



November 14, 2008

United States Environmental Protection Agency
Ann Herrick
Industrial NPDES Permits (CIP)
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

**Re: Notice of Intent for Remediation General Permit
West Boylston Street Xtramart**
323 West Boylston Street
Worcester, Massachusetts
MADEP RTN 2-16704

To Whom It May Concern:

On behalf of Drake Petroleum Company, Inc. (Drake), Groundwater and Environmental Services, Inc. (GES) submits this Notice of Intent (NOI) for Remediation General Permit (RGP) for discharges associated with the operation of a temporary groundwater treatment system at the above-referenced former Xtramart facility. This temporary groundwater treatment system is expected to be used during dewatering activities necessary for excavation associated with underground storage tank (UST) removal activities. Please find the RGP NOI application form attached to this letter (Appendix A).

Background

The West Boylston Street Xtramart is located at 323 West Boylston Street in Worcester, Massachusetts, between Watson Avenue and Bourne Street to the east. Universal TransMercator (UTM) coordinates for the site are 4,686,847 meters north and 269,168 meters east. A Site Location Map based upon the United States Geological Service (USGS) Worcester, Massachusetts 7.5 minute quadrangle is provided as Figure 1.

According to the City of Worcester Tax Assessor's office, the site is identified as Block 4, Lot 21 on Map 12, and encompasses approximately 12,000 square feet of land. The site is developed with a payment kiosk and a shed. The kiosk is located in the center of the property, with two (2) dispensers present on either side of the kiosk. Three (3) USTs are also currently located at the site. The USTs include two (2) 8,000-gallon gasoline USTs and one (1) 6,000-gallon diesel UST, all installed *circa* 1996. The USTs are located to the southwest of the kiosk, in the south-southwestern portion of the site. The remaining areas of the site consist primarily of asphalt and concrete. See Figure 2 for the location of these site features.

The kiosk is serviced by municipal drinking water, sanitary and storm sewer and private utilities including telephone, natural gas and electric. Available information indicates both municipal drinking water and sanitary sewer services enter the kiosk from the southeast corner and are tied into mains located in West Boylston Street. Overhead telephone services enter the site from West Boylston Street and electric services are provided to the site from overhead lines present to the south and west of the property. One (1) catch basin is located on West Boylston Street, near the sidewalk, adjacent to the southeastern entrance to the site. The approximate locations of these utilities are shown on the Site Map provided as Figure 2.

Land use in the immediate vicinity of the site (within approximately 500 feet) includes both commercial and residential properties. Surrounding the site to the north, south and west is a commercial property currently occupied by a Chinese restaurant (south of the site), paved areas (northwest, west and southwest of the site) and a vacant restaurant building (north of the site). Following the parking area to the west is a steep slope followed by railroad tracks. Residential properties are located to the east across West Boylston Street and Barber Avenue. Neighboring parcels are shown on the Local Area Map provided as Figure 3.

Groundwater sampling activities have been conducted at the site as part of monitoring activities associated with Release Tracking Number (RTN) 2-16704 under the Massachusetts Contingency Plan (MCP). Historical groundwater laboratory analytical results are presented in Tables 1 and 2.

Purpose

The purpose of this National Pollution Discharge Elimination System (NPDES) RGP request is to obtain permission to discharge treated groundwater pumped from the excavated UST area and other areas within the site to facilitate removal of impacted soils that may be encountered. Treated groundwater is proposed to be discharged to the catch basin located directly east of the site along West Boylston Street. Based on a conversation with the City of Worcester Department of Public Works, the catch basin discharges to a 72-inch box culvert located west of the site, near Norton Street. Storm water flows to the south along Grove Street until it reaches the west side of the Salisbury Pond. Salisbury Pond empties into Mill Brook which flows into the Blackstone River.

The receiving surface waters, which according to MADEP are classified as Class B Waterways, are not listed on the 303(d) Water Quality Impaired or Limited Water list. In addition, the receiving surface waters are not listed as an area of critical environmental concern.

Groundwater Treatment System Description

GES collected groundwater samples from tank pad monitoring wells (T-2 and T-5) on October 9, 2008, to aid in the design of the temporary groundwater treatment system and to obtain base line data for constituents required for the submittal of this NOI. These tank pad monitoring wells were selected because dewatering activities are anticipated to occur primarily in the area of the UST grave. Groundwater samples were collected using low flow sampling methodology utilizing disposable polyethylene tubing and a peristaltic pump with a YSI 6920 flow through

cell. Approximately 2 gallons of groundwater was purged from each tank pad monitoring well prior to sampling and field parameter stabilization was reached. Groundwater samples were placed within the appropriate preserved or un-preserved containers provided by Accutest Laboratories of Marlborough, Massachusetts (Accutest), a Massachusetts certified laboratory. The groundwater samples were placed on ice in coolers and transported under Chain of Custody protocol to Accutest for laboratory analysis. Groundwater samples were analyzed within applicable holding times.

Laboratory analyses included Total Suspended Solids by United States Environmental Protection Agency (USEPA) Method 160.2, pH, Total Residual Chlorine by USEPA Method 330.5, Total Petroleum Hydrocarbons (TPH) as Gasoline Range Organics (GRO) and Diesel Range Organics (DRO) by USEPA Method 8015, TPH by USEPA Method 1664, Cyanide by USEPA Method 335.3, Volatile Organic Compounds (VOCs) by USEPA Method 624, Ethylene Dibromide by USEPA 504.1, Extractable Organics by USEPA Method 625, Polycyclic Aromatic Hydrocarbons (PAHs) by USEPA Method 610, Polychlorinated Biphenyls (PCBs) by USEPA Method 608, TAL Metals by USEPA Method 200.7, Mercury by USEPA Method 245.1, Hexavalent Chromium by USEPA Method 218.4, Trivalent Chromium by USEPA Method 3500 CrD and Herbicides (Petachlorophenol) by SW846 8151A. Laboratory analytical results are provided in Appendix B. Table 3 presents a summary of the compounds with reported values greater than the method detection limit.

As indicated on Process & Instrumentation Diagram presented as Figure 4, the proposed temporary groundwater treatment system will consist of the following components plumbed in series: one (1) 20,000-gallon fractionation/storage tank, one (1) submersible transfer pump, sediment filtration including particulate filter and/or sand filter vessel, two (2) liquid granular activated carbon (LGAC) absorbers, resin beds and a discharge flow-meter/totalizer. Groundwater will be pumped from the UST area groundwater recovery wells, and/or from existing groundwater monitoring wells into the fractionation/storage tank(s). From the fractionation/storage tank(s), groundwater will be pumped through a sand media filter and/or bag filters (sediment filtration) into the LGAC absorbers. Activated carbon is provided to remove dissolved VOCs from the process water. The LGACs will be followed with two (2) ion exchange resin vessels to remove lead and arsenic from the process stream.

Based on available data, the proposed temporary groundwater treatment system maximum discharge flow rate is not expected to exceed 75 gallons per minute (gpm). The operation of the temporary groundwater treatment system is expected to last for a period of ten (10) to fifteen (15) days beginning in early December 2008, pending approval of this permit. The temporary groundwater treatment system will only be operated during the day (approximately ten (10) to twelve (12) hours per day).

Contaminant Information and RGP Category

According to historical analytical data from environmental investigations conducted under MADEP oversight and the recent baseline NOI sampling laboratory analytical data, the groundwater beneath the site is known to mostly contain gasoline constituents including methyl tertiary butyl ether (MTBE). In addition, the metals arsenic, lead and cadmium (laboratory

reporting limit is above discharge limit of 0.2 micrograms per liter [$\mu\text{g/L}$] exceed the current RGP discharge limits. However, the detected concentrations do not exceed the limits for total recoverable metals based on dilution factors listed in Appendix IV. At this time, it is unclear if these metals are attributed to natural background conditions or backfill material.

Based on the sampling data generated as part of this NOI, it is GES' professional opinion that the subject discharge can be classified as RGP Subcategory IA (Gasoline Only Site). This classification is consistent with the historical activities conducted at the site and the results of the MCP assessment and monitoring activities conducted to date.

To complete the attached NOI, GES used the following assumptions and calculations:

- The maximum design flow of the groundwater treatment system is 75 gpm.
- The average total flow is estimated to be approximately 50 gpm.
- To determine the maximum and the average daily mass, the following formulas and conversions were used:
 - Maximum Daily Mass (kilograms per day [kg/day]) = (Flow (MGD) x Max Concentration (mg/L) x 8.34) / 2.2
 - Average Daily Mass (kilograms per day [kg/day]) = (Flow (MGD) x Avg Concentration (mg/L) x 8.34) / 2.2

Because metals may be present in recovered groundwater, calculations to determine dilution factors (DF) and the reasonable potential to exceed discharge limits for each metal of concern are necessary under the RGP requirements. To determine the DF for the receiving surface waters, the RGP recommends using the closest river or stream gauging station data to determine the annual minimum flow for seven (7) consecutive days with a recurrence interval of ten (10) years (7Q10), and then calculate the DF based on the temporary groundwater treatment system maximum flow. The Blackstone River 7Q10 is 44.95 cubic feet per second (cfs) and the maximum discharge from the temporary groundwater treatment system is 0.167 cfs. Based on these parameters, the DF for the site is calculated to be 270. The calculated DF is used in conjunction with Appendix IV to determine the discharge limits for total recoverable metals. These values are presented in Table 3.

Proposed Environmental Monitoring Plan

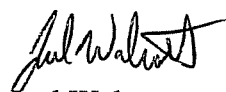
Following USEPA issuance of the RGP Permit, the notification, applicable approval from local agencies for discharge and the preparation of a site-specific Best Management Practices (BMP) Plan, GES will start the temporary groundwater treatment system and implement compliance monitoring and effluent sampling in accordance with the applicable RGP monitoring requirements for the category "Gasoline Only Sites".

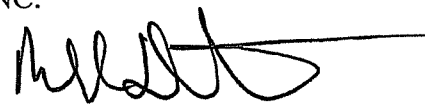
GES personnel will conduct operation and maintenance (O&M) inspections of the temporary groundwater treatment system during each day of operation to ensure that the system is operating properly and in accordance with the RGP. These inspections will consist of monitoring flow rate, field screening for temperature and pH, and submitting water samples from the influent, the

midpoints between the LGAC vessels, and the effluent from the treatment system for laboratory analysis according to the terms in the RGP and the RGP applicable requirements. Effluent sampling will occur on the first, second, and third day of operation at start- up and at minimum weekly hereafter for the remaining month. Recordkeeping and reporting will be performed in accordance to the applicable RGP requirements.

If you have any questions regarding this submittal, please feel free to contact the undersigned at (800) 221-6119.

Sincerely,
GROUNDWATER & ENVIRONMENTAL SERVICES, INC.


Joel Walcott
Project Manager


Michael Decoteau
Senior Project Engineer


Gerald H. Cresap, Jr., P.E.
Regional Engineering Manager

Attachments:

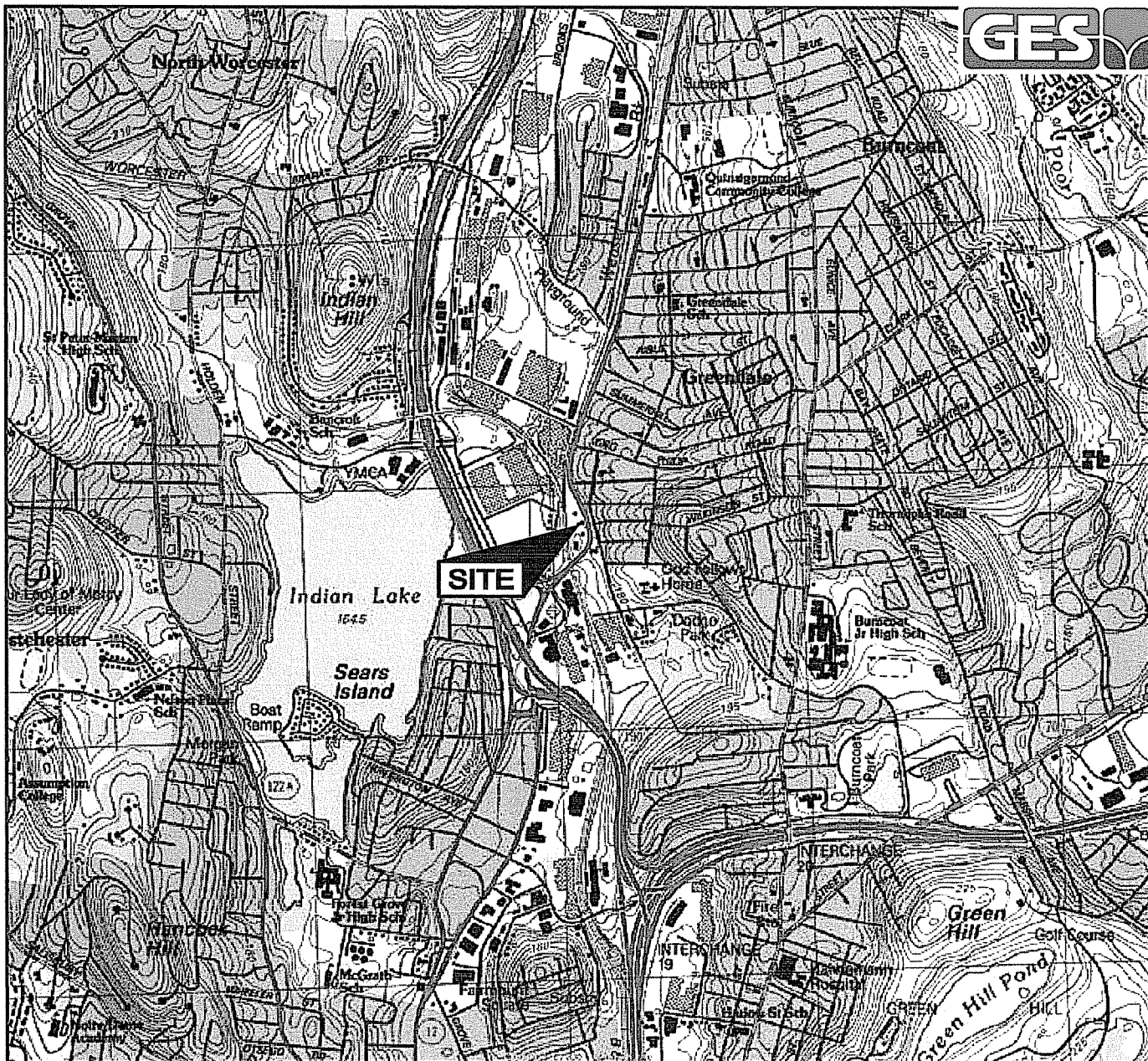
- Figure 1 Site Location Map
- Figure 2 Dewatering Site Map
- Figure 3 Local Area map
- Figure 4 Process & Instrumentation Diagram Dewatering Treatment System

- Table 1 Historical Groundwater Analytical Data – VPH, Targets and Ethanol (2/03-4/06)
- Table 2 Historical Groundwater Analytical Data – EPH and Target Compounds (2/07 – 2/08)
- Table 3 Summary of Detected Compounds (October 2008)

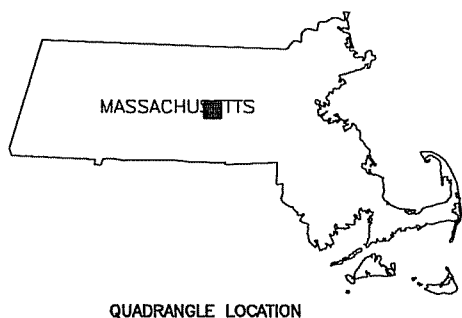
- Appendix A Remedial General Permit Notice of Intent Form
- Appendix B Copy of NOI Baseline Analytical Report (10/22/08)

- C: Drake Petroleum Company, Inc. via EMIS upload

FIGURES



SOURCE: USGS 7.5 MINUTE SERIES
TOPOGRAPHIC QUADRANGLE 1983
WORCESTER NORTH, MASSACHUSETTS
CONTOUR INTERVAL = 3 METERS

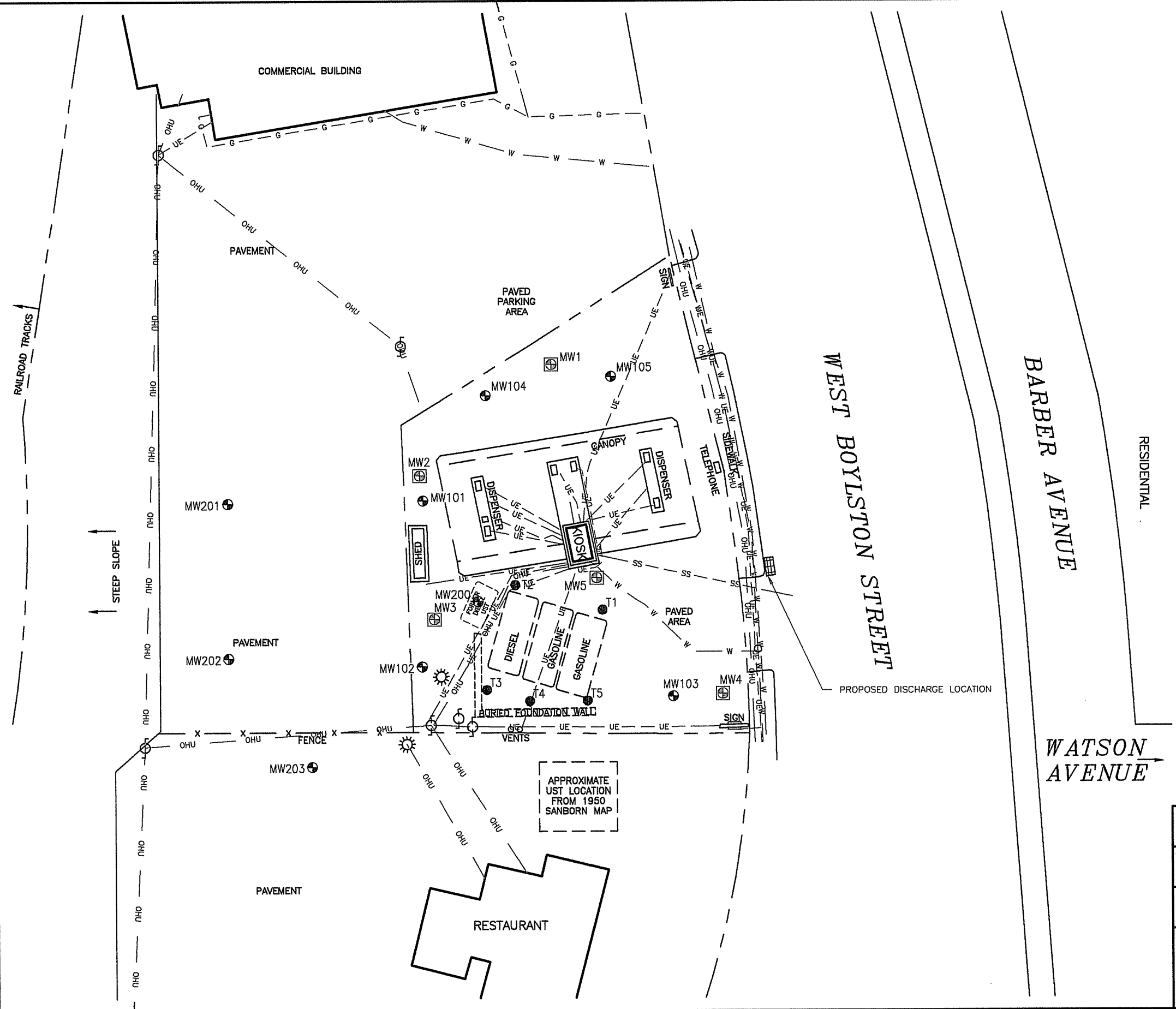


DRAFTED BY: W.G.S. (N.J.)	SITE LOCATION MAP		
CHECKED BY: 	DRAKE PETROLEUM COMPANY, INC. XTRAMART PC#001335 323 WEST BOYLSTON STREET WORCESTER, MASSACHUSETTS		
REVIEWED BY: 	Groundwater & Environmental Services, Inc. 364 LITTLETON ROAD, SUITE 4, WESTFORD, MA 01886		
NORTH 	SCALE IN FEET 	DATE 2-21-08	FIGURE 1



LEGEND

- CATCH BASIN
- LIGHT POLE
- UTILITY POLE
- TANK FIELD WELL
- MONITORING WELL
- ABANDONED/DESTROYED WELL
- SS — UNDERGROUND SANITARY SEWER LINE
- UE — UNDERGROUND ELECTRIC LINE
- W — UNDERGROUND WATER LINE
- OHU — OVERHEAD UTILITIES
- G — UNDERGROUND NATURAL GAS LINE

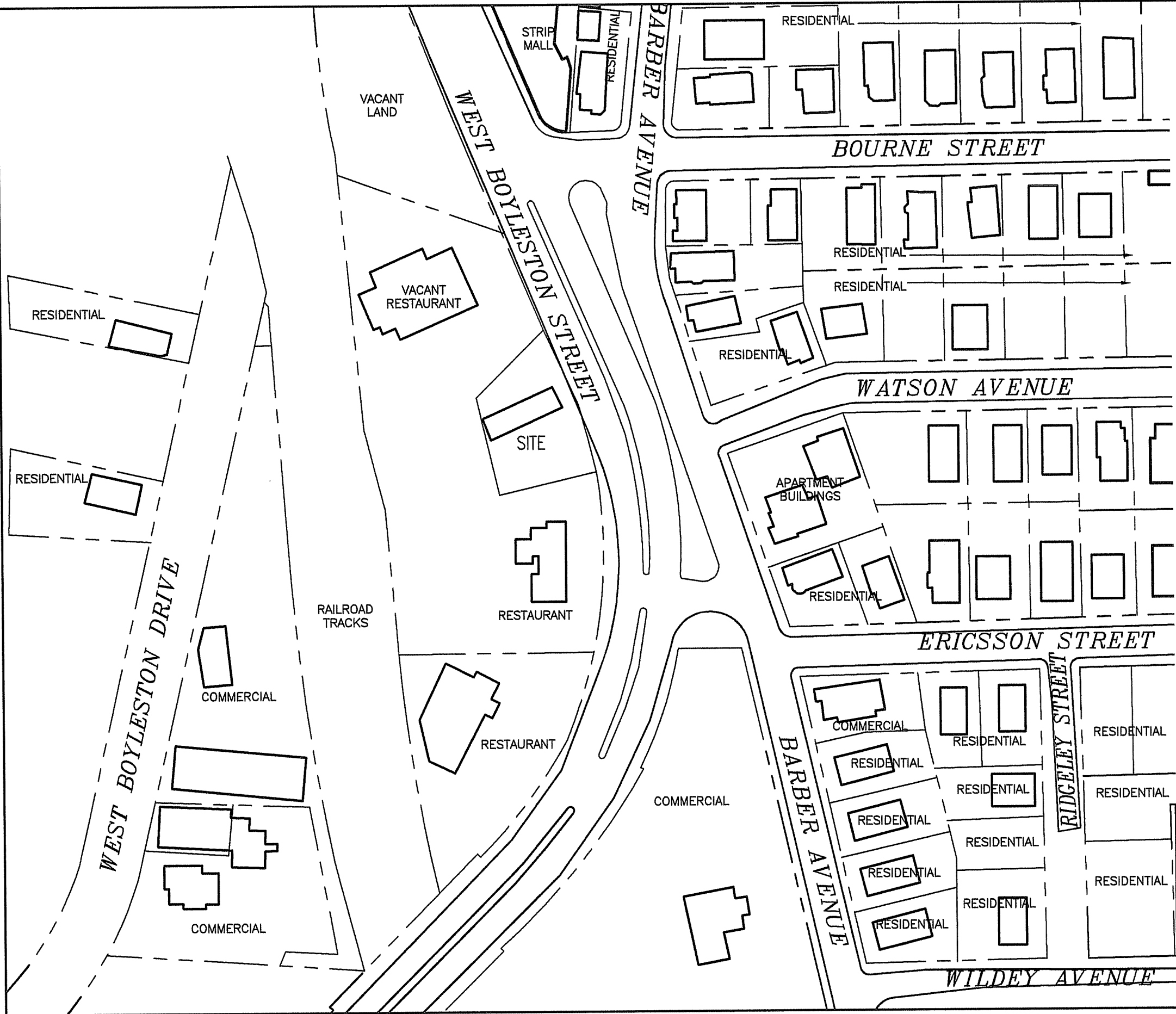


DRAFTED BY: W.G.S. (N.J.)	DEWATERING SITE MAP		
CHECKED BY: 	DRAKE PETROLEUM COMPANY, INC. WEST BOYLSTON STREET XTRAMART 323 WEST BOYLSTON STREET WORCESTER, MASSACHUSETTS		
REVIEWED BY: 	Groundwater & Environmental Services, Inc. 364 LITTLETON ROAD, SUITE 4, WESTFORD, MA 01886		
NORTH 	SCALE IN FEET 0 APPROXIMATE 30	DATE 11-13-08	FIGURE 2

M:\Graphics\1600-Westford\Misc\Warren Equities\001335 Worcester SM.dwg, B-30, 11/13/2008 10:06:14 AM, WShea

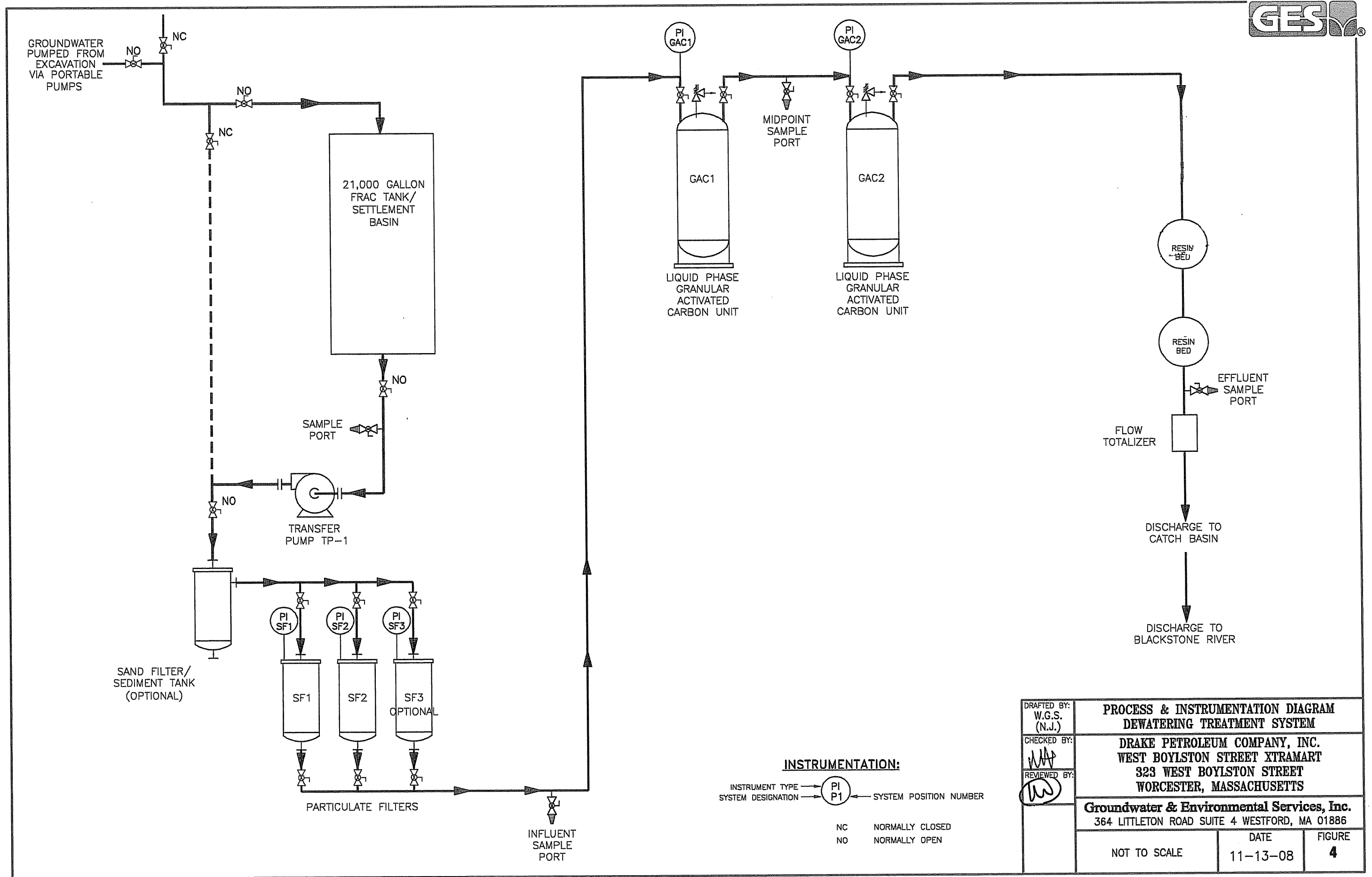
LEGEND

----- PROPERTY BOUNDARY



DRAFTED BY: W.G.S. (N.J.)	LOCAL AREA MAP		
CHECKED BY: 	DRAKE PETROLEUM COMPANY, INC. XTRAMART PC#001335 323 WEST BOYLSTON STREET WORCESTER, MASSACHUSETTS		
REVIEWED BY: 	Groundwater & Environmental Services, Inc. 364 LITTLETON ROAD, SUITE 4, WESTFORD, MA 01886		
NORTH 	SCALE IN FEET 0 APPROXIMATE 100	DATE 2-21-08	FIGURE 3

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TABLES

Table 1: Historical Groundwater Analytical Data - VPH, Targets and Ethanol (2/07- 8/08)

West Boylston Street Xtramart
323 West Boylston Street
Worcester, MA
RTN 2-16704



Monitoring Well	Casing Elevation (feet)	Sampling Date	Depth to Water (feet)	Depth to Product (feet)	Groundwater Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Naphthalene (µg/L)	C ₃ -C ₈ Aliphatics (µg/L)	C ₉ -C ₁₂ Aliphatics (µg/L)	C ₉ -C ₁₀ Aromatics (µg/L)	Ethanol (µg/L)
MADEP MCP Method 1 Groundwater Standards (in µg/L)					GW-2	2,000	50,000	20,000	9,000	50,000	1,000	3,000	5,000	7,000	—
					GW-3	10,000	40,000	5,000	5,000	50,000	20,000	50,000	50,000	50,000	—
MW-101 (GW-2/3) Screen Interval 10'-20'	98.83	13-Feb-07 ⁽²⁾	NA	ND	NA	39.7	5.4	49.7	23.4	85.8	36.9	304	434	755	NA
		3-Aug-07	12.61	ND	86.22	14.5	<2.0	45.8	<4.0	61.3	17.9	98.4	114	434	<200
		15-Nov-07	12.71	ND	86.12	7.5	<2.0	13.7	<4.0	109	<3.0	135	66.0	366	NA
		28-Feb-08	11.57	ND	87.26	9.0	<2.0	6.9	<4.0	11.2	7.1	63.2	<50	190	NA
		27-Aug-08	11.84	ND	86.99	24.6	<2.0	12.0	2.6	27.0	<3.0	120	80.9	356	NA
MW-102 (GW-3) Screen Interval 10'-20'	99.44	13-Feb-07 ⁽²⁾	NA	ND	NA	1,420	3,520	2,550	12,810	914	499	15,300	4,520	8,650	NA
		3-Aug-07 ⁽¹⁾	13.30	ND	86.14	233	425	2,280	8,320	237	647	3,900	4,090	24,700	<200
		15-Nov-07	15.65	ND	83.79	347	59.4	1,070	1,636	547	353	4,720	99.3	6,600	NA
		28-Feb-08	10.49	ND	88.95	4.0	8.1	163	602	20.8	78.3	1,980	351	2,050	NA
		27-Aug-08	12.83	ND	86.61	29.7	6.6	280	501	55.2	104	2,500	555	2,620	NA
MW-103 (GW-2/3) Screen Interval 10'-20'	100.40	13-Feb-07 ⁽²⁾	NA	ND	NA	<10.0	<10.0	<10.0	<30.0	1,120	<10.0	<150	<50	74.9	NA
		3-Aug-07	14.65	ND	85.75	<2.0	<2.0	<2.0	<4.0	883	<3.0	<50	<50	<50	<200
		15-Nov-07	14.63	ND	85.77	<2.0	<2.0	<2.0	<4.0	495	<3.0	<50	<50	<50	NA
		28-Feb-08	13.84	ND	86.56	<2.0	<2.0	<2.0	<4.0	185	<3.0	<50	<50	<50	NA
MW-104 (GW-2/3) Screen Interval 10'-20'	97.93	13-Feb-07 ⁽²⁾	NA	ND	NA	<5.0	<5.0	<5.0	<15.0	7.5	25.1	170	143	200	NA
		3-Aug-07	11.02	ND	86.91	<2.0	<2.0	<2.0	<4.0	4.1	<3.0	<50	<50	<50	NA
		15-Nov-07	11.15	ND	86.78	<2.0	<2.0	<2.0	<4.0	15.5	<3.0	52.0	<50	<50	NA
		28-Feb-08	9.57	ND	88.36	<2.0	<2.0	<2.0	<4.0	<2.0	<3.0	<50	<50	<50	NA
MW-105 (GW-2/3) Screen Interval 10'-20'	98.21	3-Aug-07	7.41	ND	90.80	<2.0	<2.0	<2.0	<4.0	<2.0	<3.0	<50	<50	<50	NA
		15-Nov-07	7.99	ND	90.22	<2.0	<2.0	<2.0	<4.0	<2.0	<3.0	<50	<50	<50	NA
		28-Feb-08	6.82	ND	91.39	<2.0	<2.0	<2.0	<4.0	<2.0	<3.0	<50	<50	<50	NA
T2 (GW-2/3)	NSVD	13-Feb-07 ⁽²⁾	NA	ND	NA	<20.0	<20.0	<20.0	<60.0	3,200	<20.0	<300	<100	<100	NA
		3-Aug-07	9.02	ND	NA	<2.0	<2.0	<2.0	<4.0	379	<3.0	<50	<50	<50	<200
		28-Feb-08	8.36	ND	NA	10.9	<2.0	2.7	4.1	34.6	<3.0	<50	<50	<50	NA
T3 (GW-2/3)	NSVD	15-Nov-07	6.36	ND	NA	4.1	<2.0	<2.0	8.7	90.6	<3.0	<50	<50	<50	NA
		28-Feb-08	8.26	ND	NA	2.4	<2.0	<2.0	<4.0	32.6	<3.0	<50	<50	<50	NA
		27-Aug-08	8.42	ND	NA	<2.0	<2.0	<2.0	<4.0	17.1	<3.0	<50	<50	<50	NA
T5 (GW-2/3)	NSVD	13-Feb-07 ⁽²⁾	NA	ND	NA	<20.0	<20.0	<20.0	<60.0	4,620	<20.0	ND	<300	<100	<100
		3-Aug-07	9.44	ND	NA	<2.0	<2.0	<2.0	<4.0	305	<3.0	<50	<50	<50	<200
		28-Feb-08	8.76	ND	NA	<2.0	<2.0	<2.0	6.0	30.0	<3.0	63.7	<50	<50	NA
		27-Aug-08	8.96	ND	NA	<2.0	<2.0	<2.0	<4.0	40.7	<3.0	<50	<50	<50	NA
MW-200 (GW-2/3)	99.29	27-Aug-08	13.24	ND	86.05	27.7	37.0	34.0	370	2,820	7.9	<50	105	412	NA
MW-201 (GW-3)	96.64	27-Aug-08	12.61	ND	84.03	<2.0	<2.0	<2.0	<4.0	30.7	<3.0	<50	<50	<50	NA
MW-202 (GW-3)	97.55	27-Aug-08	13.65	ND	83.90	24.8	4.8	161	149	40.0	63.9	164	354	1,760	NA
MW-203 (GW-2/3)	98.57	27-Aug-08	DRY	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

µg/L = micrograms per liter

NSVD = Not surveyed

ND = Not Detected

MTBE = Methyl tertiary butyl ether

NA = Not available or analyzed for that compound

Bold = concentration exceeds applicable MCP Method 1 GW-1 Groundwater StandardUnderlined = concentration exceeds applicable MCP Method 1 GW-2 Groundwater Standard**Shaded** = concentration exceeds applicable MCP Method 1 GW-3 Groundwater Standard

(1) = Result is from Run 2

(2) = Indicates data collected by Wheatstone Engineering & Consulting, Inc.

Table was modified from previous versions to reflect revisions to the MCP Method 1 Standards effective February 14, 2008.

Table 2. Historical Groundwater Analytical Results:
EPH and Target Compounds (February 2007 - February 2008)
 West Boylston Street Xtramart
 323 West Boylston Street
 Worcester, MA
 MADEP RTN 2-16704

Sample ID	GW-2	GW-3	MW-101				MW-102				T2	T3	T5
Sample Date	Standards	Standards	02/13/07 ⁽¹⁾	08/03/07	11/15/07	02/28/08	02/13/07 ⁽¹⁾	8/3/2007 ⁽²⁾	11/15/07	02/28/08	08/03/07	11/15/2007 ⁽²⁾	08/03/07
EPH and Target PAH Analysis by MADEP Method:													
Acenaphthene	NA	6,000	<5.26	<5.3	<5.4	<5.1	<6.10	<5.3	<5.6	<5.3	<5.6	<5.3	<5.6
Acenaphthylene	10,000	40	<5.26	<5.3	<5.4	<5.1	<6.10	<5.3	<5.6	<5.3	<5.6	<5.3	<5.6
Anthracene	NA	30	<5.26	<5.3	<5.4	<5.1	<6.10	<5.3	<5.6	<5.3	<5.6	<5.3	<5.6
Benzo(a)anthracene	NA	1,000	<5.26	<5.3	<5.4	<5.1	<6.10	<5.3	<5.6	<5.3	<5.6	<5.3	<5.6
Benzo(a)pyrene	NA	500	<5.26	<5.3	<5.4	<5.1	<6.10	<5.3	<5.6	<5.3	<5.6	<5.3	<5.6
Benzo(b)fluoranthene	NA	400	<5.26	<5.3	<5.4	<5.1	<6.10	<5.3	<5.6	<5.3	<5.6	<5.3	<5.6
Benzo(g,h,i)perylene	NA	20	<5.26	<5.3	<5.4	<5.1	<6.10	<5.3	<5.6	<5.3	<5.6	<5.3	<5.6
Benzo(k)fluoranthene	NA	100	<5.26	<5.3	<5.4	<5.1	<6.10	<5.3	<5.6	<5.3	<5.6	<5.3	<5.6
Chrysene	NA	70	<5.26	<5.3	<5.4	<5.1	<6.10	<5.3	<5.6	<5.3	<5.6	<5.3	<5.6
Dibenzo(a,h)anthracene	NA	40	<5.26	<5.3	<5.4	<5.1	<6.10	<5.3	<5.6	<5.3	<5.6	<5.3	<5.6
Fluoranthene	NA	200	<5.26	<5.3	<5.4	<5.1	<6.10	<5.3	<5.6	<5.3	<5.6	<5.3	<5.6
Fluorene	NA	40	<5.26	<5.3	<5.4	<5.1	<6.10	<5.3	<5.6	<5.3	<5.6	<5.3	<5.6
Indeno(1,2,3-cd)pyrene	NA	100	<5.26	<5.3	<5.4	<5.1	<6.10	<5.3	<5.6	<5.3	<5.6	<5.3	<5.6
Naphthalene	1,000	20,000	<5.26	<5.3	<5.4	<5.1	165	174	182	15.4	<5.6	<5.3	<5.6
Phenanthrene	NA	10,000	<5.26	<5.3	<5.4	<5.1	<6.10	<5.3	<5.6	<5.3	<5.6	<5.3	<5.6
Pyrene	NA	20	<5.26	<5.3	<5.4	<5.1	<6.10	<5.3	<5.6	<5.3	<5.6	<5.3	<5.6
2-Methylnaphthalene	2,000	20,000	<5.26	14.3	15.1	5.9	48.1	107	103	17.6	<5.6	<5.3	<5.6
C ₉ -C ₁₈ Aliphatics	5,000	50,000	<200	510	<110	128	<200	1,600	484	325	<110	<110	<110
C ₁₉ -C ₃₆ Aliphatics	NA	50,000	<200	<110	<110	<100	<200	<110	<110	<110	<110	<110	<110
C ₁₁ -C ₂₂ Aromatics	50,000	5,000	300	594	363	308	200	536	462	189	<110	<110	<110

Notes:

Results and standards are reported in micrograms per liter

<# =Not detected at the indicated detection limit

NS=Not Sampled

NA=Not Applicable

ND = Not Detected

EPH=Extractable Petroleum Hydrocarbons

PAHs = Polycyclic Aromatic Hydrocarbons

EPA = Environmental Protection Agency

(1)= Indicates data collected by Wheatstone Engineering & Consulting, Inc.

(2) = The PAH surrogate recovery(ies) were outside control limit(s) low.

Underlined = concentration exceeds applicable MCP Method 1 GW-2 Groundwater Standard

Shaded = concentration exceeds applicable MCP Method 1 GW-3 Groundwater Standard

Table was modified from previous versions to reflect revisions to the MCP Method 1 Standards effective February 14, 2008.

Table 3. Summary of Detected Compounds

(October 2008)

West Boyleston Street Xtramart

323 West Boylston Street

Worcester, Massachusetts

RTN 2-16704

Well ID: Applicable GW Classification:	RGP Limits		T2 (GW-2,3)	T5 (GW-2,3)
Sampling Date:	Appendix III	Dilution Factor	10/09/08	10/09/08
Dissolved Metals				
Antimony	5.6	141	1.3 U	1.3 U
Arsenic	10	540	20.1	3.2 B
Cadmium	0.2	20	0.25 U	0.25 U
Chromium III (Trivalent)	48.8	1,710	0.72 U	0.72 U
Chromium VI (Hexavalent)	11.4	1,140	0.72 U	0.72 U
Copper	5.2	520	2.7 U	2.7 B
Iron	1,000	5,000	804	5.6 U
Lead	1.3	132	51.8	43.2
Mercury	0.9	2.3	0.038 U	0.038 U
Nickel	29	2,380	1.9 B	0.7 B
Selenium	5	408	2 U	2 U
Silver	1.2	115	0.57 U	0.57 U
Zinc	66.6	1,480	6.4 B	31.0
VOCs by EPA Method 624				
Benzene	5	5	<0.50	<0.50
Ethylbenzene	< 100 BTEX	< 100 BTEX	<1.0	<1.0
Toluene	< 100 BTEX	< 100 BTEX	<1.0	<1.0
Xylenes (Total)	< 100 BTEX	< 100 BTEX	<1.0	<1.0
Total BTEX	100	100	ND	ND
tert-Amyl methyl Ether	NA	NA	0.22	<2.0
Methyl tert-butyl ether (MTBE)	70	70	10.5	3.8

Notes:

µg/L = micrograms per liter

MDL = Method Detection Limit

RL = Reporting Limit

U = Result < MDL

B = Result ≥ MDL but < RL

Appendix III = Appendix III Effluent Limitations discharge limits

Dilution Factor = Metals limits based on calculated Dilution Factor of 270 and Appendix IV Total Recoverable Metals Limitations

Bold = reported value exceeds Appendix III RGP Value, but is less than Dilution Factor based limit.

APPENDIX A

B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit

1. General site information. Please provide the following information about the site:

a) Name of facility/site: Xtramart PC No. 001335		Facility/site address:	
Location of facility/site: longitude: 42°18'05.77" latitude: 71°48'01.09"	Facility SIC code(s): 5541	Street: 323 West Boylston Street	
b) Name of facility/site owner: Drake Petroleum Company, Inc.		Town: Worcester	
Email address of owner: RLeather@warreneq.com	State: Massachusetts	Zip: 01606	County: Worcester
Telephone no. of facility/site owner: 401-781-9900 ext 257			
Fax no. of facility/site owner: 401-461-7160		Owner is (check one): 1. Federal____ 2. State/Tribal____ 3. Private ☒ 4. other, if so, describe:	
Address of owner (if different from site):			
Street: 27 Warren Way			
Town: Providence	State: RI	Zip: 02905	County:
c) Legal name of operator:	Operator telephone no: 800-221-6119		
Groundwater & Environmental Services, Inc.	Operator fax no.: 978-392-8583		Operator email: MDecoteau@gesonline.com
Operator contact name and title: Mike Decoteau, Project Engineer			
Address of operator (if different from owner):	Street: 364 Littleton Road		
Town: Westford	State: MA	Zip: 01886	County: Middlesex
d) Check "yes" or "no" for the following:			
1. Has a prior NPDES permit exclusion been granted for the discharge? Yes___ No ☒ , if "yes," number:			
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes___ No ☒ , if "yes," date and tracking #:			
3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes ☒ No___			
4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes___ No ☒			

e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes___ No ☒ If "yes," please list: 1. site identification # assigned by the state of NH or MA: 2. permit or license # assigned: 3. state agency contact information: name, location, and telephone number:	f) Is the site/facility covered by any other EPA permit, including: 1. multi-sector storm water general permit? Y___ N ☒, if Y, number: 2. phase I or II construction storm water general permit? Y___ N ☒, if Y, number: 3. individual NPDES permit? Y___ N ☒, if Y, number: 4. any other water quality related permit? Y___ N ☒, if Y, number:
--	--

2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage: Dewatering site during underground storage tank (UST) removal project. See part (d) for flow description.		
b) Provide the following information about each discharge:	1) Number of discharge points: 1	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft³/s)? Max. flow <u>0.1671</u> Average flow <u>0.1114</u> Is maximum flow a design value? Y ☒ N___ For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.
3) Latitude and longitude of each discharge within 100 feet: pt.1: long. <u>42°18'05.77"</u> lat. <u>71°48'01.90"</u>; pt.2: long. _____ lat. _____; pt.3: long. _____ lat. _____; pt.4: long. _____ lat. _____; pt.5: long. _____ lat. _____; pt.6: long. _____ lat. _____; pt.7: long. _____ lat. _____; pt.8: long. _____ lat. _____; etc.		
4) If hydrostatic testing, total volume of the discharge (gals): <u>N/A</u>		5) Is the discharge intermittent ☒ or seasonal _____? Is discharge ongoing Yes _____ No ☒ ?
c) Expected dates of discharge (mm/dd/yy): start <u>11/15/08</u> end <u>01/30/09</u>		
d) Please attach a line drawing or flow schematic showing water flow through the facility including: 1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s).		

3. Contaminant information. In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for all of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to: i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

a) Based on the analysis of the sample(s) of the untreated influent, the applicant must check the box of the sub-categories that the potential discharge falls within.

Gasoline Only ☒	VOC Only	Primarily Metals	Urban Fill Sites	Contaminated Sumps	Mixed Contaminants	Aquifer Testing
Fuel Oils (and Other Oils) only	VOC with Other Contaminants	Petroleum with Other Contaminants	Listed Contaminated Sites	Contaminated Dredge Condensates	Hydrostatic Testing of Pipelines/Tanks	Well Development or Rehabilitation

b) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids	☒		2	GRAB	SM21 2540D	4000	<4000	<0.82	<4000	<0.82
2. Total Residual Chlorine	☒		2	GRAB	SM21 4500CLF	50	<50	<0.01	<50	<0.0144
3. Total Petroleum Hydrocarbons	☒		2	GRAB	8015/3510C	320	<320	<0.07	<320	<0.07
4. Cyanide	☒		2	GRAB	EPA 335.4	10	<10	<0.002	<10	<0.0002
5. Benzene	☒		2	GRAB	EPA 624	0.25	<0.5	<0.0001	<0.5	<0.0001
6. Toluene	☒		2	GRAB	EPA 624	0.3	<1.0	<0.0002	<1.0	<0.0002
7. Ethylbenzene	☒		2	GRAB	EPA 624	0.15	<1.0	<0.0002	<1.0	<0.0002
8. (m,p,o) Xylenes	☒		2	GRAB	EPA 624	1.0	<1.0	<0.0002	<1.0	<0.0002
9. Total BTEX ⁴	☒		2	GRAB	NA	NA	NA	NA	NA	NA

⁴BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide ⁵ (1,2- Dibromo-methane)	✓		2	GRAB	8260B	0.11	<2.0	<0.0004	<2.0	<0.0004
11. Methyl-tert-Butyl Ether (MtBE)		✓	2	GRAB	EPA 624	0.26	10.5	0.002	7.15	0.002
12. tert-Butyl Alcohol (TBA)	✓		2	GRAB	8260B	3.7	<20	<0.004	<20	<0.004
13. tert-Amyl Methyl Ether (TAME)		✓	2	GRAB	8260B	0.11	0.22	0.00005	0.165	0.00003
14. Naphthalene	✓		2	GRAB	EPA 625	0.056	<0.11	<0.000005	<0.105	<0.000005
15. Carbon Tetra-chloride	✓		2	GRAB	EPA 624	0.27	<1.0	<0.0002	<1.0	<0.0002
16. 1,4 Dichlorobenzene	✓		2	GRAB	EPA 624	0.2	<1.0	<0.0002	<1.0	<0.0002
17. 1,2 Dichlorobenzene	✓		2	GRAB	EPA 624	0.15	<1.0	<0.0002	<1.0	<0.0002
18. 1,3 Dichlorobenzene	✓		2	GRAB	EPA 624	0.15	<1.0	<0.0002	<1.0	<0.0002
19. 1,1 Dichloroethane	✓		2	GRAB	EPA 624	0.28	<1.0	<0.0002	<1.0	<0.0002
20. 1,2 Dichloroethane	✓		2	GRAB	EPA 624	0.23	<1.0	<0.0002	<1.0	<0.0002
21. 1,1 Dichloroethylene	✓		2	GRAB	EPA 624	0.63	<1.0	<0.0002	<1.0	<0.0002
22. cis-1,2 Dichloro-ethylene	✓		2	GRAB	8260B	0.16	<1.0	<0.0002	<1.0	<0.0002
23. Dichloromethane (Methylene Chloride)	✓		2	GRAB	EPA 624	0.76	<1.0	<0.0002	<1.0	<0.0002
24. Tetrachloroethylene	✓		2	GRAB	EPA 624	0.22	<1.0	<0.0002	<1.0	<0.0002

⁵EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane	✓		2	GRAB	EPA 624	0.24	<1.0	<0.0002	<1.0	<0.0002
26. 1,1,2 Trichloroethane	✓		2	GRAB	EPA 624	0.27	<1.0	<0.0002	<1.0	<0.0002
27. Trichloroethylene	✓		2	GRAB	EPA 624	0.29	<1.0	<0.0002	<1.0	<0.0002
28. Vinyl Chloride	✓		2	GRAB	EPA 624	0.40	<1.0	<0.0002	<1.0	<0.0002
29. Acetone	✓		2	GRAB	8260B	1.9	<5	<0.001	<5.4	<0.001
30. 1,4 Dioxane	✓		2	GRAB	8260B	8.5	<25	<0.005	<25	<0.005
31. Total Phenols	✓		2	GRAB	EPA 625	0.61	<5.4	<0.001	<5.25	<0.001
32. Pentachlorophenol	✓		2	GRAB	EPA 625	2.0	<11	<0.002	<10.5	<0.002
33. Total Phthalates ⁶ (Phthalate esthers)	✓		2	GRAB	EPA 625	0.14	<66	<0.01	<63	<0.01
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	✓		2	GRAB	EPA 625	1.6	<11	<0.002	<10.5	<0.002
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	✓		2	GRAB	EPA 625	2.19	<37.8	<0.007	<36.75	<0.007
a. Benzo(a) Anthracene	✓		2	GRAB	EPA 625	0.23	<5.4	<0.001	<5.25	<0.001
b. Benzo(a) Pyrene	✓		2	GRAB	EPA 625	0.27	<5.4	<0.001	<5.25	<0.001
c. Benzo(b)Fluoranthene	✓		2	GRAB	EPA 625	0.35	<5.4	<0.001	<5.25	<0.001
d. Benzo(k) Fluoranthene	✓		2	GRAB	EPA 625	0.37	<5.4	<0.001	<5.25	<0.001
e. Chrysene	✓		2	GRAB	EPA 625	0.32	<5.4	<0.001	<5.25	<0.001

⁶The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min- imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzo(a,h) anthracene	✓		2	GRAB	EPA 625	0.30	<5.4	<0.001	<5.25	<0.001
g. Indeno(1,2,3-cd) Pyrene	✓		2	GRAB	EPA 625	0.35	<5.4	<0.001	<5.25	<0.001
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	✓		2	GRAB	EPA 625	0.344	<0.934	<0.000243	<0.8925	<0.0002
h. Acenaphthene	✓		2	GRAB	EPA 625	0.035	<0.11	<0.00002	<0.105	<0.00002
i. Acenaphthylene	✓		2	GRAB	EPA 625	0.034	<0.11	<0.00002	<0.105	<0.00002
j. Anthracene	✓		2	GRAB	EPA 625	0.046	<0.11	<0.00002	<0.105	<0.00002
k. Benzo(ghi) Perylene	✓		2	GRAB	EPA 625	0.035	<0.11	<0.00002	<0.105	<0.00002
l. Fluoranthene	✓		2	GRAB	EPA 625	0.037	<0.11	<0.00002	<0.105	<0.00002
m. Fluorene	✓		2	GRAB	EPA 625	0.035	<0.11	<0.00002	<0.105	<0.00002
n. Naphthalene-	✓		2	GRAB	EPA 625	0.056	<0.11	<0.00002	<0.105	<0.00002
o. Phenanthrene	✓		2	GRAB	EPA 625	0.038	<0.054	<0.00001	<0.0525	<0.00001
p. Pyrene	✓		2	GRAB	EPA 625	0.028	<0.11	<0.00002	<0.105	<0.00002
37. Total Polychlorinated Biphenyls (PCBs)	✓		2	GRAB	EPA 608	0.376	<0.54	<.00001	<0.54	<0.0001
38. Antimony	✓		2	GRAB	EPA 200.7	1.3	<1.3	<0.0002	<1.3	<0.0002
39. Arsenic		✓	2	GRAB	EPA 200.7	0.97	20.1	0.004	11.65	0.002
40. Cadmium	✓		2	GRAB	EPA 200.7	0.25	<0.25	<0.00005	<0.25	<0.00005
41. Chromium III	✓		2	GRAB	EPA 200.7	20	<20	<0.004	<20	<0.004
42. Chromium VI	✓		2	GRAB	SW846 7196A	10	<10	<0.002	<10	<0.002

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper	✓		2	GRAB	EPA 200.7	2.7	<2.7	<0.0006	<2.7	<0.0006
44. Lead		✓	2	GRAB	EPA 200.7	5.0	51.8	0.01	47.5	0.01
45. Mercury	✓		2	GRAB	EPA 200.7	0.038	<0.038	<0.00001	<0.038	<0.00001
46. Nickel		✓	2	GRAB	EPA 200.7	0.24	1.9	0.0004	1.3	0.0003
47. Selenium	✓		2	GRAB	EPA 200.7	2.0	<2.0	<0.0004	<2.0	<0.0004
48. Silver	✓		2	GRAB	EPA 200.7	0.57	<0.57	<0.0001	<0.57	<0.0001
49. Zinc		✓	2	GRAB	EPA 200.7	0.31	31	0.006	18.7	0.004
50. Iron		✓	2	GRAB	EPA 200.7	5.6	804	0.16	804	0.16
Other (describe):										

c) For discharges where **metals** are believed present, please fill out the following:

<i>Step 1:</i> Do any of the metals in the influent have a reasonable potential to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y <u>✓</u> N <u> </u>	If yes, which metals? Arsenic, Cadmium and Lead
<i>Step 2:</i> For any metals which have reasonable potential to exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: <u>Arsenic, Cadmium and Lead</u> DF: <u>270</u>	Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the influent have the potential to exceed the corresponding effluent limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y <u> </u> N <u>✓</u> If "Yes," list which metals:

4. Treatment system information. Please describe the treatment system using separate sheets as necessary, including:

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:						
b) Identify each applicable treatment unit (check all that apply):	Frac. tank ☒	Air stripper	Oil/water separator	Equalization tanks	Bag filter ☒	GAC filter ☒
	Chlorination	Dechlorination	Other (please describe): Metals removal (green sand and resin)			
c) Proposed average and maximum flow rates (gallons per minute) for the discharge and the design flow rate(s) (gallons per minute) of the treatment system: Average flow rate of discharge <u>50</u> Maximum flow rate of treatment system <u>75</u> Design flow rate of treatment system <u>75</u>						
d) A description of chemical additives being used or planned to be used (attach MSDS sheets): <u>NA</u>						

5. Receiving surface water(s). Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:	Direct <u> </u>	Within facility <u> </u>	Storm drain ☒	River/brook <u> </u>	Wetlands <u> </u>	Other (describe):
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters: <u>Discharge to catch basin on east side of street which then flows to a box culvert, west of the site then flows along Groove St, emptying into Salisbury Pond</u>						
c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water: 1. For multiple discharges, number the discharges sequentially. 2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.						
d) Provide the state water quality classification of the receiving water <u>B1</u> ,						
e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water <u>44.95</u> cfs Please attach any calculation sheets used to support stream flow and dilution calculations.						
f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes <u> </u> No ☒ If yes, for which pollutant(s)? Is there a TMDL? Yes <u> </u> No ☒ If yes, for which pollutant(s)?						

6. Results of Consultation with Federal Services: Please provide the following information according to requirements of Part I.B.4 and Appendices II and VII.

- a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes ___ No ☒
Has any consultation with the federal services been completed? Yes ___ No ☒ or is consultation underway? Yes ___ No ☒
What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one):
a "no jeopardy" opinion? ___ or written concurrence ___ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?
- b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge?
Yes ___ No ☒ Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes ___ No ___

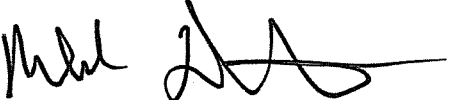
7. Supplemental information. :

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

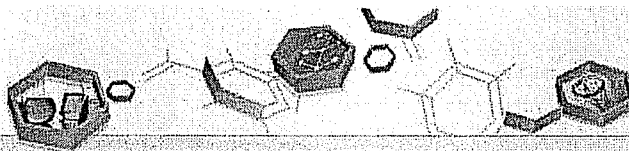
Facility/Site Name: **WEST BOYLSTON EXTRAMART**

Operator signature: 

Title: **Senior Project Engineer**

Date: **11/12/07**

APPENDIX B



10/22/08

Technical Report for

Drake Petroleum Co., Inc.

GESMA:Xtramart 323 W. Boylston St. Worcester MA

PC# 001335

Accutest Job Number: M77796

Sampling Date: 10/09/08

Report to:

Groundwater & Environmental Services

JWalcott@gesonline.com

ATTN: Joel Walcott

Total number of pages in report: 34



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Fand
Lab Director

Client Service contact: Kristen Blanchard 508-481-6200

Certifications: MA (M-MA136) CT (PH-0109) NH (2502) RI (00071) ME (MA0136) FL (E87579)
NY (11791) NJ (MA926) PA (68-01121) NC (653) IL (200018) NAVY USACE

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Test results relate only to samples analyzed.

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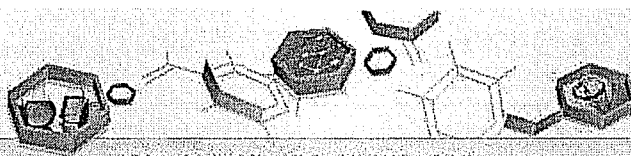
Sample Summary

Drake Petroleum Co., Inc.

Job No: M77796

GESMA:Xtramart 323 W. Boylston St. Worcester MA
Project No: PC# 001335

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
M77796-1	10/09/08	10:30 JA	10/09/08	AQ	Ground Water	T2
M77796-1A	10/09/08	10:30 JA	10/09/08	AQ	Ground Water	T2
M77796-1B	10/09/08	10:30 JA	10/09/08	AQ	Ground Water	T2
M77796-2	10/09/08	12:45 JA	10/09/08	AQ	Ground Water	T5
M77796-2A	10/09/08	12:45 JA	10/09/08	AQ	Ground Water	T5
M77796-2B	10/09/08	12:45 JA	10/09/08	AQ	Ground Water	T5



IT'S ALL IN THE CHEMISTRY

Sample Results

Report of Analysis

Report of Analysis

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Client Sample ID:	T2	Date Sampled:	10/09/08
Lab Sample ID:	M77796-1	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 624		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H48807.D	1	10/14/08	EL	n/a	n/a	MSH1537
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	ND	10	6.9	ug/l	
107-13-1	Acrylonitrile	ND	10	4.4	ug/l	
71-43-2	Benzene	ND	0.50	0.25	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.32	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
74-83-9	Bromomethane	ND	1.0	0.58	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	1.0	0.70	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.34	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.27	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.15	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.15	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.23	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.63	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.53	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.24	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.18	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.15	ug/l	
1634-04-4	Methyl Tert Butyl Ether	10.5	1.0	0.26	ug/l	
75-09-2	Methylene chloride	ND	1.0	0.76	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.24	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.27	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.29	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T2	Date Sampled:	10/09/08
Lab Sample ID:	M77796-1	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 624		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.25	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	1.0		ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4 (SUR)	122%		74-137%
2037-26-5	Toluene-D8 (SUR)	98%		80-120%
460-00-4	4-Bromofluorobenzene (SUR)	83%		79-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	T2	Date Sampled:	10/09/08
Lab Sample ID:	M77796-1	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 EPA 625		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F38337.D	1	10/21/08	PN	10/15/08	OP17046	MSF1836
Run #2							

Run #	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

ABN PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.4	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.34	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.39	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.90	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	22	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.68	ug/l	
100-02-7	4-Nitrophenol	ND	22	1.1	ug/l	
87-86-5	Pentachlorophenol	ND	11	2.1	ug/l	
108-95-2	Phenol	ND	5.4	0.65	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.35	ug/l	
83-32-9	Acenaphthene	ND	5.4	0.15	ug/l	
208-96-8	Acenaphthylene	ND	5.4	0.21	ug/l	
120-12-7	Anthracene	ND	5.4	0.17	ug/l	
92-87-5	Benzidine	ND	22	22	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.4	0.24	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.4	0.29	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.4	0.37	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.4	0.33	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.4	0.39	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.25	ug/l	
85-68-7	Butyl benzyl phthalate	ND	11	0.22	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.22	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.86	ug/l	
218-01-9	Chrysene	ND	5.4	0.34	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.19	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.21	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.24	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.24	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.4	0.19	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.18	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.4	0.19	ug/l	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T2		
Lab Sample ID:	M77796-1	Date Sampled:	10/09/08
Matrix:	AQ - Ground Water	Date Received:	10/09/08
Method:	EPA 625 EPA 625	Percent Solids:	n/a
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

ABN PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	5.4	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.23	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	11	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.18	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.4	0.32	ug/l	
84-74-2	Di-n-butyl phthalate	ND	11	0.15	ug/l	
117-84-0	Di-n-octyl phthalate	ND	11	0.22	ug/l	
84-66-2	Diethyl phthalate	ND	11	0.19	ug/l	
131-11-3	Dimethyl phthalate	ND	11	0.16	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	11	1.7	ug/l	
206-44-0	Fluoranthene	ND	5.4	0.18	ug/l	
86-73-7	Fluorene	ND	5.4	0.20	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.19	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	0.31	ug/l	
67-72-1	Hexachloroethane	ND	5.4	5.4	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.4	0.37	ug/l	
78-59-1	Isophorone	ND	5.4	0.23	ug/l	
91-20-3	Naphthalene	ND	5.4	0.19	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.31	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.15	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.23	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.23	ug/l	
85-01-8	Phenanthrene	ND	5.4	0.20	ug/l	
129-00-0	Pyrene	ND	5.4	0.29	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.4	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%		14-120%
4165-62-2	Phenol-d5	29%		10-120%
118-79-6	2,4,6-Tribromophenol	85%		12-137%
4165-60-0	Nitrobenzene-d5	83%		15-127%
321-60-8	2-Fluorobiphenyl	82%		10-129%
1718-51-0	Terphenyl-d14	61%		10-132%

ND = Not detected MDL - Method Detection Limit
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 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	T2	Date Sampled:	10/09/08
Lab Sample ID:	M77796-1	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8015		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB45797.D	1	10/13/08	AP	n/a	n/a	GAB2589
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	0.10	0.070	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
615-59-8	2,5-Dibromotoluene	79%		58-138%		

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	T2	Date Sampled:	10/09/08
Lab Sample ID:	M77796-1	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 608 EPA 608		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB22240.D	1	10/20/08	CZ	10/15/08	OP17031	GBB899
Run #2							

Run #	Initial Volume	Final Volume
Run #1	920 ml	5.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.54	0.032	ug/l	
11104-28-2	Aroclor 1221	ND	0.54	0.065	ug/l	
11141-16-5	Aroclor 1232	ND	0.54	0.083	ug/l	
53469-21-9	Aroclor 1242	ND	0.54	0.039	ug/l	
12672-29-6	Aroclor 1248	ND	0.54	0.063	ug/l	
11097-69-1	Aroclor 1254	ND	0.54	0.073	ug/l	
11096-82-5	Aroclor 1260	ND	0.54	0.025	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	118%		44-132%
877-09-8	Tetrachloro-m-xylene	118%		44-132%
2051-24-3	Decachlorobiphenyl	83%		12-151%
2051-24-3	Decachlorobiphenyl	112%		12-151%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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2

Client Sample ID:	T2	Date Sampled:	10/09/08
Lab Sample ID:	M77796-1	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846-8015 SW846 3510C		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC23476.D	1	10/16/08	WZ	10/15/08	OP17045	GBC1309
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (Semi-VOA)	ND	0.22	0.16	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	77%		39-145%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T2	Date Sampled:	10/09/08
Lab Sample ID:	M77796-1	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	25 U	200	25	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Antimony	1.3 U	6.0	1.3	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Arsenic	20.1	10	0.97	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Barium	62.3 B	200	22	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Beryllium	0.18 U	4.0	0.18	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Cadmium	0.25 U	4.0	0.25	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Calcium	87800	5000	21	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Chromium	0.72 U	10	0.72	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Cobalt	2.8 B	50	0.15	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Copper	2.7 U	25	2.7	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Iron	804	100	5.6	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Lead	51.8	5.0	1.8	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Magnesium	6390	5000	48	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Manganese	3290	15	3.3	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Mercury	0.038 U	0.20	0.038	ug/l	1	10/10/08	10/10/08	MA EPA 245.1 ¹	EPA 245.1 ³
Nickel	1.9 B	40	0.24	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Potassium	12000	5000	51	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Selenium	2.0 U	10	2.0	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Silver	0.57 U	5.0	0.57	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Sodium	227000	5000	97	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Thallium	6.3 B	10	0.88	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Vanadium	0.90 B	30	0.83	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴
Zinc	6.4 B	20	0.31	ug/l	1	10/10/08	10/14/08	PY EPA 200.7 ²	EPA 200.7 ⁴

- (1) Instrument QC Batch: MA9798
 (2) Instrument QC Batch: MA9814
 (3) Prep QC Batch: MP12617
 (4) Prep QC Batch: MP12621

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

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2.1

2

Client Sample ID:	T2	Date Sampled:	10/09/08
Lab Sample ID:	M77796-1	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	10/09/08 18:35	MA	SW846 7196A
Chromium, Trivalent ^a	< 0.020	0.020	mg/l	1	10/14/08 17:13	PY	6010/7196A M/200.7
Cyanide	< 0.010	0.010	mg/l	1	10/14/08 16:00	MA	EPA 335.4
Oil And Grease, Gravimetric	< 4.2	4.2	mg/l	1	10/14/08	BF	EPA 1664
Solids, Total Suspended	< 4.0	4.0	mg/l	1	10/13/08	MA	SM21 2540D
Total Residual Chlorine	< 0.050	0.050	mg/l	1	10/09/08 17:00	CF	SM21 4500CL F
pH	6.2		su	1	10/09/08 19:30	SAP	SM21 4500H-B

(a) Calculated as: (Chromium) - (Chromium, Hexavalent)

RL = Reporting Limit



Report of Analysis

Client Sample ID:	T2	Date Sampled:	10/09/08
Lab Sample ID:	M77796-1A	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 BY SIM EPA 625		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F38349.D	1	10/21/08	PN	10/16/08	OP17087	MSF1837
Run #2							

Run #	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
87-86-5	Pentachlorophenol	ND	1.1		ug/l	
83-32-9	Acenaphthene	ND	0.11	0.037	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.037	ug/l	
120-12-7	Anthracene	ND	0.11	0.049	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.038	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.028	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.054	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.037	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.041	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.024	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.039	ug/l	
86-73-7	Fluorene	ND	0.11	0.038	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.031	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.078	ug/l	
91-20-3	Naphthalene	ND	0.11	0.060	ug/l	
85-01-8	Phenanthrene	ND	0.054	0.041	ug/l	
129-00-0	Pyrene	ND	0.11	0.030	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	50%		10-110%
4165-62-2	Phenol-d5	31%		10-110%
118-79-6	2,4,6-Tribromophenol	106%		10-141%
4165-60-0	Nitrobenzene-d5	84%		30-130%
321-60-8	2-Fluorobiphenyl	82%		30-130%
1718-51-0	Terphenyl-d14	60%		30-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	T2	Date Sampled:	10/09/08
Lab Sample ID:	M77796-1B	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G85398.D	1	10/17/08	EL	n/a	n/a	MSG3449
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
106-93-4	1,2-Dibromoethane	ND	2.0	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		79-130%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	92%		80-120%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	T5	Date Sampled:	10/09/08
Lab Sample ID:	M77796-2	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 624		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H48808.D	1	10/14/08	EL	n/a	n/a	MSH1537
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	ND	10	6.9	ug/l	
107-13-1	Acrylonitrile	ND	10	4.4	ug/l	
71-43-2	Benzene	ND	0.50	0.25	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.32	ug/l	
75-25-2	Bromoform	ND	1.0	0.38	ug/l	
74-83-9	Bromomethane	ND	1.0	0.58	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.27	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.27	ug/l	
75-00-3	Chloroethane	ND	1.0	0.20	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	1.0	0.70	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.34	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.27	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.15	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.15	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.23	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.63	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.53	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.33	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.24	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.18	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.15	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.8	1.0	0.26	ug/l	
75-09-2	Methylene chloride	ND	1.0	0.76	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.32	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.24	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.27	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.29	ug/l	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T5	Date Sampled:	10/09/08
Lab Sample ID:	M77796-2	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 624		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

VOA PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-69-4	Trichlorofluoromethane	ND	1.0	0.25	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	1.0		ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4 (SUR)	121%		74-137%
2037-26-5	Toluene-D8 (SUR)	98%		80-120%
460-00-4	4-Bromofluorobenzene (SUR)	82%		79-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID: T5
 Lab Sample ID: M77796-2
 Matrix: AQ - Ground Water
 Method: EPA 625 EPA 625
 Project: GESMA:Xtramart 323 W. Boylston St. Worcester MA

Date Sampled: 10/09/08
 Date Received: 10/09/08
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F38338.D	1	10/21/08	PN	10/15/08	OP17046	MSF1836
Run #2							

Run #	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

ABN PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.1	0.30	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.32	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.37	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.84	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	20	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.3	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.64	ug/l	
100-02-7	4-Nitrophenol	ND	20	1.0	ug/l	
87-86-5	Pentachlorophenol	ND	10	2.0	ug/l	
108-95-2	Phenol	ND	5.1	0.61	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.33	ug/l	
83-32-9	Acenaphthene	ND	5.1	0.14	ug/l	
208-96-8	Acenaphthylene	ND	5.1	0.19	ug/l	
120-12-7	Anthracene	ND	5.1	0.16	ug/l	
92-87-5	Benzidine	ND	20	20	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	0.23	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	0.27	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	0.35	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	0.31	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	0.37	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	0.23	ug/l	
85-68-7	Butyl benzyl phthalate	ND	10	0.20	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	0.21	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.80	ug/l	
218-01-9	Chrysene	ND	5.1	0.32	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.18	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.19	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	0.23	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.1	0.18	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.17	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.1	0.18	ug/l	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T5		
Lab Sample ID:	M77796-2	Date Sampled:	10/09/08
Matrix:	AQ - Ground Water	Date Received:	10/09/08
Method:	EPA 625 EPA 625	Percent Solids:	n/a
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

ABN PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	5.1	0.25	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.22	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	10	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.17	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	ND	10	0.14	ug/l	
117-84-0	Di-n-octyl phthalate	ND	10	0.20	ug/l	
84-66-2	Diethyl phthalate	ND	10	0.18	ug/l	
131-11-3	Dimethyl phthalate	ND	10	0.15	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	10	1.6	ug/l	
206-44-0	Fluoranthene	ND	5.1	0.17	ug/l	
86-73-7	Fluorene	ND	5.1	0.18	ug/l	
118-74-1	Hexachlorobenzene	ND	5.1	0.18	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.1	0.29	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	0.29	ug/l	
67-72-1	Hexachloroethane	ND	5.1	5.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	0.35	ug/l	
78-59-1	Isophorone	ND	5.1	0.21	ug/l	
91-20-3	Naphthalene	ND	5.1	0.18	ug/l	
98-95-3	Nitrobenzene	ND	5.1	0.29	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	0.14	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.22	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.22	ug/l	
85-01-8	Phenanthrene	ND	5.1	0.19	ug/l	
129-00-0	Pyrene	ND	5.1	0.27	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.1	0.18	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	56%		14-120%
4165-62-2	Phenol-d5	34%		10-120%
118-79-6	2,4,6-Tribromophenol	85%		12-137%
4165-60-0	Nitrobenzene-d5	83%		15-127%
321-60-8	2-Fluorobiphenyl	84%		10-129%
1718-51-0	Terphenyl-d14	75%		10-132%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	T5	Date Sampled:	10/09/08
Lab Sample ID:	M77796-2	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8015		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB45798.D	1	10/13/08	AP	n/a	n/a	GAB2589
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	0.10	0.070	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
615-59-8	2,5-Dibromotoluene	89%		58-138%		

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	T5	Date Sampled:	10/09/08
Lab Sample ID:	M77796-2	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 608 EPA 608		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB22241.D	1	10/20/08	CZ	10/15/08	OP17031	GBB899
Run #2							

Run #	Initial Volume	Final Volume
Run #1	930 ml	5.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.54	0.031	ug/l	
11104-28-2	Aroclor 1221	ND	0.54	0.065	ug/l	
11141-16-5	Aroclor 1232	ND	0.54	0.082	ug/l	
53469-21-9	Aroclor 1242	ND	0.54	0.039	ug/l	
12672-29-6	Aroclor 1248	ND	0.54	0.062	ug/l	
11097-69-1	Aroclor 1254	ND	0.54	0.072	ug/l	
11096-82-5	Aroclor 1260	ND	0.54	0.025	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	105%		44-132%
877-09-8	Tetrachloro-m-xylene	105%		44-132%
2051-24-3	Decachlorobiphenyl	75%		12-151%
2051-24-3	Decachlorobiphenyl	111%		12-151%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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2

Client Sample ID:	T5	Date Sampled:	10/09/08
Lab Sample ID:	M77796-2	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846-8015 SW846 3510C		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC23477.D	1	10/16/08	WZ	10/15/08	OP17045	GBC1309
Run #2							

	Initial Volume	Final Volume
Run #1	800 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (Semi-VOA)	ND	0.25	0.18	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	68%		39-145%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T5	Date Sampled:	10/09/08
Lab Sample ID:	M77796-2	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	25 U	200	25	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Antimony	1.3 U	6.0	1.3	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Arsenic	3.2 B	10	0.97	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Barium	22 U	200	22	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Beryllium	0.18 U	4.0	0.18	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Cadmium	0.25 U	4.0	0.25	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Calcium	29000	5000	21	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Chromium	0.72 U	10	0.72	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Cobalt	0.70 B	50	0.15	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Copper	2.7 B	25	2.7	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Iron	5.6 U	100	5.6	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Lead	43.2	5.0	1.8	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Magnesium	2150 B	5000	48	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Manganese	337	15	3.3	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Mercury	0.038 U	0.20	0.038	ug/l	1	10/10/08	10/10/08 MA	EPA 245.1 ¹	EPA 245.1 ³
Nickel	0.70 B	40	0.24	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Potassium	6560	5000	51	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Selenium	2.0 U	10	2.0	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Silver	0.57 U	5.0	0.57	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Sodium	84400	5000	97	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Thallium	6.7 B	10	0.88	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Vanadium	0.83 U	30	0.83	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴
Zinc	31.0	20	0.31	ug/l	1	10/10/08	10/14/08 PY	EPA 200.7 ²	EPA 200.7 ⁴

(1) Instrument QC Batch: MA9798

(2) Instrument QC Batch: MA9814

(3) Prep QC Batch: MP12617

(4) Prep QC Batch: MP12621

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

Report of Analysis

Client Sample ID:	T5	Date Sampled:	10/09/08
Lab Sample ID:	M77796-2	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	10/09/08 18:35	MA	SW846 7196A
Chromium, Trivalent ^a	< 0.020	0.020	mg/l	1	10/14/08 17:17	PY	6010/7196A M/200.7
Cyanide	< 0.010	0.010	mg/l	1	10/14/08 16:01	MA	EPA 335.4
Oil And Grease, Gravimetric	< 4.2	4.2	mg/l	1	10/14/08	BF	EPA 1664
Solids, Total Suspended	< 4.0	4.0	mg/l	1	10/13/08	MA	SM21 2540D
Total Residual Chlorine	< 0.050	0.050	mg/l	1	10/09/08 17:00	CF	SM21 4500CL F
pH	6.5		su	1	10/09/08 19:30	SAP	SM21 4500H-B

(a) Calculated as: (Chromium) - (Chromium, Hexavalent)

RL = Reporting Limit



Report of Analysis

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2

Client Sample ID:	T5	Date Sampled:	10/09/08
Lab Sample ID:	M77796-2A	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 625 BY SIM EPA 625		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F38350.D	1	10/21/08	PN	10/16/08	OP17087	MSF1837
Run #2							

Run #	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
87-86-5	Pentachlorophenol	ND	1.0		ug/l	
83-32-9	Acenaphthene	ND	0.10	0.035	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.034	ug/l	
120-12-7	Anthracene	ND	0.10	0.046	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.051	0.036	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.026	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.051	0.051	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.035	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.038	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.023	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.037	ug/l	
86-73-7	Fluorene	ND	0.10	0.035	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.029	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.073	ug/l	
91-20-3	Naphthalene	ND	0.10	0.056	ug/l	
85-01-8	Phenanthrene	ND	0.051	0.038	ug/l	
129-00-0	Pyrene	ND	0.10	0.028	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	56%		10-110%
4165-62-2	Phenol-d5	37%		10-110%
118-79-6	2,4,6-Tribromophenol	112%		10-141%
4165-60-0	Nitrobenzene-d5	85%		30-130%
321-60-8	2-Fluorobiphenyl	84%		30-130%
1718-51-0	Terphenyl-d14	75%		30-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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2.6

2

Client Sample ID:	T5	Date Sampled:	10/09/08
Lab Sample ID:	M77796-2B	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G85399.D	1	10/17/08	EL	n/a	n/a	MSG3449
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

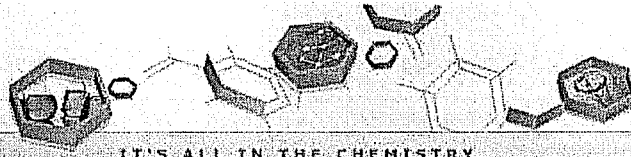
VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
106-93-4	1,2-Dibromoethane	ND	2.0	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		79-130%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	93%		80-120%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



ACCUTEST.

Sample Problem Notice

Issue Date: 10/9/08

To: Client Services

From: Sample Management

Name/Initials: AK

Client: GES Project: EXTRA MARI Job# M77796

Problem (check any that apply):

- ☐ Trip blank not received
- ☐ Temperature criteria (<6°C) not met
- ☐ Ice present ☐ No Ice ☐ Frozen
- ☐ Sample received outside of hold time
- ☐ Samples received broken
- ☐ Insufficient volume for analysis
- ☒ Samples received improperly preserved
- ☐ Times on COC do not match sample labels
- ☐ ID's on COC do not match sample labels
- ☐ Analysis requested is unclear or missing
- ☐ COC not filled out in indelible ink
- ☐ VOC vials with headspace (macro-bubbles greater than pea-size, ~4-6mm)
- ☐ Bottles received, but analysis not requested on COC
- ☐ No bottles received for analyses requested
- ☐ Unclear filtering instructions
- ☐ Unclear compositing instructions
- ☐ % Solids aliquot not received
- ☐ No COC received
- ☐ Sample dates or times unclear or missing
- ☐ Other

Description of Problem:

EDB submitted in JOD B-Sulfate + Sulfate
Vials (Should have been sodium Thiosulfate)
Enough Vol. for EDB vit 8260 (HCC Pres.)

SM1013-01 (10/01/07)

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2008

M-MA136 ACCUTEST LABORATORIES OF NEW ENGLAND
MARLBOROUGH MA

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2008 Expiration Date 30 JUN 2009

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ARSENIC	EPA 200.7
BERYLLIUM	EPA 200.7
CADMIUM	EPA 200.7
CHROMIUM	EPA 200.7
COBALT	EPA 200.7
COPPER	EPA 200.7
IRON	EPA 200.7
LEAD	EPA 200.7
MANGANESE	EPA 200.7
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
NICKEL	EPA 200.7
SELENIUM	EPA 200.7
SILVER	EPA 200.7
STRONTIUM	EPA 200.7
THALLIUM	EPA 200.7
VANADIUM	EPA 200.7
ZINC	EPA 200.7
PH	SM 4500-HB
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CaCO3), TOTAL	SM 2340B
HARDNESS (CaCO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B
CHLORIDE	SM 4500-CL-C
FLUORIDE	SM 4500-F-B,C
SULFATE	ASTM D816
AMMONIA-N	SM 18-B,C-NES
NITRATE-N	EPA 383.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.3
ORTHOPHOSPHATE	SM 4500-P-E
PHOSPHORUS, TOTAL	EPA 365.4
CHEMICAL OXYGEN DEMAND	SM 5220C
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310B
CYANIDE TOTAL	EPA 335.4

*= Provisional Certification

June 25, 2008

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M77796: Chain of Custody
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COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

M-MA136
ACCUTEST LABORATORIES OF NEW ENGLAND
MARLBOROUGH MA

Certified Parameter List as of: 01 JUL 2008

NON POTABLE WATER (CHEMISTRY)			Expiration
Analytes	Effective Date	Methods	Date
NON-FLTERABLE RESIDUE		SM 2540D	30 JUN 2009
CHLORINE TOTAL RESIDUAL		SM 4500-CL-F	
OL AND GREASE		EPA 1684	
PHENOLICS, TOTAL		EPA 420.1	
VOLATILE HALO CARBONS		EPA 624	
VOLATILE AROMATICS		EPA 602	
VOLATILE AROMATICS		EPA 624	
CHLORDANE		EPA 608	
ALDRIN		EPA 608	
DELDRIN		EPA 608	
DDD		EPA 608	
DDE		EPA 608	
DOT		EPA 608	
HEPTACHLOR		EPA 608	
HEPTACHLOR EPOXIDE		EPA 608	
POLYCHLORINATED BIPHENYLS (WATER)		EPA 608	
POLYCHLORINATED BIPHENYLS (OL)		EPA 608	

POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2008 Expiration 30 JUN 2009

Analytes	Effective Date	Methods	Expiration Date
BARIUM		EPA 200.7	30 JUN 2009
BERYLLIUM		EPA 200.7	
CADMIUM		EPA 200.7	
CHROMIUM		EPA 200.7	
COPPER		EPA 200.7	
MERCURY		EPA 200.7	
NICKEL		EPA 245.1	
NITRATE-N		EPA 200.7	
NITRITE-N		EPA 200.7	
FLUORIDE		EPA 353.2	
SODIUM		EPA 353.2	
SULFATE		SM 4500-FC	
CYANIDE, TOTAL		EPA 200.7	
TURBIDITY		SM 4500-SO4-C	
CHLORINE RESIDUAL FREE		EPA 335.4	
CALCIUM		EPA 180.1	
ALKALINITY, TOTAL		SM 4500-CL-F	
TOTAL DISSOLVED SOLIDS		EPA 200.7	
PH		SM 2320B	
PH		SM 2540C	
2,4-D		EPA 150.1	
2,4,5-TP		SM 4500-HB	
		EPA 515.1	
		EPA 515.1	

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June 25, 2008

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M77796: Chain of Custody
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COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2008

M-MA136 ACCUTEST LABORATORIES OF NEW ENGLAND
MARLBOROUGH MA

POTABLE WATER (CHEMISTRY)

Expiration 30 JUN 2009

Effective Date 01 JUL 2008

Analytes

TRIFLUOROMETHANES

VOLATILE ORGANIC COMPOUNDS

1,2-DIBROMOETHANE

1,2-DIBROMO-3-CHLOROPROPANE

Methods

EPA 524.2

EPA 524.2

EPA 504.1

EPA 504.1

M77796: Chain of Custody
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June 25, 2008

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ACCUTEST.
M77796 Laboratories

3.1
3

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

M-MA136
Certified Parameter List as of: 01 JUL 2008
ACCUTEST LABORATORIES OF NEW ENGLAND
MARLBOROUGH MA

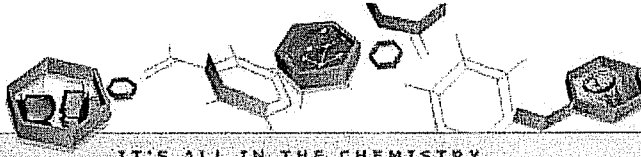
POTABLE WATER (MICROBIOLOGY)		Expiration
		Date
		30 JUN 2009
Analytes	Effective Date	Methods
TOTAL COLIFORM	01 JUL 2008	ENZ. SUB. SM223
E COLI		ENZ. SUB. SM223
		WATER TREATMENT AND DISTRIBUTION (PA)
		WATER TREATMENT AND DISTRIBUTION (PA)

June 25, 2008

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Page 1 of 1

M77796: Chain of Custody
Page 6 of 7



11/05/08

Technical Report for

Drake Petroleum Co., Inc.

GESMA:Xtramart 323 W. Boylston St. Worcester MA

PC# 001335

Accutest Job Number: M77796R

Sampling Date: 10/09/08



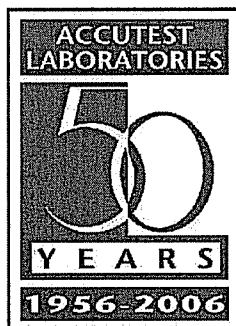
Report to:

Groundwater & Environmental Services

MHilfinger@gesonline.com

ATTN: Martin Hilfinger

Total number of pages in report: 11



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Fand
Lab Director

Client Service contact: Kristen Blanchard 508-481-6200

Certifications: MA (M-MA136) CT (PH-0109) NH (2502) RI (00071) ME (MA0136) FL (E87579)
NY (11791) NJ (MA926) PA (68-01121) NC (653) IL (200018) NAVY USACE

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Test results relate only to samples analyzed.

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Section 2: Sample Results	4
2.1: M77796-1BR: T2	5
2.2: M77796-2BR: T5	6
Section 3: Misc. Forms	7
3.1: Chain of Custody	8



Sample Summary

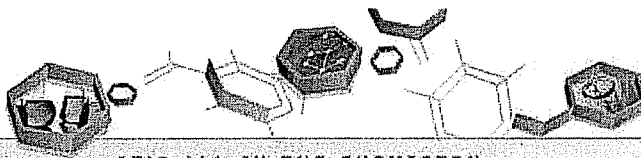
Drake Petroleum Co., Inc.

Job No: M77796R

GESMA:Xtramart 323 W. Boylston St. Worcester MA

Project No: PC# 001335

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
M77796-1BR	10/09/08	10:30 JA	10/09/08	AQ Ground Water	T2
M77796-2BR	10/09/08	12:45 JA	10/09/08	AQ Ground Water	T5



Sample Results

Report of Analysis

Report of Analysis

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2.1

2

Client Sample ID:	T2	Date Sampled:	10/09/08
Lab Sample ID:	M77796-1BR	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G85398.D	1	10/17/08	EL	n/a	n/a	MSG3449
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	1.9	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.16	ug/l	
123-91-1	1,4-Dioxane	ND	25	8.5	ug/l	
994-05-8	tert-Amyl Methyl Ether	0.22	2.0	0.11	ug/l	J
75-65-0	Tert Butyl Alcohol	ND	20	3.7	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		79-130%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	92%		80-120%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	T5	Date Sampled:	10/09/08
Lab Sample ID:	M77796-2BR	Date Received:	10/09/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	GESMA:Xtramart 323 W. Boylston St. Worcester MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G85399.D	1	10/17/08	EL	n/a	n/a	MSG3449
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

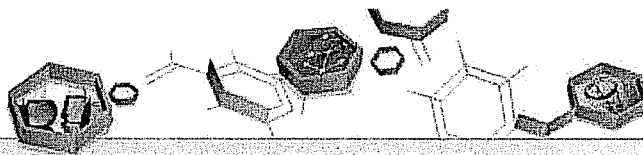
VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5.0	1.9	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.16	ug/l	
123-91-1	1,4-Dioxane	ND	25	8.5	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.11	ug/l	
75-65-0	Tert Butyl Alcohol	ND	20	3.7	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		79-130%
2037-26-5	Toluene-D8	101%		80-120%
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ND = Not detected MDL - Method Detection Limit
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IT'S ALL IN THE CHEMISTRY



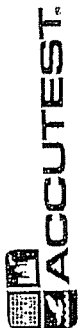
Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody





Sample Problem Notice

Issue Date: 09/19/08

To: Client Services

From: Sample Management

Name/Initials: AK

Client: GES Project: EXTRA MARI Job# M77796

Problem (check any that apply):

☐ Trip blank not received

☐ Temperature criteria (<6°C) not met

☐ Ice present ☐ No ice ☐ Frozen

☐ Sample received outside of hold time

☐ Samples received broken

☐ Insufficient volume for analysis

☒ Samples received improperly preserved

☐ Times on COC do not match sample labels

☐ ID's on COC do not match sample labels

☐ Analysis requested is unclear or missing

☐ COC not filled out in indelible ink

☐ VOC vials with headspace (macro-bubbles greater than pea-size - 4-6mm)

☐ Bottles received, but analysis not requested on COC

☐ No bottles received for analyses requested

☐ Unclear filtering instructions

☐ Unclear composting instructions

☐ % Solids aliquot not received

☐ No COC received

☐ Sample dates or times unclear or missing

☐ Other

Description of Problem:

EDB Submitted in SD BULBATE T SITE BAR
Vials (Should have been sodium thiosulfate)
Enough Vol. for EDB via 8260 (the pres.)

M77796R: Chain of Custody
Page 2 of 4

Betty Baer

1177796

From: Joel Walcott [JWalcott@gesonline.com]
Sent: Tuesday, October 14, 2008 11:35 AM
To: Betty Baer
Subject: Re: Drake Xtramart Worcester PC#001335 (M77796)
Importance: High
Attachments: m77796.pdf

Hi Betty, If there is sufficient sample volume for EDB analysis using the various provided containers, please proceed with the analysis as appropriate. Thank you for asking, and I'll make note of the attached for future submittals. Take care.

Joel Walcott
 Project Manager
 GES, Inc. Westford, MA Office
 (800) 221-6119 ext. 3259
 (978) 392-8583 fax

From: Betty Baer [mailto:bettyb@accutest.com]
Sent: Tuesday, October 14, 2008 11:29 AM
To: Joel Walcott
Subject: Drake Xtramart Worcester PC#001335 (M77796)
Importance: High

Please review the enclosed COC and Sample Problem Sheet and get back to me regarding the EDB analysis since this is a rush request.

Betty

<<m77796.pdf>>

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M77796R: Chain of Custody
 Page 3 of 4

Frank D'Agostino

From: Sarah Stott [Sstott@gesonline.com]
Sent: Monday, October 27, 2008 3:56 PM
To: Frank D'Agostino
Subject: Worcester Xtramart

Hi Frank,
I was wondering if I could get the following added into the analysis that we did for Accutest Job Number M77796.

Tert-Butyl Alcohol; Tert-Amyl Methyl; cis-1,2 Dichloroethylene; Acetone; 1,4 Dioxane; and Total Phthalates (Phthalate esthers).

Let me know what you find out. Thanks for your help.

~Sarah~

Sarah J Stott
Associate Remediation Scientist
Groundwater & Environmental Services, Inc.
364 Littleton Rd. SUITE 4
Westford, MA 01886
Phone: (800) 221-6119 x 3254
Fax: (978) 392-8583
Email: sstott@gesonline.com

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M77796R: Chain of Custody
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