



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1

**5 Post Office Square, Suite 100
BOSTON, MA 02109-3912**

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

AUG 03 2015

Michael Decoteau, P.E.
Senior Project Engineer
Groundwater and Environmental Services, Inc.
364 Littleton Road, Suite 4
Westford, MA 01886

Re: Authorization to discharge under the Remediation General Permit (RGP) – for the Drake West Warren Xtramart site located in West Warren, Massachusetts; Authorization # MAG910693

Dear Mr. Decoteau:

Based on the review of a Notice of Intent (NOI) you submitted on behalf the owner of the site referenced above, the U.S. Environmental Protection Agency (EPA) hereby authorizes you, as the named Operator, to discharge in accordance with the provisions of the RGP at that site. Your authorization number is listed above.

The checklist enclosed with this RGP authorization indicates the pollutants which you are required to monitor. Also indicated on the checklist are the effluent limits, test methods and minimum levels (MLs) for each pollutant. Please note that the checklist does not represent the complete requirements of the RGP. Operators must comply with all of the applicable requirements of this permit, including influent and effluent monitoring, narrative water quality standards, record keeping, and reporting requirements, found in Parts I and II, and Appendices I – VIII of the RGP. See EPA's website for the complete RGP and other information at: <http://www.epa.gov/region1/npdes/mass.html#dgp>.

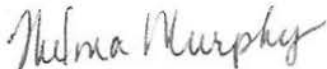
Please note the enclosed checklist includes parameters that were detected in your sampling and that may have exceeded Appendix III limits. Please note that the metals included on the checklist are dilution dependent pollutants and subject to limitations based on a dilution factor range (DFR). Since the discharge will be made to a storm drain to Cheney Brook with essentially no dilution available, the limits for cadmium, copper, iron, lead, nickel, and zinc will be based on a dilution factor of 1. (See the RGP Appendix IV for Massachusetts facilities).

Therefore, the following limits will apply to the effluent of this treatment system:
Total Suspended Solids (TSS) - 30 mg/l, Benzene- 5 ug/l, Total BTEX - 100 ug/l, Tetrachloroethene - 5 ug/l, Total phthalates - 3 ug/l, Bis (2-ethylhexyl) phthalate - 6 ug/l, Total Group I PAHs - 10.0 ug/l, Total Group II PAHs - 100.0 ug/l, total cadmium - 0.2 ug/l, total copper - 5.2 ug/l, total lead - 1.3 ug/l, total nickel - 29 ug/l, total zinc - 66.6 ug/l, total iron - 1,000 ug/l, and a pH range of 6.5 - 8.3 standard units (s.u.). There is also a monitoring requirement for total chloride.

This EPA general permit and authorization to discharge will expire on September 9, 2015. You have reported this project will terminate on October 1, 2015. Please be aware that you are required to reapply for coverage after the EPA expired permit has been reissued, if your project is extended beyond the permit expiration date. The reissuance date as well as the reapplication submittal date will be posted on the EPA web site at that time. Also, regardless of your project termination date you are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within thirty (30) days of the termination of the discharge.

Thank you in advance for your cooperation in this matter. Please contact George Papadopoulos at (617) 918-1579 or Papadopoulos.George@epa.gov, if you have any questions.

Sincerely,



Thelma Murphy, Chief
Storm Water and Construction Permits Section

Enclosure

cc: Robert Kubit, MassDEP
Jason Frigon, Xtramart - Drake Petroleum Company, Inc.

**2010 Remediation General Permit
Summary of Monitoring Parameters^[1]**

NPDES Authorization Number:	MAG910693
Authorization Issued:	July 31, 2015
Facility/Site Name:	Drake West Warren Xtramart – West Warren, MA
Facility/Site Address:	1300 Main Street, West Warren, MA 01092
	Email address of owner: jfrigon@warreneq.com
Legal Name of Operator:	Groundwater and Environmental Services, Inc.
Operator contact name, title, and Address:	Michael Decoteau, Senior Project Engineer Email: mdecoteau@gesonline.com
Estimated date of The Project Completion:	October 1, 2015
Category and Sub-Category:	Petroleum Related Site Remediation Category– Gasoline, Fuel Oils and Other Oil Sites, and Petroleum Sites with Additional Contamination Subcategories
RGP Termination Date:	September 2015
Receiving Water:	Cheney Brook

Monitoring & Limits are applicable if checked. All samples are to be collected as grab samples

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
✓	1. Total Suspended Solids (TSS)	30 milligrams/liter (mg/L) **, Me#160.2/ML5ug/L
	2. Total Residual Chlorine (TRC) ¹	Freshwater = 11 ug/L ** Saltwater = 7.5 ug/L **/ Me#330.5/ML 20ug/L
	3. Total Petroleum Hydrocarbons (TPH)	5.0 mg/L/ Me# 1664A/ML 5.0mg/L
	4. Cyanide (CN) ^{2, 3}	Freshwater = 5.2 ug/l ** Saltwater = 1.0 ug/L **/ Me#335.4/ML 10ug/L
✓	5. Benzene (B)	5ug/L / Me#8260C/ML 2 ug/L
	6. Toluene (T)	(limited as ug/L total BTEX)/ Me#8260C/ ML 2ug/L
✓	7. Ethylbenzene (E)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
	8. (m,p,o) Xylenes (X)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
✓	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) ⁴	100 ug/L/ Me#8260C/ ML 2ug/L

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
	11. Methyl-tert-Butyl Ether (MtBE)	70.0 ug/l/Me#8260C/ML 10ug/L
	12.tert-Butyl Alcohol (TBA) (TertiaryButanol)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
	13. tert-Amyl Methyl Ether (TAME)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
	14. Naphthalene ⁵	20 ug/L /Me#8260C/ML 2ug/L
	15. Carbon Tetrachloride	4.4 ug/L /Me#8260C/ ML 5ug/L
	16. 1,2 Dichlorobenzene (o- DCB)	600 ug/L /Me#8260C/ ML 5ug/L
	17. 1,3 Dichlorobenzene (m- DCB)	320 ug/L /Me#8260C/ ML 5ug/L
	18. 1,4 Dichlorobenzene (p- DCB)	5.0 ug/L /Me#8260C/ ML 5ug/L
	18a. Total dichlorobenzene	763 ug/L - NH only /Me#8260C/ ML 5ug/L
	19. 1,1 Dichloroethane (DCA)	70 ug/L /Me#8260C/ ML 5ug/L
	20. 1,2 Dichloroethane (DCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	21. 1,1 Dichloroethene (DCE)	3.2 ug/L/Me#8260C/ ML 5ug/L
	22. cis-1,2 Dichloroethene (DCE)	70 ug/L/Me#8260C/ ML 5ug/L
	23. Methylene Chloride	4.6 ug/L/Me#8260C/ ML 5ug/L
✓	24. Tetrachloroethene(PCE)	5.0 ug/L/Me#8260C/ ML 5ug/L
	25. 1,1,1 Trichloro-ethane (TCA)	200 ug/L/Me#8260C/ ML 5ug/L
	26. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	27. Trichloroethene (TCE)	5.0 ug/L /Me#8260C/ ML 5ug/L
	28. Vinyl Chloride (Chloroethene)	2.0 ug/L /Me#8260C/ ML 5ug/L
	29. Acetone	Monitor Only(ug/L)/Me#8260C/ML 50ug/L
	30. 1,4 Dioxane	Monitor Only /Me#1624C/ML 50ug/L
	31. Total Phenols	300 ug/L Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML 50ug/L
	32. Pentachlorophenol (PCP)	1.0 ug/L /Me#8270D/ML 5ug/L,Me#604 &625/ML 10ug/L
✓	33. Total Phthalates (Phthalate esters) ⁶	3.0 ug/L ** /Me#8270D/ML 5ug/L, Me#606/ML 10ug/L& Me#625/ML 5ug/L
✓	34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	6.0 ug/L /Me#8270D/ML 5ug/L,Me#606/ML 10ug/L & Me#625/ML 5ug/L
✓	35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/L

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
✓	a. Benzo(a) Anthracene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	b. Benzo(a) Pyrene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	c. Benzo(b)Fluoranthene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	d. Benzo(k)Fluoranthene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	e. Chrysene ⁷	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	f. Dibenzo(a,h)anthracene ⁷	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	g. Indeno(1,2,3-cd) Pyrene ⁷	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	100 ug/L
✓	h. Acenaphthene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	i. Acenaphthylene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	j. Anthracene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	k. Benzo(ghi) Perylene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	l. Fluoranthene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	m. Fluorene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	n. Naphthalene ⁵	20 ug/L / Me#8270/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	o. Phenanthrene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	p. Pyrene	X/Me#8270D/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	37. Total Polychlorinated Biphenyls (PCBs) ^{8, 9}	0.000064 ug/L/Me# 608/ ML 0.5 ug/L
✓	38. Chloride	Monitor only/Me# 300.0/ ML 100 ug/L

	Metal Parameters	Total Recoverable Metal Limit $H^{10} = 50 \text{ mg/l CaCO}_3$, Units = ug/l	Minimum level=ML¹¹
		Freshwater Limits	
	39. Antimony	5.6	10
	40. Arsenic **	10	20
✓	41. Cadmium **	0.2	10
	42. Chromium III (trivalent) **	17.1	15
	43. Chromium VI (hexavalent) **	11.4	10
✓	44. Copper **	5.2	15
✓	45. Lead **	1.3	20
	46. Mercury **	0.9	0.2
✓	47. Nickel **	29	20
	48. Selenium **	5	20
	49. Silver	1.2	10
✓	50. Zinc **	66.6	15
✓	51. Iron	1000	20

	Other Parameters	Limit
✓	52. Instantaneous Flow	Site specific in CFS
✓	53. Total Flow	Site specific in CFS
✓	54. pH Range for Class A & Class B Waters in MA	6.5-8.3; 1/Month/Grab ¹²
	55. pH Range for Class SA & Class SB Waters in MA	6.5-8.5; 1/Month/Grab ¹²
	56. pH Range for Class B Waters in NH	6.5-8; 1/Month/Grab ¹²
	57. Daily maximum temperature - Warm water fisheries	83°F; 1/Month/Grab ¹³
	58. Daily maximum temperature - Cold water fisheries	68°F; 1/Month/Grab ¹³
	59. Maximum Change in Temperature in MA - Any Class A water body	1.5°F; 1/Month/Grab ¹³
	60. Maximum Change in Temperature in MA - Any Class B water body- Warm Water	5°F; 1/Month/Grab ¹³
	61. Maximum Change in Temperature in MA - Any Class B water body - Cold water and Lakes/Ponds	3°F; 1/Month/Grab ¹³
	62. Maximum Change in Temperature in MA - Any Class SA water body - Coastal	1.5°F; 1/Month/Grab ¹³
	63. Maximum Change in Temperature in MA - Any Class SB water body - July to September	1.5°F; 1/Month/Grab ¹³
	64. Maximum Change in Temperature in MA -Any Class SB water body - October to June	4°F; 1/Month/Grab ¹³

Footnotes:

¹ Although the maximum values for TRC are 11 ug/l and 7.5 ug/l for freshwater, and saltwater respectively, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., Method 330.5, 20 ug/l).

² Limits for cyanide are based on EPA's water quality criteria expressed as micrograms per liter. There is currently no EPA approved test method for free cyanide. Therefore, total cyanide must be reported.

³ Although the maximum values for cyanide are 5.2 ug/l and 1.0 ug/l for freshwater and saltwater, respectively, the compliance limits are equal to the minimum level (ML) of the Method 335.4 as listed in Appendix VI (i.e., 10 ug/l).

⁴ BTEX = sum of Benzene, Toluene, Ethylbenzene, and total Xylenes.

⁵ Naphthalene can be reported as both a purgeable (VOC) and extractable (SVOC) organic compound. If both VOC and SVOC are analyzed, the highest value must be used unless the QC criteria for one of the analyses is not met. In such cases, the value from the analysis meeting the QC criteria must be used.

⁶ The sum of individual phthalate compounds (not including the #34, Bis (2-Ethylhexyl) Phthalate). The compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.

Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measurement of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.

⁷ Although the maximum value for the individual PAH compounds is 0.0038 ug/l, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.

⁸ In the November 2002 WQC, EPA has revised the definition of Total PCBs for aquatic life as total PCBs is the sum of all homologue, all isomer, all congener, or all "Oroclor analyses." *Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measure of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.*

⁹ Although the maximum value for total PCBs is 0.000064 ug/l, the compliance limit is equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., 0.5 ug/l for Method 608 or 0.00005 ug/l when Method 1668a is approved).

¹⁰ Hardness. Cadmium, Chromium III, Copper, Lead, Nickel, Silver, and Zinc are Hardness Dependent.

¹¹ Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratory-determined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B).

¹² pH sampling for compliance with permit limits may be performed using field methods as provided for in EPA test Method 150.1.

¹³ Temperature sampling per Method 170.1

July 1, 2015

U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code OEP06-4
Boston, MA 02109-3912
ATTN: Remediation General Permit NOI Processing

Re: Remediation General Permit – Notice of Intent

West Warren Xtramart
1300 Main Street
West Warren, Massachusetts 01083
MassDEP Site No. 1-2014588

To Whom It May Concern:

At the request of Drake Petroleum Company, Inc. (Drake), Groundwater & Environmental Services, Inc. (GES) is submitting the attached Remediation General Permit (RGP) – Notice of Intent (NOI) for the above-referenced location, herein referred to as “the site”. Drake is currently in the process of planning for the removal and upgrade of the current underground storage tank (UST) system and the completion of remedial excavation activities to address petroleum impacted soil at the site. Groundwater dewatering will be required as part of these site activities.

The site is the location of a subsurface release of petroleum hydrocarbons that was initially discovered in 2002 for which the Massachusetts Department of Environmental Protection (MADEP) assigned Site Number 2-14588 [now MADEP Release Tracking Number (RTN) 1-2014588]. Since 2002, additional RTNs have been assigned to the site, and have been subsequently linked to the main MADEP Site Number, including RTN 1-214808 (June 2003), RTN 1-215104 (January 2004), RTN 1-215678 (April 2005) and RTN 1-215820 (July 2005).

In addition to the petroleum releases identified above, on March 1, 2013, the owner of the site (Mr. John Lizak) submitted a Release Notification Form (RNF) to the MADEP for detection of lead in soil at the site above RCS-1. MADEP RTN 1-19023 was assigned by the MADEP for the reporting condition associated with elevated lead concentrations in soil.

The RGP-NOI form is included as Attachment A. The site is currently a Sunoco-branded petroleum retail station and convenience store. A Site Location Map and Expanded Site Map are provided as Figures 1 and 2, respectively. Based on gauging of monitoring wells at the site, the depth to groundwater is approximately four (4) feet below ground surface (bgs). As excavations are proposed to a depth of approximately fifteen (15) feet, temporary dewatering activities will be required to facilitate the removal and installation of USTs and the completion of remedial excavation activities.

On April 7, 2015, groundwater samples were obtained from monitoring wells MW-3R and MW-5 located adjacent to and within the proposed excavation areas. Per RGP-Appendix III, groundwater samples were analyzed for parameters applicable to Category I, Subcategories A, B and C (gasoline only, fuel oil and other oil sites, respectively). Overall, results indicated that the concentrations of total suspended solids, arsenic, cadmium, copper, iron, lead, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene,



benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd), pyrene, bis(2-ethylhexyl)phthalate, and total phthalates exceeded the MA Effluent Limitations listed in RGP-Appendix III under the National Pollutant Discharge Elimination System for Discharges in Massachusetts. The laboratory analytical report supporting this submittal is included as Attachment B.

During the construction dewatering process, groundwater will be pumped from the excavation into two (2) fractionation tanks plumbed in series for settling and equalization. The first fractionation tank will contain an aeration system to aid in the oxidation of iron. The groundwater will then be pumped at 100 gallons per minute or less from the second fractionation tank through a bag filter skid equipped with 50 micron filter bags, two (2) liquid phase carbon units (2,000 pounds per vessel) that are plumbed in series, a bag filter skid equipped with five (5) micron filter bags, two (2) 68 cubic foot ion exchange vessels bedded with green sand resin plumbed in series, and a totalizer before ultimately discharging into the catch basin that is located south of the site on the north side of Main Street. A schematic drawing, or process flow diagram, is included in Attachment C and the location of the subject catch basin is shown on Figure 2. From the catch basin, the storm drain line extends northwest beneath Main Street (Route 67), before discharging to Cheney Brook southwest of Main Street. The location of the site, the storm drain line, the discharge point and the receiving waters are included in Attachment D.

The site is not located at or near any location specified in Appendix VII of the RGP as subject to consultation with the U.S. Fisheries and Wildlife Service or the National Fisheries Service. According to the Massachusetts Division of Fisheries and Wildlife the site is not located within a National Heritage Endangered Species Program (NHESP) Estimated or Priority Habitat (<http://www.mass.gov/dfwele/dfw/nhesp/nhesp.htm>). According to the National Park Service's National Register Information System (NRIS) (<http://www.nps.gov/nr/>) there are more than 650 listed historical sites in Worcester County and four (4) listed for the Town of Warren, Massachusetts. The Massachusetts Historical Commission's Massachusetts Cultural Resource Information System (MACRIS) (<http://mhc-macris.net/>) listed 299 sites in Warren with the closest approximately 390 feet east of the site. Based upon the information contained in the MACRIS listing, the historical sites adjacent to the site are comprised of homes and are unlikely to be adversely affected by the proposed discharge. Copies of the MACRIS and NHESP listings and /or maps are included in Attachment E.

The project is slated to commence in August of 2015 and run for approximately 30 days. As the discharge will utilize the stormwater conveyance along Main Street (Route 67), GES will obtain a permit from the Massachusetts Department of Transportation (MassDOT) in addition to the RGP.

If you have any questions or require further information, please contact the undersigned at (800) 221-6119.

Sincerely,

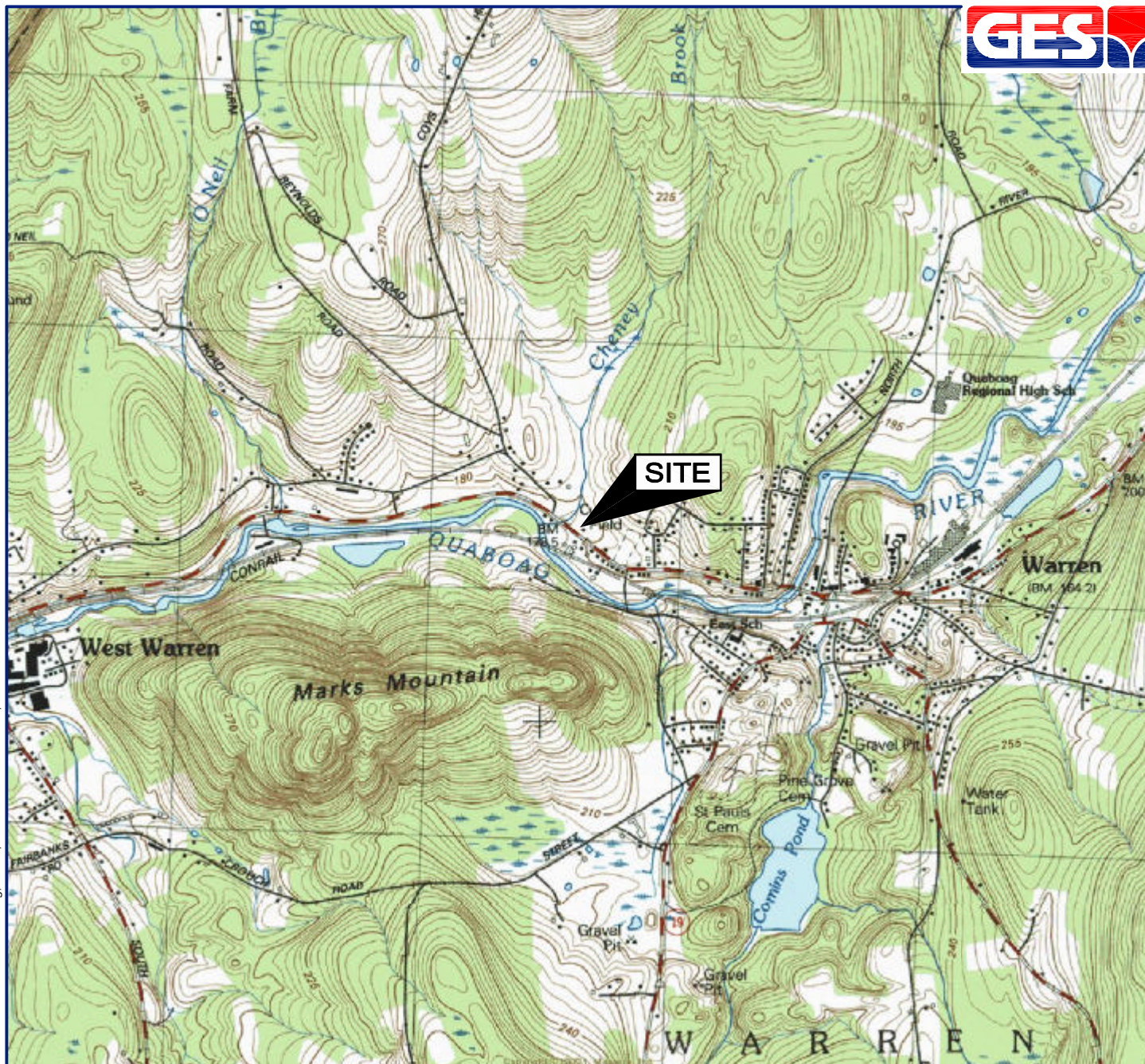
Groundwater & Environmental Services, Inc.

Timothy W. Maus
Staff Geologist

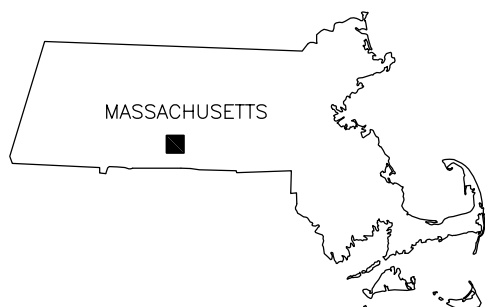
Michael Decoteau, PE
Senior Project Engineer

cc: Drake File

Figures



SOURCE: USGS 7.5 MINUTE SERIES
TOPOGRAPHIC QUADRANGLE 1982
WARREN, MASSACHUSETTS
CONTOUR INTERVAL = 3 METERS



QUADRANGLE LOCATION

DRAFTED BY: W.G.S. (N.J.)	SITE LOCATION MAP		
CHECKED BY: TM	DRAKE PETROLEUM COMPANY, INC. WEST WARREN XTRAMART 1300 MAIN STREET WEST WARREN, MASSACHUSETTS		
REVIEWED BY: EK	Groundwater & Environmental Services, Inc. 364 LITTLETON ROAD, SUITE 4, WESTFORD, MA 01886		
NORTH 	SCALE IN FEET  0 2000	DATE 4-23-09	FIGURE 1

M:\Graphics\1600-Westford\Misc\Warren\West Warren\West Warren SM.dwg, B-60, 4/24/2015 8:40:01 AM, WShea



LEGEND

- PROPERTY BOUNDARY
- FF/O FORMER FUEL OIL UST
- FU/O FORMER USED OIL UST
- F/KER FORMER KEROSENE AST
- P PRODUCT PIPING
- x FENCE
- CATCH BASIN
- M UTILITY MANHOLE
- UTILITY POLE
- DISPENSER ISLAND
- MONITORING WELL
- DESTROYED MONITORING WELL
- SOIL VAPOR EXTRACTION WELL
- RECOVERY WELL
- AIR SPARGE WELL
- MONITORING WELL (MAP 17/LOT1)
- SS UNDERGROUND SANITARY SEWER LINE
- W UNDERGROUND WATER LINE
- G UNDERGROUND GAS LINE
- UE UNDERGROUND ELECTRIC LINE
- OE OVERHEAD ELECTRIC LINE
- T OVERHEAD TELEPHONE LINE
- ? UNKNOWN LINE

TREATED EFFLUENT
WILL BE DISCHARGED
VIA THIS CATCH BASIN

SOURCE:

BASE SITE MAP FROM WILLIAMSON ENVIRONMENTAL, LLC.

DRAFTED BY: W.G.S. (N.J.)	EXPANDED SITE MAP		
CHECKED BY: T.W.M.	DRAKE PETROLEUM COMPANY, INC. WEST WARREN XTRAMART 1300 MAIN STREET WEST WARREN, MASSACHUSETTS		
REVIEWED BY: M.D.	Groundwater & Environmental Services, Inc. 364 LITTLETON ROAD SUITE 4 WESTFORD, MA 01886		
NORTH 	SCALE IN FEET 0 APPROXIMATE 60	DATE 4-24-15	FIGURE 2



Attachment A

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

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

a) Name of facility/site :		Facility/site mailing address:	
Location of facility/site : longitude: _____ latitude: _____	Facility SIC code(s):	Street:	
b) Name of facility/site owner :		Town:	
Email address of facility/site owner:	State:	Zip:	County:
Telephone no. of facility/site owner :			
Fax no. of facility/site owner :	Owner is (check one): 1. Federal____ 2. State/Tribal____ 3. Private____ 4. Other ____ if so, describe:		
Address of owner (if different from site):			
Street:			
Town:	State:	Zip:	County:
c) Legal name of operator :	Operator telephone no:		
	Operator fax no.:		Operator email:
Operator contact name and title:			
Address of operator (if different from owner):	Street:		
Town:	State:	Zip:	County:

d) Check Y for “yes” or N for “no” for the following: 1. Has a prior NPDES permit exclusion been granted for the discharge? Y___ N___, if Y, number:_____ 2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Y___ N___, if Y, date and tracking #:_____ 3. Is the discharge a “new discharge” as defined by 40 CFR 122.2? Y___ N___ 4. For sites in Massachusetts, is the discharge covered under the Massachusetts Contingency Plan (MCP) and exempt from state permitting? Y___ N___	
e) Is site/facility subject to any State permitting, license, or other action which is causing the generation of discharge? Y___ N___ If Y, 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 General Permit? Y___ N___, if Y, number: _____ 2. Final Dewatering General Permit? Y___ N___, if Y, number: _____ 3. EPA Construction General Permit? Y___ N___, if Y, number: _____ 4. Individual NPDES permit? Y___ N___, if Y, number: _____ 5. any other water quality related individual or general permit? Y___ N___, if Y, number: _____
g) Is the site/facility located within or does it discharge to an Area of Critical Environmental Concern (ACEC)? Y___ N___	
h) Based on the facility/site information and any historical sampling data, identify the sub-category into which the potential discharge falls.	
<u>Activity Category</u>	<u>Activity Sub-Category</u>
I - Petroleum Related Site Remediation	A. Gasoline Only Sites _____ B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges) _____ C. Petroleum Sites with Additional Contamination _____
II - Non Petroleum Site Remediation	A. Volatile Organic Compound (VOC) Only Sites _____ B. VOC Sites with Additional Contamination _____ C. Primarily Heavy Metal Sites _____
III - Contaminated Construction Dewatering	A. General Urban Fill Sites _____ B. Known Contaminated Sites _____

IV - Miscellaneous Related Discharges	A. Aquifer Pump Testing to Evaluate Formerly Contaminated Sites ____ B. Well Development/Rehabilitation at Contaminated/Formely Contaminated Sites ____ C. Hydrostatic Testing of Pipelines and Tanks ____ D. Long-Term Remediation of Contaminated Sumps and Dikes ____ E. Short-term Contaminated Dredging Drain Back Waters (if not covered by 401/404 permit) ____
---------------------------------------	--

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

a) Describe the discharge activities for which the owner/applicant is seeking coverage:	
b) Provide the following information about each discharge:	
1) Number of discharge points:	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow _____ Is maximum flow a design value ? Y___ N___ Average flow (include units) _____ Is average flow a design value or estimate? _____
3) Latitude and longitude of each discharge within 100 feet: pt.1: lat. _____ long. _____; pt.2: lat. _____ long. _____; pt.3: lat. _____ long. _____; pt.4: lat. _____ long. _____; pt.5: lat. _____ long. _____; pt.6: lat. _____ long. _____; pt.7: lat. _____ long. _____; pt.8: lat. _____ long. _____; etc.	
4) If hydrostatic testing, total volume of the discharge (gals): _____	5) Is the discharge intermittent ____ or seasonal ____? Is discharge ongoing? Y ___ N _____
c) Expected dates of discharge (mm/dd/yy): start _____ end _____	
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.

a) Based on the sub-category selected (see Appendix III), indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
1. Total Suspended Solids (TSS)											
2. Total Residual Chlorine (TRC)											
3. Total Petroleum Hydrocarbons (TPH)											
4. Cyanide (CN)	57125										
5. Benzene (B)	71432										
6. Toluene (T)	108883										
7. Ethylbenzene (E)	100414										
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207										
9. Total BTEX ²	n/a										
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) ³	106934										
11. Methyl-tert-Butyl Ether (MtBE)	1634044										
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650										

* Numbering system is provided to allow cross-referencing to Effluent Limits and Monitoring Requirements by Sub-Category included in Appendix III, as well as the Test Methods and Minimum Levels associated with each parameter provided in Appendix VI.

² BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

³ EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
13. tert-Amyl Methyl Ether (TAME)	9940508										
14. Naphthalene	91203										
15. Carbon Tetrachloride	56235										
16. 1,2 Dichlorobenzene (o-DCB)	95501										
17. 1,3 Dichlorobenzene (m-DCB)	541731										
18. 1,4 Dichlorobenzene (p-DCB)	106467										
18a. Total dichlorobenzene											
19. 1,1 Dichloroethane (DCA)	75343										
20. 1,2 Dichloroethane (DCA)	107062										
21. 1,1 Dichloroethene (DCE)	75354										
22. cis-1,2 Dichloroethene (DCE)	156592										
23. Methylene Chloride	75092										
24. Tetrachloroethene (PCE)	127184										
25. 1,1,1 Trichloro-ethane (TCA)	71556										
26. 1,1,2 Trichloro-ethane (TCA)	79005										
27. Trichloroethene (TCE)	79016										

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
28. Vinyl Chloride (Chloroethene)	75014										
29. Acetone	67641										
30. 1,4 Dioxane	123911										
31. Total Phenols	108952										
32. Pentachlorophenol (PCP)	87865										
33. Total Phthalates (Phthalate esters) ⁴											
34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	117817										
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)											
a. Benzo(a) Anthracene	56553										
b. Benzo(a) Pyrene	50328										
c. Benzo(b)Fluoranthene	205992										
d. Benzo(k)Fluoranthene	207089										
e. Chrysene	21801										
f. Dibenzo(a,h)anthracene	53703										
g. Indeno(1,2,3-cd) Pyrene	193395										
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)											

⁴The sum of individual phthalate compounds.

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
h. Acenaphthene	83329										
i. Acenaphthylene	208968										
j. Anthracene	120127										
k. Benzo(ghi) Perylene	191242										
l. Fluoranthene	206440										
m. Fluorene	86737										
n. Naphthalene	91203										
o. Phenanthrene	85018										
p. Pyrene	129000										
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.										
38. Chloride	16887006										
39. Antimony	7440360										
40. Arsenic	7440382										
41. Cadmium	7440439										
42. Chromium III (trivalent)	16065831										
43. Chromium VI (hexavalent)	18540299										
44. Copper	7440508										
45. Lead	7439921										
46. Mercury	7439976										
47. Nickel	7440020										
48. Selenium	7782492										
49. Silver	7440224										
50. Zinc	7440666										
51. Iron	7439896										
Other (describe):											

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>

b) For discharges where **metals** are believed present, please fill out the following (attach results of any calculations):

<i>Step 1:</i> Do any of the metals in the influent exceed the effluent limits in Appendix III (i.e., the limits set at zero dilution)? Y____ N____	If yes, which metals?
<i>Step 2:</i> For any metals which 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? Metal:_____ DF:_____ Metal:_____ DF:_____ See attachment Metal:_____ DF:_____ Metal:_____ DF:_____ Etc. Zinc DF: 1	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____ N____ If Y, 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	De-chlorination	Other (please describe):			

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 _____ gpm Maximum flow rate of treatment system _____ gpm

Design flow rate of treatment system _____ gpm

d) A description of chemical additives being used or planned to be used (attach MSDS sheets):

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

a) Identify the discharge pathway:	Direct to receiving water _____	Within facility (sewer) _____	Storm drain _____	Wetlands _____	Other (describe): _____
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:					
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 _____					
e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water _____ 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? Y____ N____ If yes, for which pollutant(s)? see note below _____ Is there a final TMDL? Y____ N____ If yes, for which pollutant(s)? _____					

6. ESA and NHPA Eligibility.

Please provide the following information according to requirements of Permit Parts I.A.4 and I.A.5 Appendices II and VII.

- a) Using the instructions in Appendix VII and information on Appendix II, under which criterion listed in Part I.C are you eligible for coverage under this general permit?
A ____ B ____ C ____ D ____ E ____ F ____ n/a
- b) If you selected Criterion D or F, has consultation with the federal services been completed? Y ____ N ____ Underway ____
- c) If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is “not likely to adversely affect” listed species or critical habitat received? Y ____ N ____ n/a
- d) Attach documentation of ESA eligibility as described in the NOI instructions and required by Appendix VII, Part I.C, Step 4.
- e) Using the instructions in Appendix VII, under which criterion listed in Part II.C are you eligible for coverage under this general permit?
1 ____ 2 ____ 3 ____
- f) If Criterion 3 was selected, attach all written correspondence with the State or Tribal historic preservation officers, including any terms and conditions that outline measures the applicant must follow to mitigate or prevent adverse effects due to activities regulated by the RGP.

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:

Operator signature:

Printed Name & Title:

Date:

MassDEP - Bureau of Waste Site Cleanup

Site Information:

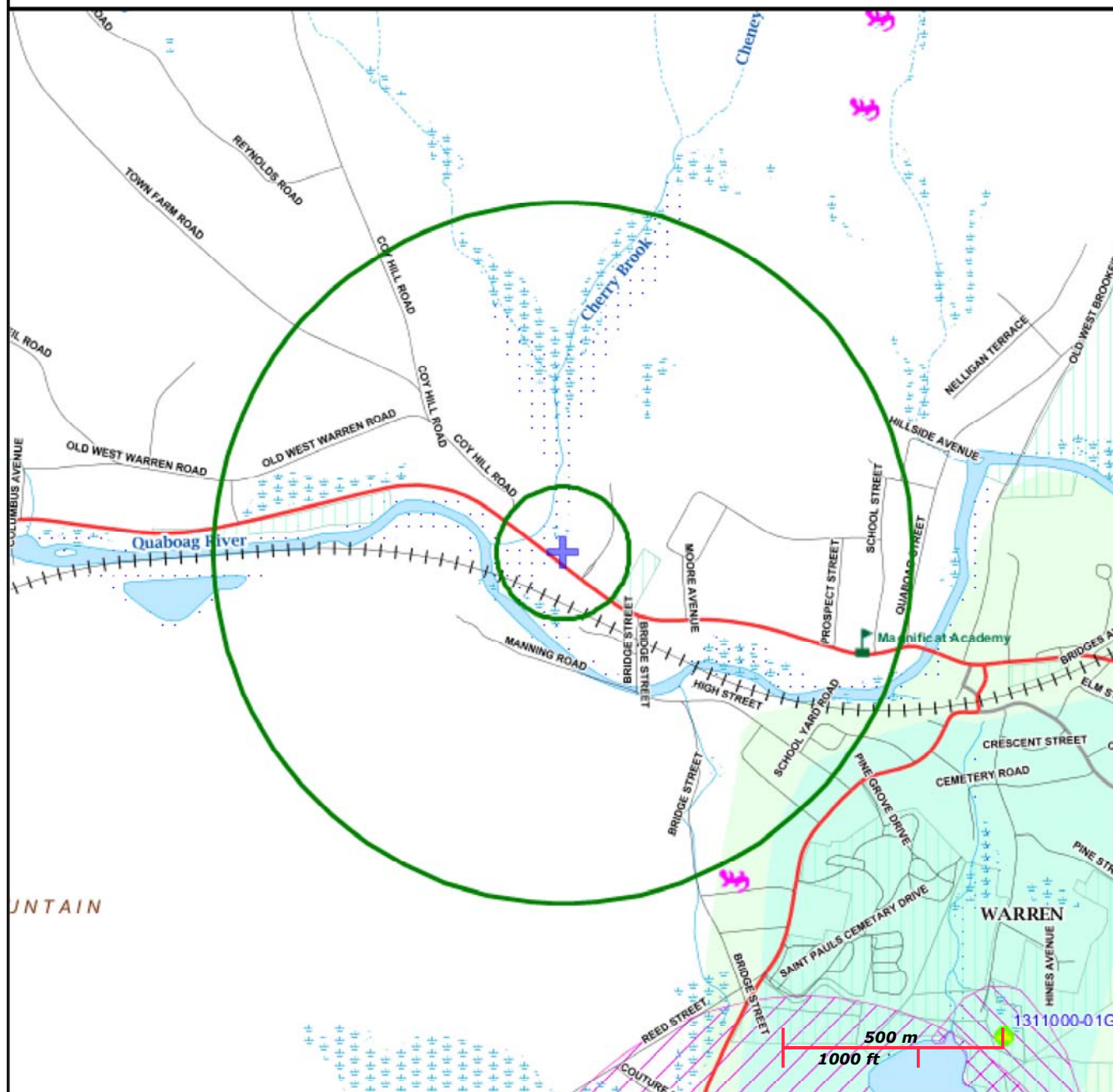
WARREN, MA
2-000014588
NAD83 UTM Meters:
4677481mN, 730656mE (Zone: 18)
June 9, 2015

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:
<http://www.mass.gov/mgis/>.



MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com. GW, SW, Emerg., Non-Com.



Attachment B



04/15/15

Technical Report for

Drake Petroleum Co., Inc.

GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

PC#007285 1604949

Accutest Job Number: MC37806

Sampling Date: 04/07/15

Report to:

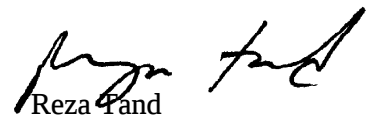
Groundwater & Environmental Services
364 Littleton Rd
Westford, MA 01886

ATTN: Ed Kontos

Total number of pages in report: **70**



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


Reza Fand
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Test results relate only to samples analyzed.

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Sample Summary

Drake Petroleum Co., Inc.

Job No: MC37806

GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA
Project No: PC#007285 1604949

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
MC37806-1	04/07/15	10:15 TM	04/07/15	AQ	Ground Water	MW-5
MC37806-2	04/07/15	11:00 TM	04/07/15	AQ	Ground Water	MW-3R

Summary of Hits

Job Number: MC37806
Account: Drake Petroleum Co., Inc.
Project: GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA
Collected: 04/07/15

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

MC37806-1 MW-5

Benzene	1.1	0.50	0.27	ug/l	SW846 8260C
Ethylbenzene	2.5	1.0	0.24	ug/l	SW846 8260C
Phenol	0.90 JB	5.1	0.33	ug/l	SW846 8270D
Butyl benzyl phthalate	1.2 J	5.1	0.25	ug/l	SW846 8270D
Di-n-octyl phthalate	1.9 J	5.1	0.29	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate	15.8	2.0	0.32	ug/l	SW846 8270D
Acenaphthene	0.11	0.10	0.0077	ug/l	SW846 8270D BY SIM
Acenaphthylene	0.084 J	0.10	0.0086	ug/l	SW846 8270D BY SIM
Anthracene	0.15	0.10	0.010	ug/l	SW846 8270D BY SIM
Benzo(a)anthracene	0.69	0.051	0.024	ug/l	SW846 8270D BY SIM
Benzo(a)pyrene	0.72	0.10	0.016	ug/l	SW846 8270D BY SIM
Benzo(b)fluoranthene	0.99	0.051	0.019	ug/l	SW846 8270D BY SIM
Benzo(g,h,i)perylene	0.62	0.10	0.013	ug/l	SW846 8270D BY SIM
Benzo(k)fluoranthene	0.67	0.10	0.010	ug/l	SW846 8270D BY SIM
Chrysene	1.1	0.10	0.013	ug/l	SW846 8270D BY SIM
Dibenzo(a,h)anthracene	0.20	0.10	0.015	ug/l	SW846 8270D BY SIM
Fluoranthene	1.9	0.10	0.0076	ug/l	SW846 8270D BY SIM
Fluorene	0.14	0.10	0.015	ug/l	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene	0.48	0.10	0.021	ug/l	SW846 8270D BY SIM
Naphthalene	5.2	2.0	0.0083	ug/l	SW846 8270D BY SIM
Phenanthrene	0.91	0.051	0.011	ug/l	SW846 8270D BY SIM
Pyrene	1.6	0.10	0.0087	ug/l	SW846 8270D BY SIM
Antimony	1.2	0.50	0.031	ug/l	EPA 200.8
Arsenic	3.2	1.0	0.040	ug/l	EPA 200.8
Cadmium	1.8	0.50	0.014	ug/l	EPA 200.8
Chromium	21.4	4.0	0.079	ug/l	EPA 200.8
Copper	17.0	4.0	0.087	ug/l	EPA 200.8
Iron	9210	50	7.9	ug/l	EPA 200.8
Lead	14.3	0.50	0.040	ug/l	EPA 200.8
Nickel	10.6	4.0	0.026	ug/l	EPA 200.8
Selenium	0.68 B	1.0	0.25	ug/l	EPA 200.8
Silver	0.093 B	2.0	0.015	ug/l	EPA 200.8
Zinc	208	4.0	1.9	ug/l	EPA 200.8
Chloride ^a	885	10		mg/l	EPA 300/SW846 9056A
Chloride	975	50		mg/l	SM 4500 CL C-11
Chromium, Trivalent ^b	0.019	0.014		mg/l	6010/7196A M/200.7
Solids, Total Suspended	223	4.0		mg/l	SM 2540D-11
Total Residual Chlorine ^c	< 0.050	0.050		mg/l	SM21 4500CL F

MC37806-2 MW-3R

Tetrachloroethene	0.24 J	1.0	0.21	ug/l	SW846 8260C
Phenol	0.67 JB	5.4	0.35	ug/l	SW846 8270D

Summary of Hits

Job Number: MC37806

Account: Drake Petroleum Co., Inc.

Project: GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Collected: 04/07/15

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Butyl benzyl phthalate		0.40 J	5.4	0.26	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		1.9 J	2.2	0.35	ug/l	SW846 8270D
Acenaphthylene		0.025 J	0.11	0.0091	ug/l	SW846 8270D BY SIM
Anthracene		0.036 J	0.11	0.011	ug/l	SW846 8270D BY SIM
Benzo(a)anthracene		0.076	0.054	0.026	ug/l	SW846 8270D BY SIM
Benzo(a)pyrene		0.084 J	0.11	0.017	ug/l	SW846 8270D BY SIM
Benzo(b)fluoranthene		0.19	0.054	0.021	ug/l	SW846 8270D BY SIM
Benzo(g,h,i)perylene		0.11	0.11	0.014	ug/l	SW846 8270D BY SIM
Benzo(k)fluoranthene		0.083 J	0.11	0.011	ug/l	SW846 8270D BY SIM
Chrysene		0.089 J	0.11	0.014	ug/l	SW846 8270D BY SIM
Dibenzo(a,h)anthracene		0.031 J	0.11	0.016	ug/l	SW846 8270D BY SIM
Fluoranthene		0.15 B	0.11	0.0080	ug/l	SW846 8270D BY SIM
Fluorene		0.017 J	0.11	0.016	ug/l	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		0.072 J	0.11	0.022	ug/l	SW846 8270D BY SIM
Phenanthrene		0.065 B	0.054	0.012	ug/l	SW846 8270D BY SIM
Pyrene		0.15 B	0.11	0.0092	ug/l	SW846 8270D BY SIM
Antimony		0.89	0.50	0.031	ug/l	EPA 200.8
Arsenic		2.8	1.0	0.040	ug/l	EPA 200.8
Cadmium		0.078 B	0.50	0.014	ug/l	EPA 200.8
Chromium		2.8 B	4.0	0.079	ug/l	EPA 200.8
Copper		5.8	4.0	0.087	ug/l	EPA 200.8
Iron		1820	50	7.9	ug/l	EPA 200.8
Lead ^d		10.9	2.5	0.20	ug/l	EPA 200.8
Nickel		5.1	4.0	0.026	ug/l	EPA 200.8
Selenium		0.48 B	1.0	0.25	ug/l	EPA 200.8
Silver		0.036 B	2.0	0.015	ug/l	EPA 200.8
Zinc		30.6	4.0	1.9	ug/l	EPA 200.8
Chloride ^a		2450	20		mg/l	EPA 300/SW846 9056A
Chloride		2450	50		mg/l	SM 4500 CL C-11
Solids, Total Suspended		45.0	4.0		mg/l	SM 2540D-11
Total Residual Chlorine ^c		< 0.050	0.050		mg/l	SM21 4500CL F

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

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

(c) Analysis performed past the required 15 minutes of collection time/holding time.

(d) Elevated RL due to dilution required for matrix interference.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-5	Date Sampled:	04/07/15
Lab Sample ID:	MC37806-1	Date Received:	04/07/15
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V38038.D	1	04/14/15	KD	n/a	n/a	MSV1370
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	1.1	0.50	0.27	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.37	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.28	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
123-91-1	1,4-Dioxane	ND	25	20	ug/l	
100-41-4	Ethylbenzene	2.5	1.0	0.24	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.27	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.29	ug/l	
75-65-0	Tert Butyl Alcohol	ND	20	2.6	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.21	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		72-133%
2037-26-5	Toluene-D8	102%		85-114%
460-00-4	4-Bromofluorobenzene	101%		70-134%

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:	MW-5		
Lab Sample ID:	MC37806-1	Date Sampled:	04/07/15
Matrix:	AQ - Ground Water	Date Received:	04/07/15
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F80694.D	1	04/09/15	KD	04/07/15	OP42576	MSF3498
Run #2							

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

ABN Appendix IX 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	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.48	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.34	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	0.60	ug/l	
95-48-7	2-Methylphenol	ND	10	0.31	ug/l	
106-44-5	4-Methylphenol	ND	10	0.45	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.47	ug/l	
100-02-7	4-Nitrophenol	ND	20	1.3	ug/l	
87-86-5	Pentachlorophenol	ND	10	0.35	ug/l	
108-95-2	Phenol	0.90	5.1	0.33	ug/l	JB
95-95-4	2,4,5-Trichlorophenol	ND	10	0.46	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.46	ug/l	
85-68-7	Butyl benzyl phthalate	1.2	5.1	0.25	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	5.1	0.28	ug/l	
117-84-0	Di-n-octyl phthalate	1.9	5.1	0.29	ug/l	J
84-66-2	Diethyl phthalate	ND	5.1	0.27	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.25	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	15.8	2.0	0.32	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	38%		10-79%
4165-62-2	Phenol-d5	28%		10-72%
118-79-6	2,4,6-Tribromophenol	102%		35-138%
4165-60-0	Nitrobenzene-d5	65%		30-116%
321-60-8	2-Fluorobiphenyl	71%		35-107%
1718-51-0	Terphenyl-d14	96%		43-135%

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:	MW-5	Date Sampled:	04/07/15
Lab Sample ID:	MC37806-1	Date Received:	04/07/15
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I95023.D	1	04/09/15	MR	04/07/15	OP42577	MSI3554
Run #2							

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

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.11	0.10	0.0077	ug/l	J
208-96-8	Acenaphthylene	0.084	0.10	0.0086	ug/l	
120-12-7	Anthracene	0.15	0.10	0.010	ug/l	
56-55-3	Benzo(a)anthracene	0.69	0.051	0.024	ug/l	
50-32-8	Benzo(a)pyrene	0.72	0.10	0.016	ug/l	
205-99-2	Benzo(b)fluoranthene	0.99	0.051	0.019	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.62	0.10	0.013	ug/l	
207-08-9	Benzo(k)fluoranthene	0.67	0.10	0.010	ug/l	
218-01-9	Chrysene	1.1	0.10	0.013	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.20	0.10	0.015	ug/l	
206-44-0	Fluoranthene	1.9	0.10	0.0076	ug/l	
86-73-7	Fluorene	0.14	0.10	0.015	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.48	0.10	0.021	ug/l	
91-20-3	Naphthalene	5.2	2.0	0.0083	ug/l	
85-01-8	Phenanthrene	0.91	0.051	0.011	ug/l	
129-00-0	Pyrene	1.6	0.10	0.0087	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%		26-121%
321-60-8	2-Fluorobiphenyl	65%		28-107%
1718-51-0	Terphenyl-d14	107%		29-129%

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:	MW-5	
Lab Sample ID:	MC37806-1	Date Sampled: 04/07/15
Matrix:	AQ - Ground Water	Date Received: 04/07/15
Method:	EPA 504.1 EPA 504.1	Percent Solids: n/a
Project:	GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB62726.D	1	04/10/15	NK	04/07/15	OP42580	GBB3416
Run #2							

	Initial Volume	Final Volume
Run #1	36.5 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	104%		59-170%
460-00-4	Bromofluorobenzene (S)	96%		59-170%

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:	MW-5	
Lab Sample ID:	MC37806-1	Date Sampled: 04/07/15
Matrix:	AQ - Ground Water	Date Received: 04/07/15
Method:	SW846 8082A SW846 3510C	Percent Solids: n/a
Project:	GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK47080.D	1	04/10/15	NK	04/08/15	OP42599	GBK1474
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	5.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.28	0.18	ug/l	
11104-28-2	Aroclor 1221	ND	0.28	0.18	ug/l	
11141-16-5	Aroclor 1232	ND	0.28	0.20	ug/l	
53469-21-9	Aroclor 1242	ND	0.28	0.21	ug/l	
12672-29-6	Aroclor 1248	ND	0.28	0.14	ug/l	
11097-69-1	Aroclor 1254	ND	0.28	0.18	ug/l	
11096-82-5	Aroclor 1260	ND	0.28	0.21	ug/l	
37324-23-5	Aroclor 1262	ND	0.28	0.20	ug/l	
11100-14-4	Aroclor 1268	ND	0.28	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	64%		10-147%
877-09-8	Tetrachloro-m-xylene	62%		10-147%
2051-24-3	Decachlorobiphenyl	55%		10-134%
2051-24-3	Decachlorobiphenyl	52%		10-134%

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: MW-5	Date Sampled: 04/07/15
Lab Sample ID: MC37806-1	Date Received: 04/07/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA	

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Antimony	1.2	0.50	0.031	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Arsenic	3.2	1.0	0.040	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Cadmium	1.8	0.50	0.014	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Chromium	21.4	4.0	0.079	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Copper	17.0	4.0	0.087	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Iron	9210	50	7.9	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Lead	14.3	0.50	0.040	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Mercury	0.096 U	0.20	0.096	ug/l	1	04/10/15	04/13/15 SA	EPA 245.1 ²	EPA 245.1 ⁵
Nickel	10.6	4.0	0.026	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Selenium	0.68 B	1.0	0.25	ug/l	1	04/08/15	04/13/15 SA	EPA 200.8 ³	EPA 200.8 ⁴
Silver	0.093 B	2.0	0.015	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Zinc	208	4.0	1.9	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴

(1) Instrument QC Batch: MA18041

(2) Instrument QC Batch: MA18044

(3) Instrument QC Batch: MA18048

(4) Prep QC Batch: MP24462

(5) Prep QC Batch: MP24467

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: MW-5	Date Sampled: 04/07/15
Lab Sample ID: MC37806-1	Date Received: 04/07/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	975	50	mg/l	50	04/10/15	CF	SM 4500 CL C-11
Chloride ^a	885	10	mg/l	5	04/10/15 10:45	ANJ	EPA 300/SW846 9056A
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	04/07/15 16:35	MA	SW846 7196A
Chromium, Trivalent ^b	0.019	0.014	mg/l	1	04/09/15 13:33	SA	6010/7196A M/200.7
Cyanide	< 0.010	0.010	mg/l	1	04/09/15 15:00	MA	EPA 335.4
HEM Petroleum Hydrocarbons	< 4.1	4.1	mg/l	1	04/14/15	BF	EPA 1664A
Phenols	< 0.050	0.050	mg/l	1	04/09/15 15:20	BF	EPA 420.1
Solids, Total Suspended	223	4.0	mg/l	1	04/10/15	BF	SM 2540D-11
Total Residual Chlorine ^c	< 0.050	0.050	mg/l	1	04/07/15 14:48	MA	SM21 4500CL F

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

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

(c) Analysis performed past the required 15 minutes of collection time/holding time.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-3R	Date Sampled:	04/07/15
Lab Sample ID:	MC37806-2	Date Received:	04/07/15
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V38039.D	1	04/14/15	KD	n/a	n/a	MSV1370
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.27	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.37	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.28	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
123-91-1	1,4-Dioxane	ND	25	20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.27	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.29	ug/l	
75-65-0	Tert Butyl Alcohol	ND	20	2.6	ug/l	
127-18-4	Tetrachloroethene	0.24	1.0	0.21	ug/l	J
108-88-3	Toluene	ND	1.0	0.29	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		72-133%
2037-26-5	Toluene-D8	101%		85-114%
460-00-4	4-Bromofluorobenzene	103%		70-134%

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:	MW-3R	Date Sampled:	04/07/15
Lab Sample ID:	MC37806-2	Date Received:	04/07/15
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D SW846 3510C		
Project:	GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F80695.D	1	04/09/15	KD	04/07/15	OP42576	MSF3498
Run #2							

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

ABN Appendix IX 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	0.55	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.51	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.37	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	0.64	ug/l	
95-48-7	2-Methylphenol	ND	11	0.33	ug/l	
106-44-5	4-Methylphenol	ND	11	0.48	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.51	ug/l	
100-02-7	4-Nitrophenol	ND	22	1.4	ug/l	
87-86-5	Pentachlorophenol	ND	11	0.38	ug/l	
108-95-2	Phenol	0.67	5.4	0.35	ug/l	JB
95-95-4	2,4,5-Trichlorophenol	ND	11	0.49	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.49	ug/l	
85-68-7	Butyl benzyl phthalate	0.40	5.4	0.26	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	5.4	0.29	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	
84-66-2	Diethyl phthalate	ND	5.4	0.29	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.26	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	1.9	2.2	0.35	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	39%		10-79%
4165-62-2	Phenol-d5	27%		10-72%
118-79-6	2,4,6-Tribromophenol	103%		35-138%
4165-60-0	Nitrobenzene-d5	64%		30-116%
321-60-8	2-Fluorobiphenyl	62%		35-107%
1718-51-0	Terphenyl-d14	106%		43-135%

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:	MW-3R	Date Sampled:	04/07/15
Lab Sample ID:	MC37806-2	Date Received:	04/07/15
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270D BY SIM SW846 3510C		
Project:	GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I95024.D	1	04/09/15	MR	04/07/15	OP42577	MSI3554
Run #2							

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

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.0082	ug/l	
208-96-8	Acenaphthylene	0.025	0.11	0.0091	ug/l	J
120-12-7	Anthracene	0.036	0.11	0.011	ug/l	J
56-55-3	Benzo(a)anthracene	0.076	0.054	0.026	ug/l	
50-32-8	Benzo(a)pyrene	0.084	0.11	0.017	ug/l	J
205-99-2	Benzo(b)fluoranthene	0.19	0.054	0.021	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.11	0.11	0.014	ug/l	
207-08-9	Benzo(k)fluoranthene	0.083	0.11	0.011	ug/l	J
218-01-9	Chrysene	0.089	0.11	0.014	ug/l	J
53-70-3	Dibenzo(a,h)anthracene	0.031	0.11	0.016	ug/l	J
206-44-0	Fluoranthene	0.15	0.11	0.0080	ug/l	B
86-73-7	Fluorene	0.017	0.11	0.016	ug/l	J
193-39-5	Indeno(1,2,3-cd)pyrene	0.072	0.11	0.022	ug/l	J
91-20-3	Naphthalene	ND	2.2	0.0088	ug/l	
85-01-8	Phenanthrene	0.065	0.054	0.012	ug/l	B
129-00-0	Pyrene	0.15	0.11	0.0092	ug/l	B

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	63%		26-121%
321-60-8	2-Fluorobiphenyl	58%		28-107%
1718-51-0	Terphenyl-d14	115%		29-129%

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:	MW-3R	
Lab Sample ID:	MC37806-2	Date Sampled: 04/07/15
Matrix:	AQ - Ground Water	Date Received: 04/07/15
Method:	EPA 504.1 EPA 504.1	Percent Solids: n/a
Project:	GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB62727.D	1	04/10/15	NK	04/07/15	OP42580	GBB3416
Run #2							

	Initial Volume	Final Volume
Run #1	36.6 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	125%		59-170%
460-00-4	Bromofluorobenzene (S)	121%		59-170%

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:	MW-3R	Date Sampled:	04/07/15
Lab Sample ID:	MC37806-2	Date Received:	04/07/15
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8082A SW846 3510C		
Project:	GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK47081.D	1	04/10/15	NK	04/08/15	OP42599	GBK1474
Run #2							

	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	0.27	0.18	ug/l	
11104-28-2	Aroclor 1221	ND	0.27	0.18	ug/l	
11141-16-5	Aroclor 1232	ND	0.27	0.19	ug/l	
53469-21-9	Aroclor 1242	ND	0.27	0.20	ug/l	
12672-29-6	Aroclor 1248	ND	0.27	0.14	ug/l	
11097-69-1	Aroclor 1254	ND	0.27	0.18	ug/l	
11096-82-5	Aroclor 1260	ND	0.27	0.20	ug/l	
37324-23-5	Aroclor 1262	ND	0.27	0.20	ug/l	
11100-14-4	Aroclor 1268	ND	0.27	0.19	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	79%		10-147%
877-09-8	Tetrachloro-m-xylene	77%		10-147%
2051-24-3	Decachlorobiphenyl	71%		10-134%
2051-24-3	Decachlorobiphenyl	70%		10-134%

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: MW-3R	Date Sampled: 04/07/15
Lab Sample ID: MC37806-2	Date Received: 04/07/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA	

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Antimony	0.89	0.50	0.031	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Arsenic	2.8	1.0	0.040	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Cadmium	0.078 B	0.50	0.014	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Chromium	2.8 B	4.0	0.079	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Copper	5.8	4.0	0.087	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Iron	1820	50	7.9	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Lead ^a	10.9	2.5	0.20	ug/l	5	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Mercury	0.096 U	0.20	0.096	ug/l	1	04/10/15	04/13/15 SA	EPA 245.1 ²	EPA 245.1 ⁵
Nickel	5.1	4.0	0.026	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Selenium	0.48 B	1.0	0.25	ug/l	1	04/08/15	04/13/15 SA	EPA 200.8 ³	EPA 200.8 ⁴
Silver	0.036 B	2.0	0.015	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴
Zinc	30.6	4.0	1.9	ug/l	1	04/08/15	04/09/15 SA	EPA 200.8 ¹	EPA 200.8 ⁴

(1) Instrument QC Batch: MA18041

(2) Instrument QC Batch: MA18044

(3) Instrument QC Batch: MA18048

(4) Prep QC Batch: MP24462

(5) Prep QC Batch: MP24467

(a) Elevated RL due to dilution required for matrix interference.

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: MW-3R	Date Sampled: 04/07/15
Lab Sample ID: MC37806-2	Date Received: 04/07/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	2450	50	mg/l	50	04/10/15	CF	SM 4500 CL C-11
Chloride ^a	2450	20	mg/l	10	04/10/15 11:09	ANJ	EPA 300/SW846 9056A
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	04/07/15 16:35	MA	SW846 7196A
Chromium, Trivalent ^b	< 0.014	0.014	mg/l	1	04/09/15 13:18	SA	6010/7196A M/200.7
Cyanide	< 0.010	0.010	mg/l	1	04/09/15 14:59	MA	EPA 335.4
HEM Petroleum Hydrocarbons	< 4.1	4.1	mg/l	1	04/14/15	BF	EPA 1664A
Phenols	< 0.050	0.050	mg/l	1	04/09/15 15:20	BF	EPA 420.1
Solids, Total Suspended	45.0	4.0	mg/l	1	04/10/15	BF	SM 2540D-11
Total Residual Chlorine ^c	< 0.050	0.050	mg/l	1	04/07/15 14:44	MA	SM21 4500CL F

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

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

(c) Analysis performed past the required 15 minutes of collection time/holding time.

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Parameter Certifications (MA)
- Chain of Custody

Parameter Certifications

Job Number: MC37806
Account: DRAKEPET Drake Petroleum Co., Inc.
Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

The following parameters included in this report are certified by the state of MA.

Parameter	CAS#	Method	Mat	Certification Status
1,2-Dibromoethane	106-93-4	EPA 504.1	AQ	Accutest is certified for this parameter.
Mercury	7439-97-6	EPA 245.1	AQ	Accutest is certified for this parameter.
Chloride	16887-00-6	SM 4500 CL C-11	AQ	Accutest is certified for this parameter.
Cyanide	57-12-5	EPA 335.4	AQ	Accutest is certified for this parameter.
Phenols		EPA 420.1	AQ	Accutest is certified for this parameter.
Solids, Total Suspended		SM 2540D-11	AQ	Accutest is certified for this parameter.
Total Residual Chlorine		SM21 4500CL F	AQ	Accutest is certified for this parameter.

4.1
4

CHAIN OF CUSTODY

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL: 508-481-6200 FAX: 508-481-7753
www.accutest.com

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MC37806: Chain of Custody

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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC37806 **Client:** GES **Project:** XTRAMART
Date / Time Received: 4/7/2015 12:35:00 PM **Delivery Method:** _____ **Airbill #s:** _____
Cooler Temps (Initial/Adjusted): #1: (0.5/0.5); #2: (0.9/0.9);

Cooler Security

	Y	or	N		Y	or	N
1. Custody Seals Present:	☒		☐	3. COC Present:	☒		☐
2. Custody Seals Intact:	☒		☐	4. Smpl Dates/Time OK	☒		☐

Cooler Temperature

	Y	or	N
1. Temp criteria achieved:	☒		☐
2. Thermometer ID:	G1;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	2		

Quality Control Preservation

	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☒	☐
2. Trip Blank listed on COC:	☐		☒	☐
3. Samples preserved properly:	☒		☐	
4. VOCs headspace free:	☒		☐	☐

Sample Integrity - Documentation

	Y	or	N
1. Sample labels present on bottles:	☒		☐
2. Container labeling complete:	☒		☐
3. Sample container label / COC agree:	☒		☐

Sample Integrity - Condition

	Y	or	N
1. Sample recvd within HT:	☒		☐
2. All containers accounted for:	☒		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions

	Y	or	N	N/A
1. Analysis requested is clear:	☒		☐	
2. Bottles received for unspecified tests	☐		☒	
3. Sufficient volume recvd for analysis:	☒		☐	
4. Compositing instructions clear:	☐		☐	☒
5. Filtering instructions clear:	☐		☐	☒

Comments

GC/MS Volatiles

5

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

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Job Number: MC37806**Account:** DRAKEPET Drake Petroleum Co., Inc.**Project:** GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1370-MB	V38034.D	1	04/14/15	KD	n/a	n/a	MSV1370

The QC reported here applies to the following samples:**Method:** SW846 8260C

MC37806-1, MC37806-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	0.50	0.27	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.37	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.28	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
123-91-1	1,4-Dioxane	ND	25	20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.27	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.29	ug/l	
75-65-0	Tert Butyl Alcohol	ND	20	2.6	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.21	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
95-47-6	m,p-Xylene	ND	1.0	0.47	ug/l	
	o-Xylene	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	100% 72-133%
2037-26-5	Toluene-D8	101% 85-114%
460-00-4	4-Bromofluorobenzene	100% 70-134%

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: MC37806

Account: DRAKEPET Drake Petroleum Co., Inc.

Project: GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1370-BS	V38031.D	1	04/14/15	KD	n/a	n/a	MSV1370
MSV1370-BSD	V38032.D	1	04/14/15	KD	n/a	n/a	MSV1370

The QC reported here applies to the following samples:

Method: SW846 8260C

MC37806-1, MC37806-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	44.1	88	42.7	85	3	14-172/25
71-43-2	Benzene	50	47.4	95	45.5	91	4	68-127/25
56-23-5	Carbon tetrachloride	50	50.7	101	47.1	94	7	55-153/25
95-50-1	1,2-Dichlorobenzene	50	47.2	94	45.2	90	4	77-125/25
541-73-1	1,3-Dichlorobenzene	50	48.7	97	46.9	94	4	77-124/25
106-46-7	1,4-Dichlorobenzene	50	47.6	95	45.4	91	5	73-128/25
75-34-3	1,1-Dichloroethane	50	51.4	103	49.2	98	4	63-145/25
107-06-2	1,2-Dichloroethane	50	45.9	92	45.0	90	2	58-145/25
75-35-4	1,1-Dichloroethene	50	53.8	108	49.9	100	8	56-158/25
156-59-2	cis-1,2-Dichloroethene	50	49.8	100	47.4	95	5	67-133/25
123-91-1	1,4-Dioxane	250	229	92	224	90	2	30-182/25
100-41-4	Ethylbenzene	50	52.2	104	49.5	99	5	71-129/25
1634-04-4	Methyl Tert Butyl Ether	50	54.6	109	52.6	105	4	46-151/25
75-09-2	Methylene chloride	50	49.1	98	46.1	92	6	55-146/25
91-20-3	Naphthalene	50	39.7	79	39.0	78	2	39-176/25
994-05-8	tert-Amyl Methyl Ether	50	49.0	98	46.9	94	4	34-159/25
75-65-0	Tert Butyl Alcohol	500	487	97	470	94	4	51-162/25
127-18-4	Tetrachloroethene	50	50.4	101	48.0	96	5	63-137/25
108-88-3	Toluene	50	50.1	100	48.0	96	4	75-126/25
71-55-6	1,1,1-Trichloroethane	50	48.7	97	45.7	91	6	68-144/25
79-00-5	1,1,2-Trichloroethane	50	48.9	98	49.1	98	0	72-133/25
79-01-6	Trichloroethene	50	48.4	97	46.9	94	3	73-126/25
75-01-4	Vinyl chloride	50	43.9	88	40.4	81	8	36-167/25
95-47-6	m,p-Xylene	100	104	104	98.3	98	6	68-130/25
	o-Xylene	50	52.3	105	48.3	97	8	69-126/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	100%	72-133%
2037-26-5	Toluene-D8	103%	101%	85-114%
460-00-4	4-Bromofluorobenzene	102%	102%	70-134%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC37806

Account: DRAKEPET Drake Petroleum Co., Inc.

Project: GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC37854-15MS	V38040.D	5	04/14/15	KD	n/a	n/a	MSV1370
MC37854-15MSD	V38041.D	5	04/14/15	KD	n/a	n/a	MSV1370
MC37854-15	V38036.D	1	04/14/15	KD	n/a	n/a	MSV1370

The QC reported here applies to the following samples:

Method: SW846 8260C

MC37806-1, MC37806-2

CAS No.	Compound	MC37854-15 Spike ug/l	Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	250	145	58	250	132	53	9	10-135/30
71-43-2	Benzene	5.1	250	236	92	250	240	94	2	61-138/30
56-23-5	Carbon tetrachloride	ND	250	248	99	250	243	97	2	57-155/30
95-50-1	1,2-Dichlorobenzene	ND	250	228	91	250	231	92	1	75-125/30
541-73-1	1,3-Dichlorobenzene	ND	250	232	93	250	238	95	3	74-125/30
106-46-7	1,4-Dichlorobenzene	ND	250	225	90	250	232	93	3	72-128/30
75-34-3	1,1-Dichloroethane	ND	250	251	100	250	250	100	0	63-150/30
107-06-2	1,2-Dichloroethane	ND	250	238	95	250	236	94	1	57-150/30
75-35-4	1,1-Dichloroethene	ND	250	257	103	250	253	101	2	53-165/30
156-59-2	cis-1,2-Dichloroethene	ND	250	243	97	250	241	96	1	66-138/30
123-91-1	1,4-Dioxane	ND	1250	1010	81	1250	873	70	15	29-167/30
100-41-4	Ethylbenzene	0.25	250	252	101	250	256	102	2	61-137/30
1634-04-4	Methyl Tert Butyl Ether	ND	250	263	105	250	251	100	5	34-160/30
75-09-2	Methylene chloride	ND	250	241	96	250	234	94	3	52-154/30
91-20-3	Naphthalene	ND	250	191	76	250	190	76	1	21-185/30
994-05-8	tert-Amyl Methyl Ether	ND	250	224	90	250	219	88	2	28-162/30
75-65-0	Tert Butyl Alcohol	ND	2500	2460	98	2500	2370	95	4	41-172/30
127-18-4	Tetrachloroethene	ND	250	237	95	250	244	98	3	60-140/30
108-88-3	Toluene	ND	250	246	98	250	250	100	2	74-131/30
71-55-6	1,1,1-Trichloroethane	ND	250	233	93	250	233	93	0	67-151/30
79-00-5	1,1,2-Trichloroethane	ND	250	253	101	250	246	98	3	73-134/30
79-01-6	Trichloroethene	ND	250	234	94	250	241	96	3	68-133/30
75-01-4	Vinyl chloride	ND	250	226	90	250	220	88	3	29-176/30
	m,p-Xylene	ND	500	495	99	500	501	100	1	58-139/30
95-47-6	o-Xylene	ND	250	248	99	250	251	100	1	61-135/30

CAS No.	Surrogate Recoveries	MS	MSD	MC37854-15 Limits
1868-53-7	Dibromofluoromethane	102%	101%	102% 72-133%
2037-26-5	Toluene-D8	103%	103%	101% 85-114%
460-00-4	4-Bromofluorobenzene	101%	102%	101% 70-134%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Page 1 of 1

Job Number: MC37806

Account: DRAKEPET Drake Petroleum Co., Inc.

Project: GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Method: SW846 8260C

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC37806-1	V38038.D	103	102	101
MC37806-2	V38039.D	104	101	103
MC37854-15MS	V38040.D	102	103	101
MC37854-15MSD	V38041.D	101	103	102
MSV1370-BS	V38031.D	100	103	102
MSV1370-BSD	V38032.D	100	101	102
MSV1370-MB	V38034.D	100	101	100

Surrogate Compounds

Recovery Limits

S1 = Dibromofluoromethane

72-133%

S2 = Toluene-D8

85-114%

S3 = 4-Bromofluorobenzene

70-134%

5.4.1

5

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Page 1 of 1

Job Number: MC37806**Account:** DRAKEPET Drake Petroleum Co., Inc.**Project:** GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42576-MB	F80689.D	1	04/09/15	KD	04/07/15	OP42576	MSF3498

The QC reported here applies to the following samples:**Method:** SW846 8270D

MC37806-1, MC37806-2

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	0.29	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.51	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.47	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.34	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	0.59	ug/l	
95-48-7	2-Methylphenol	ND	10	0.30	ug/l	
106-44-5	4-Methylphenol	ND	10	0.44	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.47	ug/l	
100-02-7	4-Nitrophenol	ND	20	1.3	ug/l	
87-86-5	Pentachlorophenol	ND	10	0.35	ug/l	
108-95-2	Phenol	1.0	5.0	0.32	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	10	0.45	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.45	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.24	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.27	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.29	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.27	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.24	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.32	ug/l	

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	50% 10-79%
4165-62-2	Phenol-d5	34% 10-72%
118-79-6	2,4,6-Tribromophenol	90% 35-138%
4165-60-0	Nitrobenzene-d5	75% 30-116%
321-60-8	2-Fluorobiphenyl	70% 35-107%
1718-51-0	Terphenyl-d14	106% 43-135%

Method Blank Summary

Page 1 of 1

Job Number: MC37806**Account:** DRAKEPET Drake Petroleum Co., Inc.**Project:** GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42577-MB	I95018.D	1	04/09/15	MR	04/07/15	OP42577	MSI3554

The QC reported here applies to the following samples:**Method:** SW846 8270D BY SIM

MC37806-1, MC37806-2

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.0075	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.0084	ug/l	
120-12-7	Anthracene	ND	0.10	0.0098	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.024	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.015	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.019	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.013	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.010	ug/l	
218-01-9	Chrysene	ND	0.10	0.013	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.015	ug/l	
206-44-0	Fluoranthene	0.023	0.10	0.0074	ug/l	J
86-73-7	Fluorene	ND	0.10	0.015	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.020	ug/l	
91-20-3	Naphthalene	0.046	2.0	0.0081	ug/l	J
85-01-8	Phenanthrene	0.028	0.050	0.011	ug/l	J
129-00-0	Pyrene	0.021	0.10	0.0085	ug/l	J

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	75% 26-121%
321-60-8	2-Fluorobiphenyl	65% 28-107%
1718-51-0	Terphenyl-d14	109% 29-129%

Blank Spike Summary

Page 1 of 1

Job Number: MC37806**Account:** DRAKEPET Drake Petroleum Co., Inc.**Project:** GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42576-BS	F80690.D	1	04/09/15	KD	04/07/15	OP42576	MSF3498

The QC reported here applies to the following samples:**Method:** SW846 8270D

MC37806-1, MC37806-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-57-8	2-Chlorophenol	50	41.0	82	47-106
59-50-7	4-Chloro-3-methyl phenol	50	41.7	83	50-111
120-83-2	2,4-Dichlorophenol	50	42.8	86	53-114
105-67-9	2,4-Dimethylphenol	50	38.1	76	23-110
51-28-5	2,4-Dinitrophenol	50	40.7	81	10-156
534-52-1	4,6-Dinitro-o-cresol	50	43.5	87	17-159
95-48-7	2-Methylphenol	50	36.4	73	40-92
106-44-5	4-Methylphenol	100	70.0	70	38-86
88-75-5	2-Nitrophenol	50	44.1	88	53-115
100-02-7	4-Nitrophenol	50	20.9	42	10-83
87-86-5	Pentachlorophenol	50	40.6	81	41-122
108-95-2	Phenol	50	21.6	43	15-55
95-95-4	2,4,5-Trichlorophenol	50	46.9	94	52-120
88-06-2	2,4,6-Trichlorophenol	50	45.0	90	53-119
85-68-7	Butyl benzyl phthalate	50	48.0	96	68-128
84-74-2	Di-n-butyl phthalate	50	45.2	90	68-117
117-84-0	Di-n-octyl phthalate	50	47.0	94	60-139
84-66-2	Diethyl phthalate	50	45.6	91	51-127
131-11-3	Dimethyl phthalate	50	44.9	90	22-147
117-81-7	bis(2-Ethylhexyl)phthalate	50	48.0	96	69-133

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	60%	10-79%
4165-62-2	Phenol-d5	41%	10-72%
118-79-6	2,4,6-Tribromophenol	103%	35-138%
4165-60-0	Nitrobenzene-d5	95%	30-116%
321-60-8	2-Fluorobiphenyl	87%	35-107%
1718-51-0	Terphenyl-d14	112%	43-135%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 1

Job Number: MC37806**Account:** DRAKEPET Drake Petroleum Co., Inc.**Project:** GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42577-BS	I95019.D	1	04/09/15	MR	04/07/15	OP42577	MSI3554

The QC reported here applies to the following samples:**Method:** SW846 8270D BY SIM

MC37806-1, MC37806-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	38.9	78	45-116
208-96-8	Acenaphthylene	50	37.9	76	34-110
120-12-7	Anthracene	50	39.8	80	50-117
56-55-3	Benzo(a)anthracene	50	47.3	95	55-139
50-32-8	Benzo(a)pyrene	50	45.6	91	48-131
205-99-2	Benzo(b)fluoranthene	50	44.1	88	49-141
191-24-2	Benzo(g,h,i)perylene	50	43.8	88	60-130
207-08-9	Benzo(k)fluoranthene	50	40.8	82	49-133
218-01-9	Chrysene	50	43.5	87	52-128
53-70-3	Dibenzo(a,h)anthracene	50	43.4	87	60-136
206-44-0	Fluoranthene	50	45.7	91	46-132
86-73-7	Fluorene	50	39.3	79	53-120
193-39-5	Indeno(1,2,3-cd)pyrene	50	44.2	88	57-134
91-20-3	Naphthalene	50	33.6	67	32-116
85-01-8	Phenanthrene	50	38.6	77	50-120
129-00-0	Pyrene	50	46.4	93	48-127

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	91%	26-121%
321-60-8	2-Fluorobiphenyl	81%	28-107%
1718-51-0	Terphenyl-d14	118%	29-129%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC37806

Account: DRAKEPET Drake Petroleum Co., Inc.

Project: GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42576-MS	F80691.D	1	04/09/15	KD	04/07/15	OP42576	MSF3498
OP42576-MSD	F80692.D	1	04/09/15	KD	04/07/15	OP42576	MSF3498
MC37600-14	F80693.D	1	04/09/15	KD	04/07/15	OP42576	MSF3498

The QC reported here applies to the following samples:

Method: SW846 8270D

MC37806-1, MC37806-2

CAS No.	Compound	MC37600-14 Spike ug/l	Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	ND	50	42.1	84	50	38.1	76	10	37-112/20
59-50-7	4-Chloro-3-methyl phenol	ND	50	42.7	85	50	38.7	77	10	43-115/20
120-83-2	2,4-Dichlorophenol	ND	50	44.0	88	50	39.4	79	11	47-119/20
105-67-9	2,4-Dimethylphenol	ND	50	38.9	78	50	34.7	69	11	15-118/20
51-28-5	2,4-Dinitrophenol	ND	50	41.7	83	50	33.7	67	21* a	10-165/20
534-52-1	4,6-Dinitro-o-cresol	ND	50	44.9	90	50	40.7	81	10	13-165/20
95-48-7	2-Methylphenol	ND	50	37.7	75	50	33.2	66	13	30-99/20
106-44-5	4-Methylphenol	ND	100	71.8	72	100	63.4	63	12	32-89/20
88-75-5	2-Nitrophenol	ND	50	45.3	91	50	39.5	79	14	44-120/20
100-02-7	4-Nitrophenol	ND	50	22.0	44	50	20.0	40	10	10-93/20
87-86-5	Pentachlorophenol	ND	50	42.3	85	50	38.9	78	8	33-131/20
108-95-2	Phenol	0.94	JB 50	21.9	42	50	20.0	38	9	15-53/20
95-95-4	2,4,5-Trichlorophenol	ND	50	46.8	94	50	43.2	86	8	45-126/20
88-06-2	2,4,6-Trichlorophenol	ND	50	45.9	92	50	41.0	82	11	45-124/20
85-68-7	Butyl benzyl phthalate	ND	50	48.4	97	50	44.8	90	8	58-135/20
84-74-2	Di-n-butyl phthalate	ND	50	46.4	93	50	42.7	85	8	60-122/20
117-84-0	Di-n-octyl phthalate	ND	50	48.2	96	50	44.6	89	8	54-142/20
84-66-2	Diethyl phthalate	ND	50	46.5	93	50	43.3	87	7	40-132/20
131-11-3	Dimethyl phthalate	ND	50	45.6	91	50	42.3	85	8	13-149/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND	50	48.8	98	50	44.6	89	9	59-139/20

CAS No.	Surrogate Recoveries	MS	MSD	MC37600-14 Limits
367-12-4	2-Fluorophenol	60%	55%	60% 10-79%
4165-62-2	Phenol-d5	40%	38%	40% 10-72%
118-79-6	2,4,6-Tribromophenol	105%	97%	100% 35-138%
4165-60-0	Nitrobenzene-d5	93%	85%	93% 30-116%
321-60-8	2-Fluorobiphenyl	87%	79%	89% 35-107%
1718-51-0	Terphenyl-d14	110%	103%	115% 43-135%

(a) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: MC37806

Account: DRAKEPET Drake Petroleum Co., Inc.

Project: GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42577-MS	I95020.D	1	04/09/15	MR	04/07/15	OP42577	MSI3554
OP42577-MSD	I95021.D	1	04/09/15	MR	04/07/15	OP42577	MSI3554
MC37600-15	I95022.D	1	04/09/15	MR	04/07/15	OP42577	MSI3554

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

MC37806-1, MC37806-2

CAS No.	Compound	MC37600-15 Spike		MS	MS	Spike	MSD	MSD	RPD	Limits
		ug/l	Q	ug/l	ug/l	%	ug/l	%		Rec/RPD
83-32-9	Acenaphthene	ND		50	39.8	80	50	37.3	6	36-124/20
208-96-8	Acenaphthylene	ND		50	38.7	77	50	36.2	7	25-116/20
120-12-7	Anthracene	ND		50	40.6	81	50	39.0	4	42-122/20
56-55-3	Benzo(a)anthracene	ND		50	48.9	98	50	45.4	7	45-145/20
50-32-8	Benzo(a)pyrene	ND		50	46.3	93	50	43.3	7	40-136/20
205-99-2	Benzo(b)fluoranthene	ND		50	43.5	87	50	42.6	2	41-148/20
191-24-2	Benzo(g,h,i)perylene	ND		50	46.0	92	50	42.5	8	48-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	43.2	86	50	38.0	13	45-131/20
218-01-9	Chrysene	0.020	J	50	44.6	89	50	41.6	7	41-135/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	44.8	90	50	41.9	7	49-144/20
206-44-0	Fluoranthene	0.022	JB	50	46.7	93	50	43.7	7	38-136/20
86-73-7	Fluorene	ND		50	39.7	79	50	37.8	5	43-127/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	45.8	92	50	42.8	7	45-142/20
91-20-3	Naphthalene	ND		50	34.2	68	50	32.2	6	23-125/20
85-01-8	Phenanthrene	0.019	JB	50	39.6	79	50	37.5	5	41-126/20
129-00-0	Pyrene	0.022	JB	50	47.7	95	50	44.6	7	41-131/20

CAS No.	Surrogate Recoveries	MS	MSD	MC37600-15 Limits	
4165-60-0	Nitrobenzene-d5	89%	83%	89%	26-121%
321-60-8	2-Fluorobiphenyl	80%	75%	79%	28-107%
1718-51-0	Terphenyl-d14	117%	109%	120%	29-129%

* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Job Number: MC37806
Account: DRAKEPET Drake Petroleum Co., Inc.
Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

Method: SW846 8270D	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC37806-1	F80694.D	38	28	102	65	71	96
MC37806-2	F80695.D	39	27	103	64	62	106
OP42576-BS	F80690.D	60	41	103	95	87	112
OP42576-MB	F80689.D	50	34	90	75	70	106
OP42576-MS	F80691.D	60	40	105	93	87	110
OP42576-MSD	F80692.D	55	38	97	85	79	103

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	10-79%
S2 = Phenol-d5	10-72%
S3 = 2,4,6-Tribromophenol	35-138%
S4 = Nitrobenzene-d5	30-116%
S5 = 2-Fluorobiphenyl	35-107%
S6 = Terphenyl-d14	43-135%

Semivolatile Surrogate Recovery Summary

Job Number: MC37806
Account: DRAKEPET Drake Petroleum Co., Inc.
Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

Method: SW846 8270D BY SIM	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC37806-1	I95023.D	64	65	107
MC37806-2	I95024.D	63	58	115
OP42577-BS	I95019.D	91	81	118
OP42577-MB	I95018.D	75	65	109
OP42577-MS	I95020.D	89	80	117
OP42577-MSD	I95021.D	83	75	109

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	26-121%
S2 = 2-Fluorobiphenyl	28-107%
S3 = Terphenyl-d14	29-129%

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC37806
Account: DRAKEPET Drake Petroleum Co., Inc.
Project: GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42580-MB	BB62721.D	1	04/10/15	NK	04/07/15	OP42580	GBB3416

The QC reported here applies to the following samples: Method: EPA 504.1

MC37806-1, MC37806-2

CAS No.	Compound	Result	RL	MDL	Units	Q
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries	Limits
460-00-4	Bromofluorobenzene (S)	108% 59-170%
460-00-4	Bromofluorobenzene (S)	108% 59-170%

Blank Spike Summary

Page 1 of 1

Job Number: MC37806

Account: DRAKEPET Drake Petroleum Co., Inc.

Project: GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42580-BS	BB62722.D	1	04/10/15	NK	04/07/15	OP42580	GBB3416

The QC reported here applies to the following samples:

Method: EPA 504.1

MC37806-1, MC37806-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
106-93-4	1,2-Dibromoethane	0.071	0.085	120	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	116%	59-170%
460-00-4	Bromofluorobenzene (S)	114%	59-170%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC37806
Account: DRAKEPET Drake Petroleum Co., Inc.
Project: GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42580-MS	BB62728.D	1	04/10/15	NK	04/07/15	OP42580	GBB3416
OP42580-MSD	BB62729.D	1	04/10/15	NK	04/07/15	OP42580	GBB3416
MC37600-16	BB62730.D	1	04/10/15	NK	04/07/15	OP42580	GBB3416

The QC reported here applies to the following samples: Method: EPA 504.1

MC37806-1, MC37806-2

CAS No.	Compound	MC37600-16 Spike ug/l	Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
106-93-4	1,2-Dibromoethane	ND		0.071	0.077	108	0.071	0.075	106	3 65-135/30

CAS No.	Surrogate Recoveries	MS	MSD	MC37600-16 Limits
460-00-4	Bromofluorobenzene (S)	114%	108%	117% 59-170%
460-00-4	Bromofluorobenzene (S)	114%	107%	117% 59-170%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC37806
Account: DRAKEPET Drake Petroleum Co., Inc.
Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

Method: EPA 504.1	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b
MC37806-1	BB62726.D	104	96
MC37806-2	BB62727.D	125	121
OP42580-BS	BB62722.D	116	114
OP42580-MB	BB62721.D	108	108
OP42580-MS	BB62728.D	114	114
OP42580-MSD	BB62729.D	108	107

Surrogate Compounds
Recovery Limits

S1 = Bromofluorobenzene (S)
 59-170%

- (a) Recovery from GC signal #2
- (b) Recovery from GC signal #1

GC Semi-volatiles

QC Data Summaries

∞

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Page 1 of 1

Job Number: MC37806

Account: DRAKEPET Drake Petroleum Co., Inc.

Project: GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42599-MB	BK47075.D	1	04/10/15	NK	04/08/15	OP42599	GBK1474

The QC reported here applies to the following samples:

Method: SW846 8082A

MC37806-1, MC37806-2

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	0.16	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	0.16	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	0.18	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	0.19	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	0.12	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	0.16	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	0.19	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	0.18	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	0.17	ug/l	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	66% 10-147%
877-09-8	Tetrachloro-m-xylene	63% 10-147%
2051-24-3	Decachlorobiphenyl	69% 10-134%
2051-24-3	Decachlorobiphenyl	67% 10-134%

8.1.1

8

Blank Spike Summary

Job Number: MC37806
Account: DRAKEPET Drake Petroleum Co., Inc.
Project: GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42599-BS	BK47076.D	1	04/10/15	NK	04/08/15	OP42599	GBK1474

The QC reported here applies to the following samples: Method: SW846 8082A

MC37806-1, MC37806-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	2	1.5	75	47-126
11104-28-2	Aroclor 1221		ND		40-140
11141-16-5	Aroclor 1232		ND		40-140
53469-21-9	Aroclor 1242		ND		40-140
12672-29-6	Aroclor 1248		ND		40-140
11097-69-1	Aroclor 1254		ND		40-140
11096-82-5	Aroclor 1260	2	1.6	80	38-121
37324-23-5	Aroclor 1262		ND		40-140
11100-14-4	Aroclor 1268		ND		40-140

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	69%	10-147%
877-09-8	Tetrachloro-m-xylene	64%	10-147%
2051-24-3	Decachlorobiphenyl	69%	10-134%
2051-24-3	Decachlorobiphenyl	69%	10-134%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC37806
Account: DRAKEPET Drake Petroleum Co., Inc.
Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42599-MS	BK47077.D	1	04/10/15	NK	04/08/15	OP42599	GBK1474
OP42599-MSD	BK47078.D	1	04/10/15	NK	04/08/15	OP42599	GBK1474
MC37600-24	BK47079.D	1	04/10/15	NK	04/08/15	OP42599	GBK1474

The QC reported here applies to the following samples: Method: SW846 8082A

MC37806-1, MC37806-2

CAS No.	Compound	MC37600-24 Spike		MS	MS	Spike	MSD	MSD	RPD	Limits
		ug/l	Q	ug/l	%	ug/l	ug/l	%		Rec/RPD
12674-11-2	Aroclor 1016	ND	2	1.3	65	2	1.4	70	7	40-140/50
11104-28-2	Aroclor 1221	ND		ND			ND		nc	40-140/50
11141-16-5	Aroclor 1232	ND		ND			ND		nc	40-140/50
53469-21-9	Aroclor 1242	ND		ND			ND		nc	40-140/50
12672-29-6	Aroclor 1248	ND		ND			ND		nc	40-140/50
11097-69-1	Aroclor 1254	ND		ND			ND		nc	40-140/50
11096-82-5	Aroclor 1260	ND	2	1.5	75	2	1.5	75	0	40-140/50
37324-23-5	Aroclor 1262	ND		ND			ND		nc	40-140/50
11100-14-4	Aroclor 1268	ND		ND			ND		nc	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	MC37600-24 Limits	
877-09-8	Tetrachloro-m-xylene	66%	58%	74%	10-147%
877-09-8	Tetrachloro-m-xylene	62%	58%	72%	10-147%
2051-24-3	Decachlorobiphenyl	57%	70%	70%	10-134%
2051-24-3	Decachlorobiphenyl	57%	69%	71%	10-134%

* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Job Number: MC37806
Account: DRAKEPET Drake Petroleum Co., Inc.
Project: GESMA: West Warren Xtramart, 1300 West Main Street, Warren, MA

Method: SW846 8082A	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b	S2 ^a	S2 ^b
MC37806-1	BK47080.D	64	62	55	52
MC37806-2	BK47081.D	79	77	71	70
OP42599-BS	BK47076.D	69	64	69	69
OP42599-MB	BK47075.D	66	63	69	67
OP42599-MS	BK47077.D	66	62	57	57
OP42599-MSD	BK47078.D	58	58	70	69

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	10-147%
S2 = Decachlorobiphenyl	10-134%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

8.4.1
8

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC37806
Account: DRAKEPET - Drake Petroleum Co., Inc.
Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

QC Batch ID: MP24462
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 04/08/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.66	2		
Antimony	0.50	.011	.031	0.0036	<0.50
Arsenic	1.0	.023	.04	0.049	<1.0
Barium	1.0	.008	.053		
Beryllium	0.50	.0074	.014		
Boron	5.0	.12	.18		
Cadmium	0.50	.0062	.014	-0.0064	<0.50
Calcium	250	2.1	18		
Chromium	4.0	.016	.079	0.13	<4.0
Cobalt	0.50	.0032	.011		
Copper	4.0	.0087	.087	0.076	<4.0
Iron	50	.36	7.9	2.6	<50
Lead	0.50	.0066	.04	0.0013	<0.50
Magnesium	250	.7	.93		
Manganese	2.0	.0048	1		
Molybdenum	1.0	.014	.048		
Nickel	4.0	.0074	.026	0.0032	<4.0
Potassium	250	1.7	3.3		
Selenium	1.0	.073	.25	0.19	<1.0
Silver	2.0	.0044	.015	-0.0015	<2.0
Sodium	250	1	11		
Strontium	5.0	.005	.011		
Thallium	0.50	.021	.061		
Tin	5.0	.0073	.07		
Titanium	1.0	.1	.13		
Vanadium	4.0	.1	.19		
Zinc	4.0	.033	1.9	1.3	<4.0

Associated samples MP24462: MC37806-1, MC37806-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC37806
 Account: DRAKEPET - Drake Petroleum Co., Inc.
 Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

QC Batch ID: MP24462
 Matrix Type: AQUEOUS

Methods: EPA 200.8
 Units: ug/l

Prep Date: 04/08/15

Metal	MC37806-2 Original MS		SpikeLot MPICP7	% Rec	QC Limits
Aluminum					
Antimony	0.89	106	100	105.1	70-130
Arsenic	2.8	94.4	100	91.6	70-130
Barium					
Beryllium					
Boron					
Cadmium	0.078	86.1	100	86.0	70-130
Calcium					
Chromium	2.8	95.3	100	92.5	70-130
Cobalt					
Copper	5.8	82.9	100	77.1	70-130
Iron	1820	3840	2000	101.0	70-130
Lead	10.9	216 (a)	200	102.6	70-130
Magnesium					
Manganese					
Molybdenum					
Nickel	5.1	85.6	100	80.5	70-130
Potassium					
Selenium	0.48	82.4	100	81.9	70-130
Silver	0.036	33.2	40	82.9	70-130
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc	30.6	104	100	73.4	70-130

Associated samples MP24462: MC37806-1, MC37806-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested
 (a) Elevated RL due to dilution required for matrix interference.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC37806
 Account: DRAKEPET - Drake Petroleum Co., Inc.
 Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

QC Batch ID: MP24462
 Matrix Type: AQUEOUS

Methods: EPA 200.8
 Units: ug/l

Prep Date: 04/08/15

Metal	MC37806-2 Original	MSD	SpikeLot MPICP7	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.89	105	100	104.1	0.9	20
Arsenic	2.8	94.3	100	91.5	0.1	20
Barium						
Beryllium						
Boron						
Cadmium	0.078	86.1	100	86.0	0.0	20
Calcium						
Chromium	2.8	96.1	100	93.3	0.8	20
Cobalt						
Copper	5.8	83.0	100	77.2	0.1	20
Iron	1820	3770	2000	97.5	1.8	20
Lead	10.9	225 (a)	200	107.1	4.1	20
Magnesium						
Manganese						
Molybdenum						
Nickel	5.1	85.5	100	80.4	0.1	20
Potassium						
Selenium	0.48	80.7	100	80.2	2.1	20
Silver	0.036	33.1	40	82.7	0.3	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc	30.6	104	100	73.4	0.0	20

Associated samples MP24462: MC37806-1, MC37806-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested
 (a) Elevated RL due to dilution required for matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC37806
 Account: DRAKEPET - Drake Petroleum Co., Inc.
 Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

QC Batch ID: MP24462
 Matrix Type: AQUEOUS

Methods: EPA 200.8
 Units: ug/l

Prep Date: 04/08/15

Metal	BSP Result	SpikeLot MPICP7	% Rec	QC Limits
Aluminum				
Antimony	103	100	103.0	85-115
Arsenic	103	100	103.0	85-115
Barium				
Beryllium				
Boron				
Cadmium	96.2	100	96.2	85-115
Calcium				
Chromium	99.6	100	99.6	85-115
Cobalt				
Copper	93.6	100	93.6	85-115
Iron	2040	2000	102.0	85-115
Lead	193	200	96.5	85-115
Magnesium				
Manganese				
Molybdenum				
Nickel	95.2	100	95.2	85-115
Potassium				
Selenium	103	100	103.0	85-115
Silver	37.4	40	93.5	85-115
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	95.2	100	95.2	85-115

Associated samples MP24462: MC37806-1, MC37806-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC37806
 Account: DRAKEPET - Drake Petroleum Co., Inc.
 Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

QC Batch ID: MP24462
 Matrix Type: AQUEOUS

Methods: EPA 200.8
 Units: ug/l

Prep Date: 04/08/15

Metal	MC37806-2 Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony	0.887	0.956	7.8	0-10
Arsenic	2.78	3.40	22.5*(a)	0-10
Barium				
Beryllium				
Boron				
Cadmium	0.0778	0.133	71.1 (b)	0-10
Calcium				
Chromium	2.81	2.86	1.7	0-10
Cobalt				
Copper	5.79	6.96	20.1*(a)	0-10
Iron	1820	1970	7.9	0-10
Lead	10.9	11.0	0.3	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	5.14	5.53	7.7	0-10
Potassium				
Selenium	0.476	1.98	315.9(b)	0-10
Silver	0.0356	0.0422	18.4 (b)	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	30.6	37.0	20.8*(a)	0-10

Associated samples MP24462: MC37806-1, MC37806-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Serial dilution indicates possible matrix interference.

(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC37806
Account: DRAKEPET - Drake Petroleum Co., Inc.
Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

QC Batch ID: MP24467
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 04/10/15

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.038	.096	-0.023	<0.20

Associated samples MP24467: MC37806-1, MC37806-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC37806
 Account: DRAKEPET - Drake Petroleum Co., Inc.
 Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

QC Batch ID: MP24467
 Matrix Type: AQUEOUS

Methods: EPA 245.1
 Units: ug/l

Prep Date: 04/10/15

Metal	MC37692-1		SpikeLot		QC
	Original	MS	HGRWS1	% Rec	Limits
Mercury	0.0	3.3	3	110.0	70-130

Associated samples MP24467: MC37806-1, MC37806-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC37806
 Account: DRAKEPET - Drake Petroleum Co., Inc.
 Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

QC Batch ID: MP24467
 Matrix Type: AQUEOUS

Methods: EPA 245.1
 Units: ug/l

Prep Date: 04/10/15

Metal	MC37692-1 Original	MSD	SpikeLot HGRWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.2	3	106.7	3.1	20

Associated samples MP24467: MC37806-1, MC37806-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC37806
 Account: DRAKEPET - Drake Petroleum Co., Inc.
 Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

QC Batch ID: MP24467
 Matrix Type: AQUEOUS

Methods: EPA 245.1
 Units: ug/l

Prep Date: 04/10/15

Metal	BSP Result	SpikeLot HGRWS1	% Rec	QC Limits
Mercury	3.1	3	103.3	85-115

Associated samples MP24467: MC37806-1, MC37806-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC37806
Account: DRAKEPET - Drake Petroleum Co., Inc.
Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GN50292	1.0	0.0	mg/l	10	10.0	100.0	80-120%
Chromium, Hexavalent	GN50268	0.010	0.0	mg/l	.1	0.10	100.0	85-115%
Cyanide	GP18999/GN50282	0.010	0.0	mg/l	0.1	0.101	101.0	90-110%
Cyanide	GP18999/GN50282			mg/l	0.2	0.201	100.5	90-110%
HEM Petroleum Hydrocarbons	GP19014/GN50314	4.0	0.0	mg/l	20.0	18.5	92.5	64-132%
Phenols	GP19002/GN50283	0.050	0.0	mg/l	0.20	0.18	90.0	80-120%
Solids, Total Suspended	GN50286	4.0	0.0	mg/l				
Total Residual Chlorine	GN50266	0.050	0.0	mg/l	1	0.98	98.0	80-120%

Associated Samples:

Batch GN50266: MC37806-1, MC37806-2
Batch GN50268: MC37806-1, MC37806-2
Batch GN50286: MC37806-1, MC37806-2
Batch GN50292: MC37806-1, MC37806-2
Batch GP18999: MC37806-1, MC37806-2
Batch GP19002: MC37806-1, MC37806-2
Batch GP19014: MC37806-1, MC37806-2

(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC37806
Account: DRAKEPET - Drake Petroleum Co., Inc.
Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Chromium, Hexavalent	GN50268	mg/l	.1	0.10	0.0	20%

Associated Samples:
Batch GN50268: MC37806-1, MC37806-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC37806
Account: DRAKEPET - Drake Petroleum Co., Inc.
Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GN50292	MC37806-1	mg/l	975	975	0.0	0-20%
Chromium, Hexavalent	GN50268	MC37806-2	mg/l	0.0	0.0	0.0	0-20%
Cyanide	GP18999/GN50282	MC37806-2	mg/l	0.0	0.0	0.0	0-20%
HEM Petroleum Hydrocarbons	GP19014/GN50314	MC37968-1	mg/l	0.80	0.0	200.0(a)	0-24%
Phenols	GP19002/GN50283	MC37806-1	mg/l	0.017	0.017	0.0	0-20%
Solids, Total Suspended	GN50286	MC37806-1	mg/l	223	219	1.8	0-5%
Total Residual Chlorine	GN50266	MC37806-2	mg/l	0.0	0.0	0.0	0-20%

Associated Samples:

Batch GN50266: MC37806-1, MC37806-2
Batch GN50268: MC37806-1, MC37806-2
Batch GN50286: MC37806-1, MC37806-2
Batch GN50292: MC37806-1, MC37806-2
Batch GP18999: MC37806-1, MC37806-2
Batch GP19002: MC37806-1, MC37806-2
Batch GP19014: MC37806-1, MC37806-2

(*) Outside of QC limits

(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC37806
Account: DRAKEPET - Drake Petroleum Co., Inc.
Project: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GN50292	MC37806-1	mg/l	975	500	1470	99.0	75-125%
Chromium, Hexavalent	GN50268	MC37806-2	mg/l	0.0	.1	0.10	100.0	85-115%
Cyanide	GP18999/GN50282	MC37806-2	mg/l	0.0	0.1	0.10	100.0	90-110%
HEM Petroleum Hydrocarbons	GP19014/GN50314	MC37968-1	mg/l	0.80	20.0	17.7	84.5	64-132%
Phenols	GP19002/GN50283	MC37806-1	mg/l	0.017	0.20	0.19	86.5	75-125%
Total Residual Chlorine	GN50266	MC37806-2	mg/l	0.0	1	0.80	80.0	75-125%

Associated Samples:

Batch GN50266: MC37806-1, MC37806-2

Batch GN50268: MC37806-1, MC37806-2

Batch GN50292: MC37806-1, MC37806-2

Batch GP18999: MC37806-1, MC37806-2

Batch GP19002: MC37806-1, MC37806-2

Batch GP19014: MC37806-1, MC37806-2

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

Misc. Forms

Custody Documents and Other Forms

(Accutest New Jersey)

Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC37806 **Client:** _____ **Project:** _____
Date / Time Received: 4/8/2015 9:40:00 AM **Delivery Method:** _____ **Airbill #'s:** _____
Cooler Temps (Initial/Adjusted): #1: (4/2.2): 0

Cooler Security

	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present:	☒		☐	3. COC Present:	☒		☐
2. Custody Seals Intact:	☒		☐	4. Smpl Dates/Time OK	☒		☐

Cooler Temperature

	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	☒		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation

	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	☐	☐		☒
2. Trip Blank listed on COC:	☐	☐		☒
3. Samples preserved properly:	☒		☐	
4. VOCs headspace free:	☐	☐		☒

Sample Integrity - Documentation

	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	☒		☐
2. Container labeling complete:	☒		☐
3. Sample container label / COC agree:	☒		☐

Sample Integrity - Condition

	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	☒		☐
2. All containers accounted for:	☒		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions

	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	☒		☐	
2. Bottles received for unspecified tests	☐		☒	
3. Sufficient volume recvd for analysis:	☒		☐	
4. Compositing instructions clear:	☐		☐	☒
5. Filtering instructions clear:	☐		☐	☒

Comments

General Chemistry

QC Data Summaries

(Accutest New Jersey)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC37806
Account: ALNE - Accutest Labs of New England, Inc.
Project: DRAKEPET: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP87987/GN22994	2.0	0.0	mg/l	80	78.0	97.5	90-110%
Sulfate	GP87987/GN22994	10	0.0	mg/l	80	85.3	106.6	90-110%

Associated Samples:
Batch GP87987: MC37806-1, MC37806-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC37806
Account: ALNE - Accutest Labs of New England, Inc.
Project: DRAKEPET: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GP87987/GN22896	JB91741-1	mg/l	62.4	61.3	1.8	0-20%
Chloride	GP87987/GN22896	JB91741-1	mg/l	57.9	61.3	1.8	0-20%
Sulfate	GP87987/GN22994	JB91741-1	mg/l	1210	1180	2.5	0-20%

Associated Samples:
Batch GP87987: MC37806-1, MC37806-2
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC37806
Account: ALNE - Accutest Labs of New England, Inc.
Project: DRAKEPET: GESMA:West Warren Xtramart, 1300 West Main Street, Warren, MA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP87987/GN22896	JB91741-1	mg/l	62.4	80	143	100.8	80-120%
Chloride	GP87987/GN22896	JB91741-1	mg/l	57.9	80	143	100.8	80-120%
Sulfate	GP87987/GN22994	JB91741-1	mg/l	1210	800	2140	116.3	80-120%

Associated Samples:

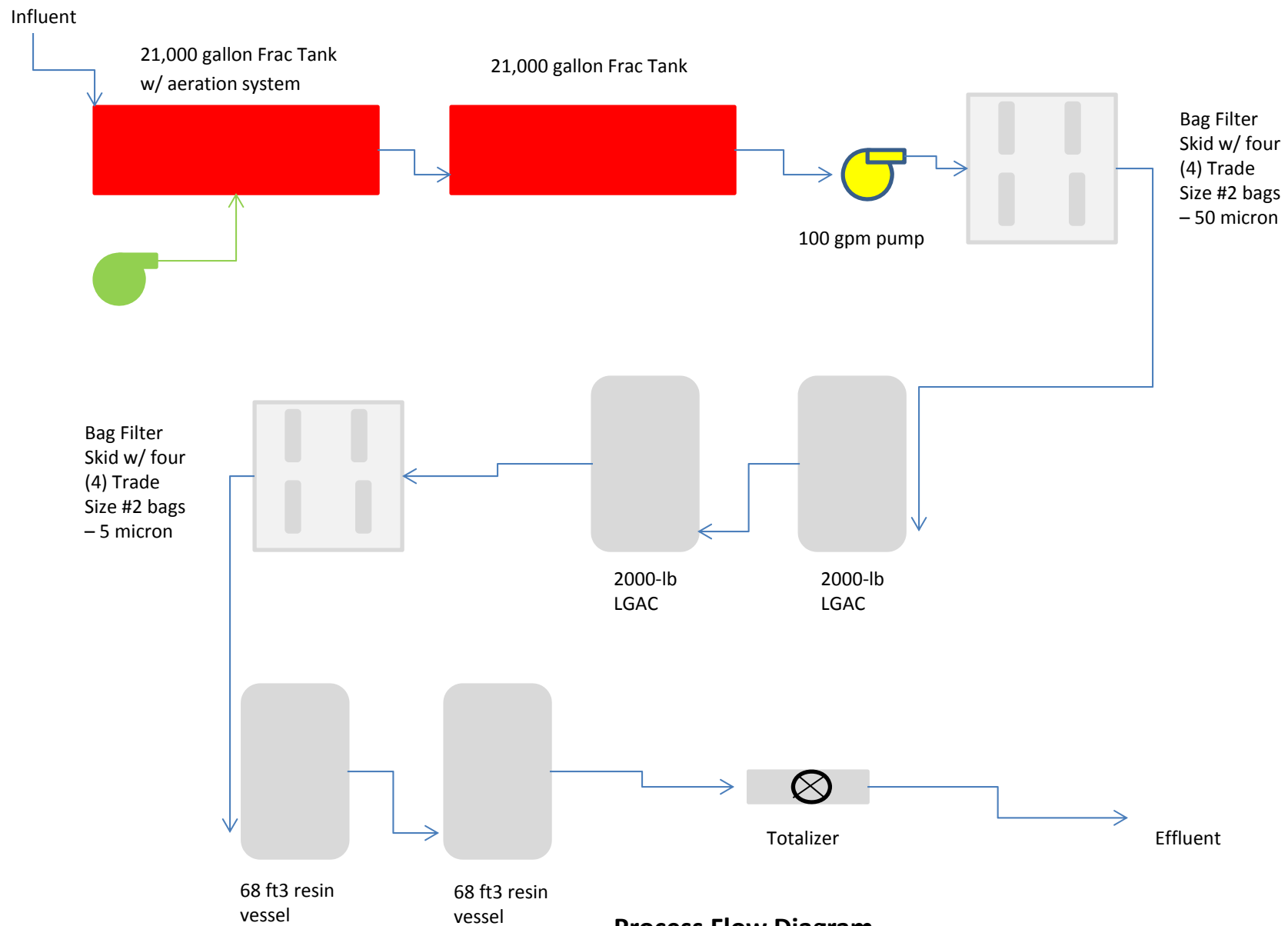
Batch GP87987: MC37806-1, MC37806-2

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



Attachment C

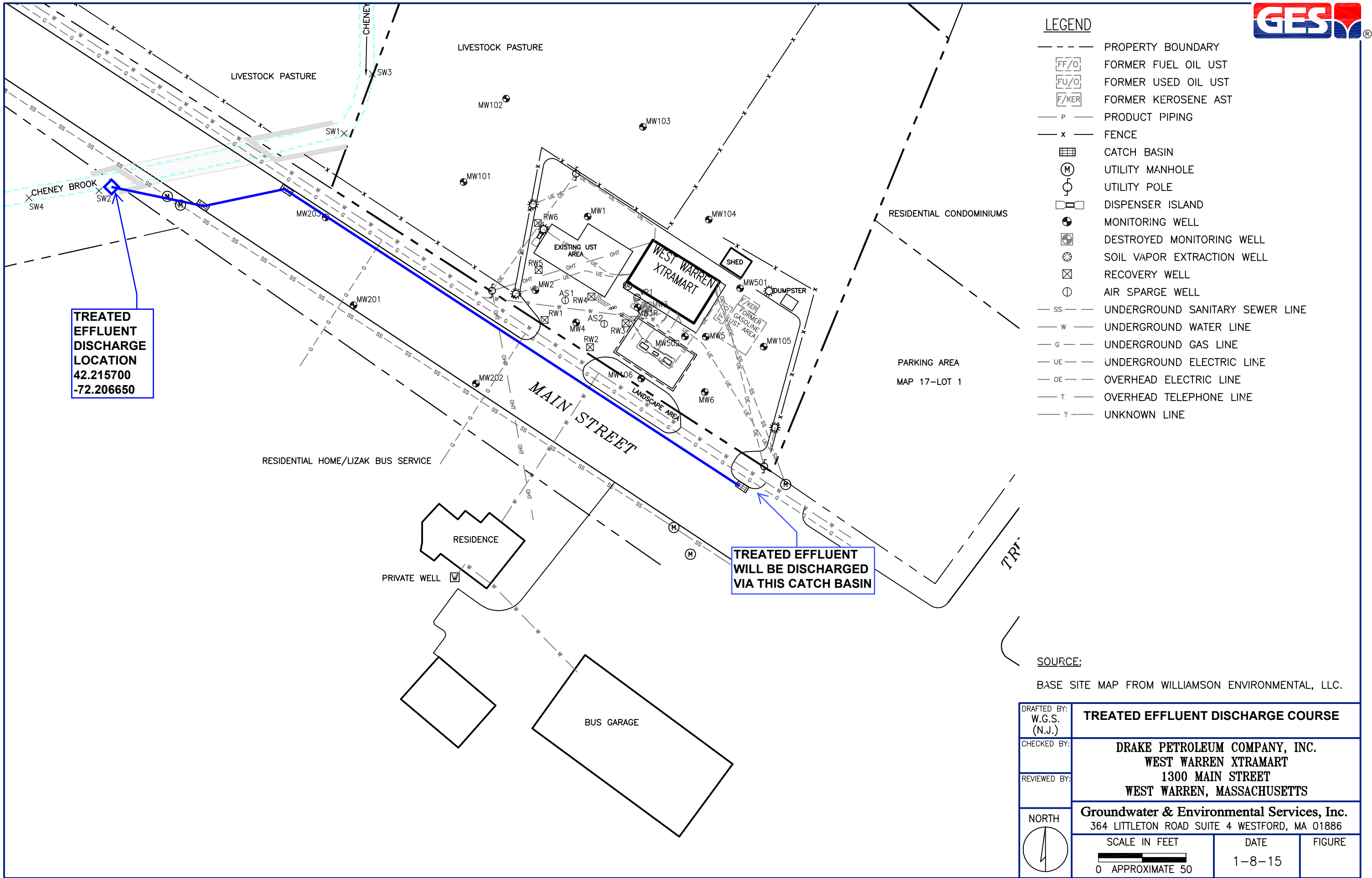


Process Flow Diagram
Drake Petroleum Company, Inc. – West Warren XtraMart
1300 Main Street
West Warren, Massachusetts



Attachment D

M:\Graphics\1600-Westford\Misc\Warren\West Warren SM.dwg, B-50, 1/8/2015 10:47:31 AM, WSIlea





Attachment E

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Warren; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
WRR.A	Warren Cotton Mill #3 Area		Warren	
WRR.B	Saint Thomas Church Area		Warren	
WRR.C	Warren Cotton Mills Area		Warren	
WRR.D	A Street Tenement Area		Warren	
WRR.E	Bacon Street Area		Warren	
WRR.F	East Main Street Area		Warren	
WRR.G	Maple Street Area		Warren	
WRR.H	Moore Avenue Area		Warren	
WRR.I	Warren Town Center		Warren	
WRR.800	Hodges Corner Cemetery	Apple Rd	Warren	1787
WRR.137	Keyes, Danforth House	Bacon St	Warren	r 1875
WRR.138	Keyes, Danforth House	Bacon St	Warren	r 1865
WRR.139	Lincoln, William L. Double House	Bacon St	Warren	r 1865
WRR.140	Western Railroad Depot	Bacon St	Warren	1839
WRR.141	Chadsey, John Wightman House	Bacon St	Warren	r 1865
WRR.142	Stickland, Erasmus Franklin House	Bacon St	Warren	r 1865
WRR.143	Whipple, Moses Kilburn House	Bacon St	Warren	r 1865
WRR.29	Bliss, Elbridge Cutler House	Bemis Rd	Warren	r 1850
WRR.30	Gleason, John Barnes House	Bemis Rd	Warren	c 1816
WRR.31	Bemis, Charles House	Bemis Rd	Warren	c 1845
WRR.32	Tidd, Dea. Samuel House	Bemis Rd	Warren	r 1820
WRR.33	Jones, Priest House	Bemis Rd	Warren	r 1720
WRR.25	Tyler, Abner House	Bragg Rd	Warren	c 1800
WRR.235	Ellis, Stillman House	Bridge St	Warren	r 1850
WRR.901	Boston and Albany Railroad Bridge #73.17	Bridge St	Warren	1926
WRR.20	Alexander, Joseph - Sessions, William H. House	Brimfield Rd	Warren	1833
WRR.21	Sessions, William H. House	Brimfield Rd	Warren	c 1855

Thursday, June 04, 2015

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Inv. No.	Property Name	Street	Town	Year
WRR.900	Brook Road Bridge over Tufts Brook	Brook Rd	Warren	1936
WRR.161	Clark, D. Olin House	Burbank Ave	Warren	r 1885
WRR.162	DeLuce, F. J. House	7 Burbank Ave	Warren	c 1890
WRR.164	Sawyer, E. C. House	14 Burbank Ave	Warren	c 1890
WRR.112	Warren Cotton Mills Worker Housing	9-15 Canada Flats	Warren	r 1890
WRR.88	West Warren Methodist Church	Central St	Warren	1879
WRR.82	Taylor, W. House	Chapel St	Warren	r 1860
WRR.87	Lester, John House	Chapel St	Warren	r 1875
WRR.85	Drood, J. House	19 Chapel St	Warren	r 1875
WRR.83		22-24 Chapel St	Warren	r 1905
WRR.84	Ellis, D. - O'Neil, P. House	23 Chapel St	Warren	r 1865
WRR.121	Lincoln, Col. Warren House	Coy's Hill Rd	Warren	r 1800
WRR.122	Lincoln, William House	Coy's Hill Rd	Warren	r 1845
WRR.123	Bridges, Baxter - Blodgett, Giles House	Coy's Hill Rd	Warren	r 1820
WRR.202	Cowee, William P. House	Crescent St	Warren	r 1830
WRR.203	Knowles Steam Pump Works Worker Housing	17 Crescent St	Warren	r 1885
WRR.23	Hathaway, Richmond House	Cronin Rd	Warren	r 1850
WRR.24	Tyler, David Richards House	Cronin Rd	Warren	1852
WRR.42	Crouch, D. House	Crouch Rd	Warren	c 1850
WRR.916	Milestone, 1767	Cutler Tavern Rd	Warren	1753
WRR.86		Dean St	Warren	r 1900
WRR.36	Bliss, Samuel House	Dunham Rd	Warren	r 1750
WRR.909	Warren Cotton Mills #2 Dam	East Main St	Warren	c 1866
WRR.154	Burbank, Asher Allen House	13 East Main St	Warren	r 1885
WRR.158	Penfield, D. E. Double House	27 East Main St	Warren	r 1890
WRR.159	Penfield, D. E. Three-Decker	31 East Main St	Warren	r 1890
WRR.160	Penfield, D. E. Three-Decker	33 East Main St	Warren	r 1890
WRR.9	Rich, Alexander House	East Rd	Warren	r 1780
WRR.10	Rice, Patten House	East Rd	Warren	c 1832
WRR.11	Keyes, Franklin W. House	East Rd	Warren	r 1850
WRR.12		East Rd	Warren	r 1750
WRR.13	Combs, John Jr. House	East Rd	Warren	c 1799
WRR.14	Warriner, Alfred A. House	East Rd	Warren	1876
WRR.165	Hill, James F. House	East Rd	Warren	r 1895
WRR.169	Bennett, Henry H. House	East Rd	Warren	r 1875
WRR.170	Babbitt, Charles H. House	East Rd	Warren	r 1880
WRR.166	Foskit, Edward L. House	7 East Rd	Warren	r 1905
WRR.167	Warren Village School	9 East Rd	Warren	1872

Inv. No.	Property Name	Street	Town	Year
WRR.168	Forrant, Charles House	20 East Rd	Warren	r 1875
WRR.189	Fairbank, Wilson H. House	Elm St	Warren	r 1885
WRR.190	Warren First Methodist Church Parsonage	Elm St	Warren	c 1890
WRR.191	Curtis, William L. House	Elm St	Warren	c 1890
WRR.27	Tyler, Capt. John House	Forest Ave	Warren	r 1850
WRR.44	Burroughs, David House	Gilbert Rd	Warren	r 1800
WRR.45	Fairbank, Asahel House	Gilbert Rd	Warren	r 1800
WRR.46	Collester House	Gilbert Rd	Warren	r 1800
WRR.906	Crossman Bridge	Gilbert Rd	Warren	1888
WRR.52	Marcy, F. F. House	Grove St	Warren	r 1875
WRR.26	Damon, Thomas House	Hawkes Rd	Warren	r 1750
WRR.231	Hamblett, Charles G. House	2 High St	Warren	r 1875
WRR.232	Nichols, Frank Edwards House	4 High St	Warren	r 1875
WRR.100	Warren Cotton Mills Agent's House	7 High St	Warren	1854
WRR.233	Skerry, William H. House	9 High St	Warren	r 1875
WRR.234	Burt, Charles H. House	11 High St	Warren	c 1879
WRR.99	Warren Cotton Mills Double Worker Housing	8-10 Highland St	Warren	c 1918
WRR.98	Warren Cotton Mills Double Worker Housing	12-14 Highland St	Warren	c 1918
WRR.174	Jones, Thomas H. House	2 Jones St	Warren	r 1880
WRR.175	Jones, Thomas H. House	4 Jones St	Warren	r 1880
WRR.172	Demond, Lottie House	Keyes St	Warren	r 1880
WRR.173	Demond, Lottie House	Keyes St	Warren	r 1880
WRR.186	Buck, Dr. Edgar J. House	Liberty St	Warren	r 1895
WRR.187	Manning, Bridget House	Liberty St	Warren	r 1885
WRR.188	Demond, Lottie E. - Sweeney, John House	11 Liberty St	Warren	r 1885
WRR.28	Gleason, Capt. Isaac House	Little Rest Rd	Warren	r 1775
WRR.255		Lombard St	Warren	r 1890
WRR.256	Lynch, Martin House	1 Lombard St	Warren	r 1885
WRR.51	Crossman, A. W. House	Main St	Warren	c 1855
WRR.54	Brooks, C. B. House	Main St	Warren	r 1860
WRR.55	Crossman, A. W. Edge Tool Factory Worker Housing	Main St	Warren	r 1860
WRR.56	Shehan, William M. House	Main St	Warren	r 1860
WRR.57	Shehan, D. House	Main St	Warren	r 1860
WRR.61	Blair, Royal E. House	Main St	Warren	r 1860
WRR.63	Crossman, A. W. Edge Tool Factory Boarding House	Main St	Warren	c 1853
WRR.71	Crossman, A. W. Block	Main St	Warren	1875

Inv. No.	Property Name	Street	Town	Year
WRR.73	Elwell, Noah House	Main St	Warren	r 1860
WRR.75	Crossman, A. W. General Store and Hall	Main St	Warren	c 1853
WRR.76	U. S. Post Office - West Warren Branch	Main St	Warren	r 1905
WRR.78	West School	Main St	Warren	1888
WRR.97	Marcy, F. F. General Store	Main St	Warren	r 1895
WRR.118	Warren Cotton Mills Double Worker Housing	Main St	Warren	c 1883
WRR.129	Tripp, Benjamin A. Boot Factory	Main St	Warren	c 1868
WRR.132	Warren Hotel - Hotel Ramsdell	Main St	Warren	1886
WRR.133	Bosworth, John - Ramsdell, William B. Block	Main St	Warren	r 1865
WRR.134	Hitchcock, J. F. - Fairbank Block	Main St	Warren	r 1845
WRR.135	Harwood, I. Block	Main St	Warren	r 1865
WRR.136	Blair, Alvah Grocery Store	Main St	Warren	c 1835
WRR.146	Boston and Albany Railroad Depot	Main St	Warren	r 1895
WRR.147	Warren Public Library	Main St	Warren	1889
WRR.148	Fairbank, Wilson H. House	Main St	Warren	r 1865
WRR.149	Fairbank, Asahel Jr. House	Main St	Warren	r 1850
WRR.908	Warren Cotton Mills #3 Dam and Canal	Main St	Warren	c 1874
WRR.910	Warren Cotton Mills #1 Dam	Main St	Warren	c 1854
WRR.912	Warren Civil War Monument	Main St	Warren	1891
WRR.913	Hitchcock, Joseph Field Memorial Drinking Fountain	Main St	Warren	1885
WRR.918	Milestone, 1767	Main St	Warren	1753
WRR.130	Warren Town Hall	1 Main St	Warren	1900
WRR.155	Fairbank, Edward House	15 Main St	Warren	r 1875
WRR.156	Howe, Henry S. House	16 Main St	Warren	r 1880
WRR.157	Towne, H. G. House	18 Main St	Warren	r 1880
WRR.70	Blair, Abner House	50-52 Main St	Warren	r 1820
WRR.72	Warren Cotton Mills Double Worker Housing	51-53 Main St	Warren	r 1875
WRR.69	Warren Cotton Mills Double Worker Housing	54-56 Main St	Warren	r 1860
WRR.68	Warren Cotton Mills Double Worker Housing	58-60 Main St	Warren	r 1860
WRR.67	Warren Cotton Mills Double Worker Housing	62-64 Main St	Warren	r 1875
WRR.74	Elwell, Noah House	71 Main St	Warren	r 1860
WRR.66	Warren Cotton Mills Recreation Hall	80 Main St	Warren	1919
WRR.65	Warren Cotton Mills Worker Housing	86-96 Main St	Warren	r 1875
WRR.64	Warren Cotton Mill Tenement House	98-198 Main St	Warren	r 1875
WRR.77	Chandler, P. F. - O'Neil, Paul House	109 Main St	Warren	r 1865
WRR.62	Warren Cotton Mills Worker Housing	114-116 Main St	Warren	1919
WRR.902	Manning Road Bridge over Quaboag River	Manning Rd	Warren	1935

Inv. No.	Property Name	Street	Town	Year
WRR.131	Ramsdell, William B. Boot Shop	Maple St	Warren	r 1870
WRR.210	Kenney, Sarah E. House	Maple St	Warren	r 1875
WRR.214	Burroughs, Tyler - Blair, Shepard House	Maple St	Warren	r 1780
WRR.217	Cady, W. D. House	Maple St	Warren	r 1840
WRR.218	Cowee, Sullivan House	Maple St	Warren	r 1840
WRR.219	Hutchins, Dr. Cyrus House	Maple St	Warren	r 1800
WRR.220	Lincoln, A. A. House	Maple St	Warren	r 1875
WRR.221	Davis, Enoch House	Maple St	Warren	c 1847
WRR.223	Bacon, Rufus F. - Bliss, Charles House	Maple St	Warren	r 1855
WRR.228	Batchellor, Daniel and David House	Maple St	Warren	r 1800
WRR.230	Boston and Albany Freight Depot	Maple St	Warren	r 1865
WRR.801	Saint Paul's Roman Catholic Cemetery	Maple St	Warren	1877
WRR.802	Pine Grove Cemetery	Maple St	Warren	1746
WRR.227	Janes, T. - Washburn, Charles H. House	24 Maple St	Warren	r 1835
WRR.226	Knowles, Simeon House	26 Maple St	Warren	c 1850
WRR.225	Butterworth, Shubal P. House	28 Maple St	Warren	r 1845
WRR.224	Bosworth, John - Crosby, Lyman House	29 Maple St	Warren	r 1855
WRR.215	Butterworth Brothers House	48 Maple St	Warren	r 1885
WRR.212	Tucker, E. P. House	56 Maple St	Warren	r 1885
WRR.211	Topliff, Dr. John House	59 Maple St	Warren	r 1800
WRR.216	Blair, Shepard House	Mechanic St	Warren	r 1835
WRR.251	DeLaval, George P. House	Moore Ave	Warren	c 1887
WRR.252	Richardson, Mary Moore House	Moore Ave	Warren	r 1885
WRR.257	Lynch, Martin House	Moore Ave	Warren	r 1885
WRR.250	Gardner, C. L. House	12 Moore Ave	Warren	r 1885
WRR.253	Moore, Isaac Elijah House	18 Moore Ave	Warren	1882
WRR.904	Makepeace, Gershom Farm Bridge	Naultaug Brook	Warren	r 1750
WRR.205	Strickland, Arvilla House	2 Nelson St	Warren	r 1875
WRR.206	Strickland, Arvilla House	3 Nelson St	Warren	r 1875
WRR.90	Garion, T. - Stone, M. House	North St	Warren	r 1865
WRR.91	Crossman, A. W. House	North St	Warren	r 1865
WRR.92	Saint Thomas Aquinas Roman Catholic Church	North St	Warren	1872
WRR.93	Saint Thomas Aquinas Roman Catholic School	North St	Warren	r 1905
WRR.94	Elwell Tenement House	North St	Warren	r 1890
WRR.95		North St	Warren	r 1890
WRR.96	Wood, E. J. Block	North St	Warren	r 1890
WRR.89	Foskit, A. H. House	O'Neil Rd	Warren	r 1865
WRR.124	Ward, Helon House	Old West Brookfield	Warren	c 1840

Inv. No.	Property Name	Street	Town	Year
WRR.125	Hathaway, Robert House	Old West Brookfield	Warren	r 1780
WRR.126	Mars, William House	Old West Brookfield	Warren	r 1800
WRR.108	Warren Cotton Mills Double Worker Housing	7-8 Patch St	Warren	c 1864
WRR.109	Warren Cotton Mills Double Worker Housing	22-24 Patch St	Warren	r 1880
WRR.110	Warren Cotton Mills Worker Housing	55-58 Patch St	Warren	r 1905
WRR.111	Warren Cotton Mills Double Worker Housing	80-81 Patch St	Warren	c 1912
WRR.3	Patrick, Matthew House	Patrick Rd	Warren	r 1720
WRR.903	Patrick, Matthew Farm Bridge	Patrick Rd	Warren	c 1750
WRR.192	Smith, Isaac & Samuel - Carpenter, Dr. Nelson Hse	3-3 1/2 Pleasant St	Warren	c 1810
WRR.107	Warren Cotton Mill #2	Polaski St	Warren	1866
WRR.265	Bacon, Theodore F. House	11 Prospect St	Warren	r 1875
WRR.266	Lombard, Russell House	13 Prospect St	Warren	r 1875
WRR.907	Western Railroad Bridge over Quaboag River	Quaboag River	Warren	c 1837
WRR.282	Thurston, Almira - Chandler, Olive House	Quaboag St	Warren	r 1875
WRR.280	Copeland, Alvin House	10 Quaboag St	Warren	r 1850
WRR.287	Wetherbee, J. - Tyler, John Warren House	15 Quaboag St	Warren	r 1865
WRR.286	Copeland, Alvin House	17 Quaboag St	Warren	r 1865
WRR.281	Tupper, B. F. - Pond, Preston H. House	18 Quaboag St	Warren	r 1850
WRR.285	Bosworth, John House	19 Quaboag St	Warren	r 1865
WRR.283	Bartlett, Butler House	29 Quaboag St	Warren	r 1865
WRR.37	Gleason, Charles Edwin House	Reed St	Warren	r 1800
WRR.38	Lawrence, John W. House	Reed St	Warren	r 1895
WRR.39	Reed, Nathaniel House	Reed St	Warren	r 1775
WRR.41	Reed, Waldo House	Reed St	Warren	c 1822
WRR.917	Milestone, 1767	Reed St	Warren	1753
WRR.254	Hannon, James House	Richardson St	Warren	r 1895
WRR.267	Albee, John O. House	Richardson St	Warren	r 1885
WRR.268	Graves, Dwight E. House	3 Richardson St	Warren	r 1885
WRR.127	Holt, Samuel House	River St	Warren	r 1880
WRR.128	Allen, A. House	River St	Warren	r 1830
WRR.1	Dean, John Miller's House	Rt 67	Warren	c 1816
WRR.2	Dean, John Grist Mill and Dam	Rt 67	Warren	c 1764
WRR.6	Makepeace, Gershom House	Rt 67	Warren	c 1790
WRR.915	Milestone, 1767	Rt 67	Warren	1753
WRR.8	Bridges, Jonathan House	Sarty Rd	Warren	c 1801
WRR.58	Moore - Marston Double House	School St	Warren	r 1890
WRR.59	Hall, Willard Double House	School St	Warren	r 1875

Inv. No.	Property Name	Street	Town	Year
WRR.60	Hall, Willard Double House	School St	Warren	r 1875
WRR.269		School St	Warren	r 1895
WRR.273	Hathaway, Daniel A. House	School St	Warren	r 1855
WRR.914	Warren High School Bell	School St	Warren	1885
WRR.276	Hellyar, S. House	5 School St	Warren	r 1865
WRR.275	Tyler - Tripp, Benjamin House	10 School St	Warren	r 1850
WRR.274	Field - Foster, George W. House	12 School St	Warren	r 1850
WRR.272	Drury, Winsor Double House	15 School St	Warren	c 1855
WRR.271	Drury, Winsor House	22-24 School St	Warren	c 1850
WRR.270	Kavanaugh, James House	39 School St	Warren	r 1883
WRR.43	Smith, Almon House	Smith Rd	Warren	c 1825
WRR.102	Warren Cotton Mills Business Office	South St	Warren	c 1918
WRR.103	Warren Cotton Mills Weaving Mill	South St	Warren	1912
WRR.104	Warren Cotton Mill #1	South St	Warren	1880
WRR.105	Warren Cotton Mills Dye House	South St	Warren	r 1860
WRR.113	Brosnan, M. Double House	South St	Warren	r 1885
WRR.114	Welsh, William Double House	South St	Warren	r 1865
WRR.116		South St	Warren	r 1905
WRR.198	Brigham, F. House	South St	Warren	1868
WRR.199	Powers, William L. House	South St	Warren	r 1865
WRR.200	Ward, William M. - Chadsey, William House	South St	Warren	r 1830
WRR.201	Knowles Steam Pump Works Worker Housing	South St	Warren	r 1850
WRR.204	Knowles Steam Pump Works Pump and Boiler House	South St	Warren	c 1874
WRR.207	Knowles Steam Pump Works Office	South St	Warren	c 1830
WRR.208	Comins, C. H. Saw and Planing Mill	South St	Warren	r 1865
WRR.289	Powers, William L. Barn	South St	Warren	r 1865
WRR.115	Warren Cotton Mills Double Worker Housing	52-54 South St	Warren	c 1918
WRR.15	Warren District #9 Schoolhouse	Southbridge Rd	Warren	1846
WRR.16	Lincoln, Warren II House	Southbridge Rd	Warren	r 1820
WRR.17	Burroughs, David House	Southbridge Rd	Warren	c 1826
WRR.18	Gleason, Jason House	Southbridge Rd	Warren	r 1800
WRR.19	Fisk, Samuel L. House	Southbridge Rd	Warren	r 1830
WRR.34	Flannery, Patrick House	Southbridge Rd	Warren	c 1855
WRR.177	Phetteplace, Marble House	Southbridge St	Warren	r 1840
WRR.184	Gilbert, Lucien Willard House	Southbridge St	Warren	r 1865
WRR.185	Buck, Dr. Edgar J. House	Southbridge St	Warren	r 1875
WRR.193	Fairbanks, Edward House	Southbridge St	Warren	r 1885

Inv. No.	Property Name	Street	Town	Year
WRR.194	Hill, James F. Tenement Block	Southbridge St	Warren	r 1885
WRR.195	Davis, James S. House	Southbridge St	Warren	r 1830
WRR.196	Carpenter, Dr. Nelson House	Southbridge St	Warren	r 1850
WRR.197		Southbridge St	Warren	r 1885
WRR.288	Buck, Dr. Edgar J. Dentist Office	Southbridge St	Warren	r 1875
WRR.183	Sawtell, Orris Butterfield House	21 Southbridge St	Warren	r 1850
WRR.181	Whitaker, Almon Double House	26-28 Southbridge St	Warren	r 1840
WRR.182	Whitaker, Almon House	29 Southbridge St	Warren	r 1865
WRR.180	Sessions, William H. House	30 Southbridge St	Warren	r 1850
WRR.179	Weston, C. House	32 Southbridge St	Warren	r 1850
WRR.178	Bliss, Warriner House	34 Southbridge St	Warren	r 1865
WRR.79		Summer St	Warren	r 1905
WRR.80	Benson, William Double House	Summer St	Warren	r 1875
WRR.81		Summer St	Warren	r 1905
WRR.49	Blair, William House	Ware Rd	Warren	r 1720
WRR.53	Crossman, Charles P. House	Ware Rd	Warren	r 1870
WRR.229	Washburn, C. H. Double House	2-4 Washburn Ave	Warren	r 1885
WRR.171	Keyes, Danforth House	Washington St	Warren	r 1865
WRR.176	Batchelder, Sarah House	Washington St	Warren	r 1865
WRR.919	Milestone, 1767	Washington St	Warren	1753
WRR.237	Lincoln, Albert Warren House	West Main St	Warren	r 1865
WRR.240	Powers, Capt. Chester House	West Main St	Warren	r 1775
WRR.244	Field, Joseph - Knowles, Lucius J. House	West Main St	Warren	r 1800
WRR.245	Sayles and Jenks Woolen Mill Worker Housing	West Main St	Warren	r 1885
WRR.247	Sayles and Jenks Woolen Mill Worker Housing	West Main St	Warren	r 1860
WRR.259	Richardson, Nathan House	West Main St	Warren	r 1850
WRR.260	Batchellor, David - Howard, George House	West Main St	Warren	r 1750
WRR.262	Perry, H. - Bliss, A. B. House	West Main St	Warren	c 1850
WRR.263	Bosworth, Henry B. House	West Main St	Warren	r 1855
WRR.264	Warren Firehouse, Old	West Main St	Warren	r 1905
WRR.278	Saint Paul's Roman Catholic Church	West Main St	Warren	1896
WRR.279	Crouch, George H. - Burbank House	West Main St	Warren	c 1850
WRR.905	Crossman, A. W. Edge Tool Factory Dam	West Main St	Warren	r 1865
WRR.911	Warren Cotton Mills #4 Dam and Canal	West Main St	Warren	c 1883
WRR.261	Laecroix, L. - Canfield, H. House	31 West Main St	Warren	c 1850
WRR.258	Richardson, Nathan Double House	51-53 West Main St	Warren	c 1850
WRR.249	Moore, John House	57 West Main St	Warren	c 1850
WRR.248	Richardson, Stephen B. Double House	58-60 West Main St	Warren	r 1855

Inv. No.	Property Name	Street	Town	Year
WRR.246	Moore, Col. Isaac House	68 West Main St	Warren	r 1775
WRR.242	Sibley, S. Harrison Woolen Mill Worker Housing	72 West Main St	Warren	r 1860
WRR.243	Clapp, A. House	74 West Main St	Warren	r 1845
WRR.241	McElhinney, Thomas W. House	76 West Main St	Warren	c 1879
WRR.239	Hill, Washington - Lydon, Bartholomew House	80 West Main St	Warren	c 1830
WRR.238	Blair, James Jr. - Tagan, William House	82 West Main St	Warren	r 1850
WRR.119	Foskit, Dwight House	West Warren Rd	Warren	c 1830
WRR.120	Blair, John House	West Warren Rd	Warren	r 1815
WRR.153	Shumway, G. A. House	Winthrop Terr	Warren	r 1885
WRR.152	Bishop, William H. House	7 Winthrop Terr	Warren	c 1850
WRR.150	Warren First Congregational - Federated Church	25 Winthrop Terr	Warren	1875

