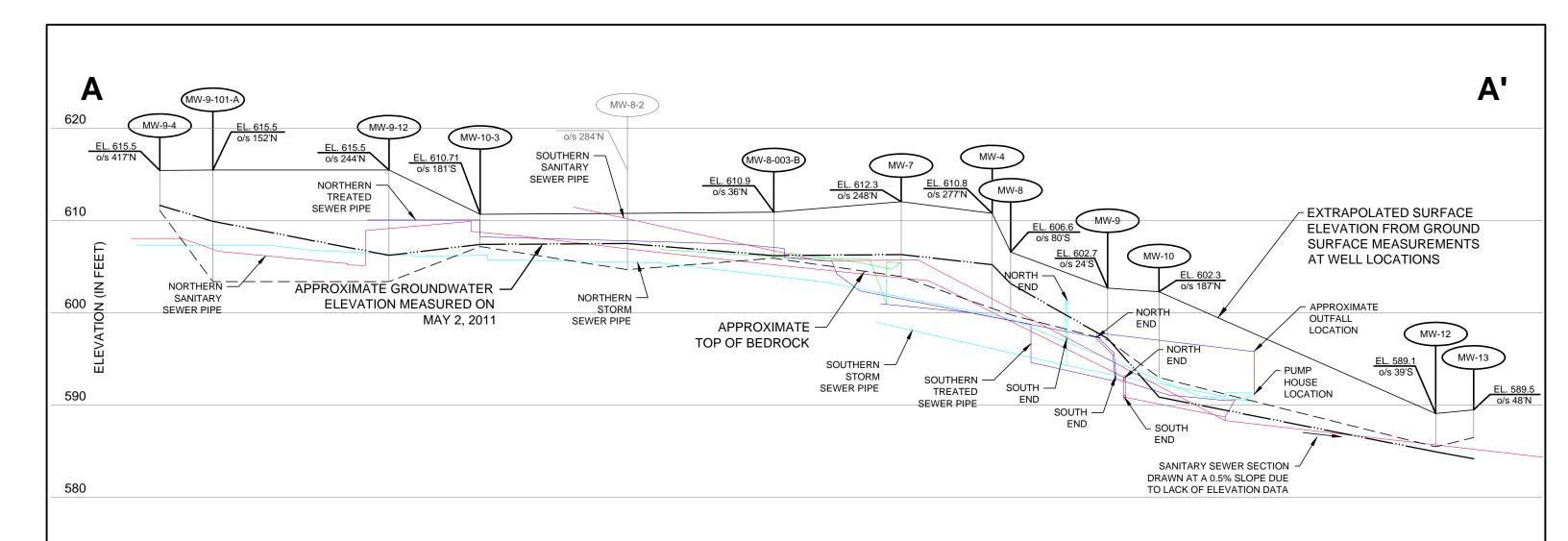


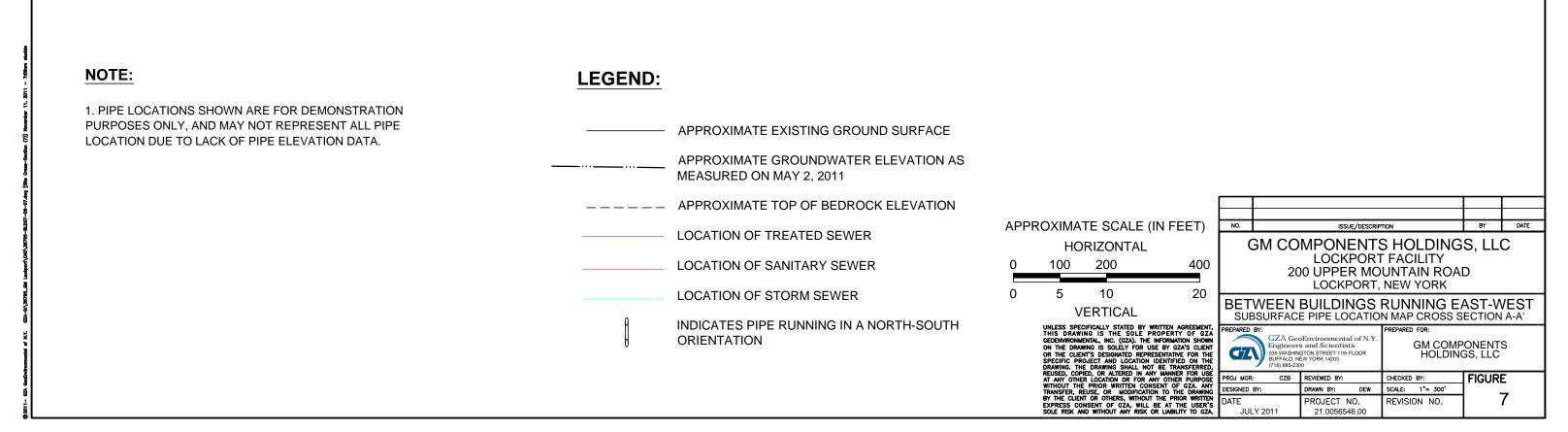


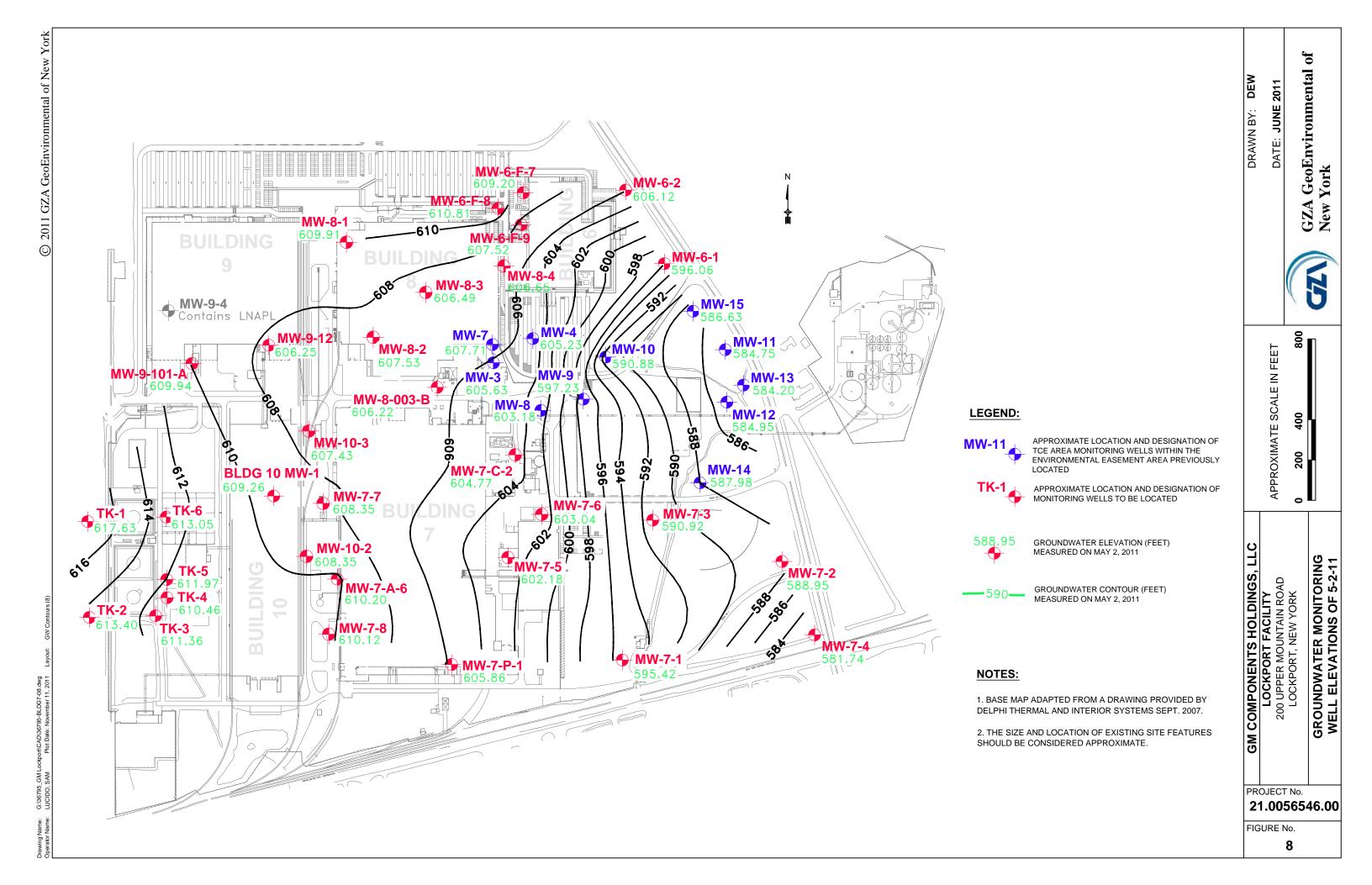


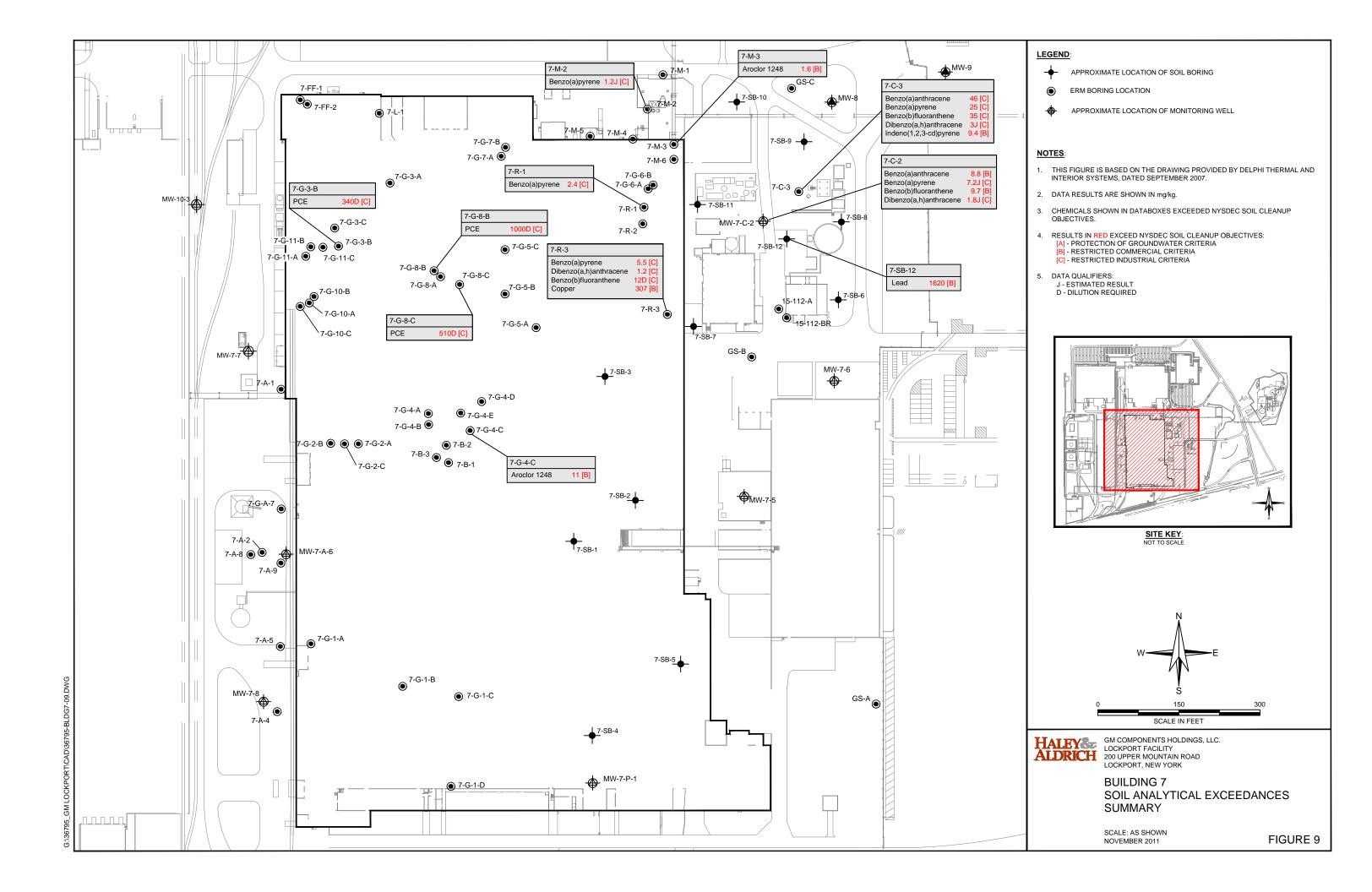












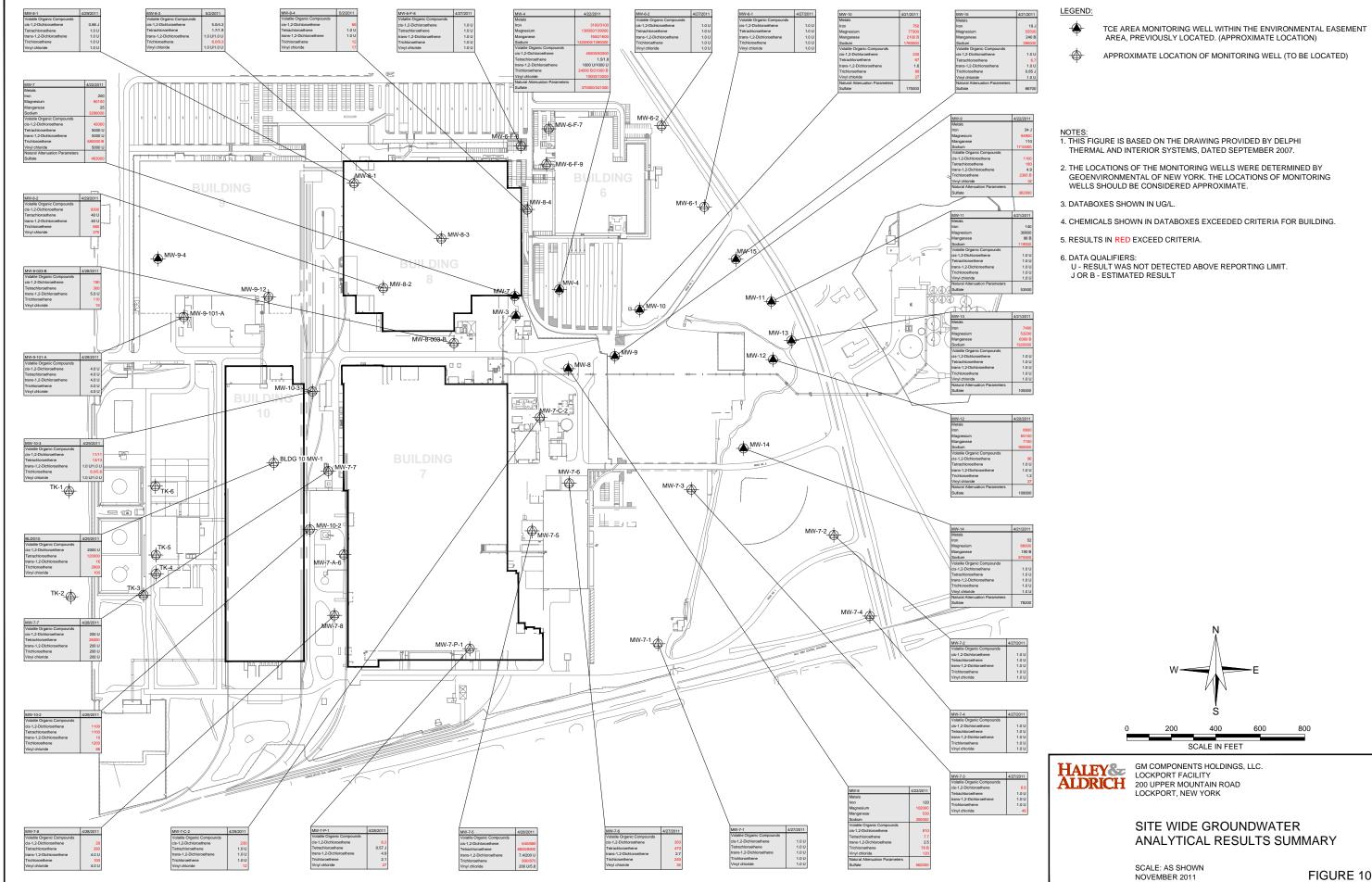


FIGURE 10

