



NHE-10037

July 20, 2006

United States Environmental Protection Agency  
RGP-NOC Processing  
Municipal Assistance Unit (CMU)  
One Congress Street, Suite 1100  
Boston, Massachusetts 02114-2023

**Re: Notice of Intent for Remediation General Permit**  
Mobil Station No. 10341 (formerly 01-MQ5)  
280 Lafayette Road  
Hampton, New Hampshire  
NHDES Site No.199812237

To Whom It May Concern:

On behalf of ExxonMobil Corporation (ExxonMobil), Groundwater and Environmental Services, Inc. (GES) submits this Notice of Intent (NOI) for Remediation General Permit (RGP) for water discharges associated with the operation of a temporary groundwater treatment system at the above-referenced Mobil Station, which is expected to be used during dewatering activities necessary for excavation associated with tank upgrade activities. Please find the RGP NOI application form attached to this letter (Appendix A).

### **Background**

The majority of the Mobil property is developed with a Mobil-On-The-Run convenience store, a self-service gasoline facility, and a Touch Free Car Wash, which were reportedly constructed in 1991 and 1992, respectively. The Mobil station property is located on the Northwestern corner of Lafayette Road and Stickney terrace in the Town of Hampton, New Hampshire. The Mobil station and site vicinity are serviced by municipal water and sanitary sewer, natural gas and municipal storm-water drainage conveyance system systems located in both streets. Most of the Mobil property is paved with some landscaped areas and occupied by a station building, a car wash building, dispenser islands and underground storage tanks (UST). Most of the on site storm-water runoff are connected via catch basins, which discharge to an on-site detention pond, which is located on the southwestern portion of the Mobil property, behind the car wash. This detention pond is discharging to one catch basin (CB-1), which is connected to the municipal storm-water system located within Stickney Terrace. Another catch basin (CB-2) is located on the northeastern portion of the Mobil property and is directly discharging to the municipal storm-water system located within Lafayette Road. A Site Locus Map and a Site Map are attached as Figures 1 and 2 and show relevant site features and utilities in the immediate vicinity of the Mobil property.

The site vicinity is serviced by municipal water, but one private water supply well and few non-public production wells located within 1,000 feet of the Mobil property. In addition, a wetland area, which received storm-water from Stickney Terrace and other properties in the vicinity, is located approximately 500 feet west of the Mobil property on the western side of the railroad track as indicated on the attached Site Vicinity Map-Figure 3. This wetlands area is connected to an intermittent stream, which discharge to Drakes River, which ultimately discharge to the wetland area associated with the Taylor River.

Since 2003, environmental investigations have been performed under the New Hampshire Department of Environmental Services (NHDES) in response to identified petroleum impacts in soil and groundwater at the Mobil property. A summary of historical groundwater data is included as Table 1.

### **Purpose**

The purpose of this NPDES Remediation General Permit request is to obtain permission to discharge treated groundwater pumped from the excavated UST area to allow for tank and dispenser upgrade activities, includes installation of new product pipelines, and installation of new UST sumps and tank top manholes. Dewatering of the excavations is necessary to conduct the upgrade activities because the water table at the Mobil Station is relatively shallow and reportedly observed at approximately 2 to 5 feet below grade surface.

Treated groundwater is proposed to be discharged to one or two of the above referenced on-site or local catch basins designated as CB-1 and CB-2, respectively on the attached Site Map. The approximately locations of the two storm-water conveyance systems are shown on the attached site vicinity map:

- CB-1, which is located along on the Mobil property on the northeast side along the eastern landscaped area. CB-1 is discharging to a 12-inch diameter pipe , which discharges to the municipal storm-water system located within Lafayette Road. Based on conversations with the Town of Hampton Public Works Department and review of available utility site plans, this storm-water drainage conveyance system is flowing to the south towards Lafayette Park Avenue and then discharges into a wetland marsh by the Hampton High School, which is located approximately 3,000 feet from the Mobil property and then into the Taylor River, which is located approximately 1.0 mile south of the Mobil property;
- CB-2, which is located within Stickney Terrace and is discharging to a series of 12-inch diameter discharge pipes, which are flowing in a northern direction through an easement and then in a western direction beneath the railroad track and ultimately discharge to a wetland area. The wetland area is located approximately 500 feet west of the Mobil property and ultimately discharge to the Drakes River and then the Taylor River and their associated wetlands, which are located approximately 3,000 feet and 1.2 miles southwest of the Mobil property.

The above receiving wetland areas have a drainage area of approximately two square miles based on the USGS Topographic Map of the Exeter Quadrangle. Based on the USGS Map these wetland areas south and ultimately discharges to Drake and Taylor River, which according to NHDES are classified as Class B Waterway. Furthermore, according to NHDES and as documented in Appendix E, portion of the Taylor River, downstream of the proposed discharge locations are listed as "Listed 303(D) Water Quality Impaired or Limited Water".

### **Groundwater Treatment System Description**

Since dewatering activities were anticipated to occur primarily in the area of the UST grave, GES collected groundwater samples from the three tank pad monitoring wells (MW-B, MW-C, and MW-D) on May 25, 2006 to aid in the design of the temporary groundwater treatment system, and to obtain base line data on constituents required for the submittal of this NOI but not previously tested for during semi-annual groundwater sampling monitoring conducted at the site, with the most recent events conducted in October 2005 and April 2006.

The temporary groundwater treatment system was designed based upon results of the groundwater sample analytical data described above, the results of a short-term pilot test performed at the site in April 2006 in the vicinity of the USTs and anticipated construction and de-watering activities.

As indicated on Process & Instrumentation Diagram presented in Figure 5 and the Flow diagram included in Appendix D, the proposed temporary groundwater treatment system will consist of the following components plumbed in series: four 20,000-gallon fractionation/storage tanks, one diesel transfer pump, sediment filtration including particulate filter and /or sand filter vessel, and liquid granular activated carbon (LGAC) adsorbers, and a discharge flow-meter/totalizer. Groundwater will be pumped from the UST area groundwater recovery wells, and/or from existing groundwater monitoring wells into the fractionation/storage tank(s). From the fractionation/storage tank(s), groundwater will be pumped through a sand media filter and/or bag filters (sediment filtration) into the LGAC adsorbers. Based on the carbon consumption presented further below, GES estimates that two trains of a minimum of three 2,000 pounds (lbs) LGAC adsorbers in series will be used for treatment. Breakthrough at the second mid point, between the second and third LGAC adsorbers, is expected after the fourth day of operation, therefore, a spare set of treatment carbon vessels will be on site so that they may be transferred to while the previously used vessels can be changed. Following treatment through the LGAC adsorbers, groundwater will discharge to one of two above-referenced storm water catch basins.

Based on available data, the proposed temporary groundwater treatment system maximum discharge flow rate is not expected to exceed 100 gallons per minute (gpm), which represent approximately 6 % of the capacity of the existing receiving storm-water system. The operation of the temporary groundwater treatment system is expected to operate for a period of ten to fifteen days during tank top upgrade activities starting in mid August 2006 and to be operated only during the day (approximately 10 to 12 hours per day) and not during the night.

## Contaminant Information and RGP Sub-Categories:

According to historical analytical data from environmental investigations conducted under NHDES oversight, the recent baseline NOI sampling analytical data, the groundwater beneath the site is known to mostly contain gasoline constituents such as benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tertiary butyl ether (MTBE), tertiary Buthyl Alcohol (TBA), Tertiary-Amyl Methyl Ether (TAME), naphthalene, and total petroleum hydrocarbons (TPH). However, during review of the system influent baseline sampling analytical data, GES noted the concentrations of few Group II Polycyclic Aromatic Hydrocarbons (PAHs) and few metals such as arsenic, cadmium, zinc and iron exceed the current RGP discharge limits. At this time, it is unclear if these metals and PAHs concentrations are attributed to natural background conditions, site history and backfill material and/or heavier fuel oil release.

Based on the sampling data generated as part of this NOI, GES' professional opinion is that the subject discharge can be classified mainly as RGP Subcategory IA (Gasoline Only site) and at lesser extent RGP Subcategory IB (Fuel Oil and other Oils site).

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

- The maximum design flow of the groundwater treatment system is 100 gpm.
- The average total flow was estimated at 85 gpm.
- To determine the maximum and average daily concentrations, GES used data from the last two semi-annual sampling events conducted in October 2005 and April 2006 and/or the RGP NOI baseline May 2006 sample for constituents not previously analyzed from three tank pad wells MW-B, MW-C, and MW-D.
- To determine the maximum and the average daily mass, GES used the daily concentrations and then calculated the daily mass by converting the concentrations with following formulas:
  - Daily Mass (kg/day) = Flow (L/day) x Concentration ( $\mu\text{g/L}$ ) x  $10\text{E-}9$  kg/ $\mu\text{g}$ .
  - Mass (kg/day) = Flow (gpm) x Concentration ( $\mu\text{g/L}$ ) x  $5.44 \text{E-}6$ , using 100 gpm for maximum flow and 85 gpm for average flow.
- To determine the size of amount of carbon to be used for treatment, GES contacted the one of ExxonMobil's carbon vendor, which used the average concentrations presented in the NOI, the maximum flow of 100 gpm and a safety factor of 1.75. As presented in Appendix F, based on these assumptions, approximately 4,000 pounds of carbon will be used per day.

Because metals are believed to be present at the site, calculations to determine dilution factors (DF) and the reasonable potential to exceed discharge limits for each metal of concern are necessary under the RGP requirements. To determine the dilution factor for the receiving waters, the RGP recommends using the closest river or stream gauging station data to determine the annual minimum flow for 7 consecutive days with a recurrence interval of 10 years (7Q10), and then calculate the DF based on the treatment system maximum flow. However, because the proposed discharges will, after going through the local storm-water drainage system, discharge to large wetland areas before discharging to the Taylor River and because the closest gauging



stations downstream on the Taylor River was considered to be too far to be representative of receiving water conditions, GES used previous assumptions recommended by USEPA throughout the submittal of similar previous RGP NOI. Therefore, given the subject receiving wetland drainage areas of approximately 2.0 square miles and the nature of the subject receiving wetlands, the DF for the discharge from the proposed temporally de-watering treatment system has been conservatively estimated to be essentially zero (0). Based on the relative low concentrations of metal in the untreated samples, GES believes that the proposed temporary groundwater treatment, essentially designed to treat petroleum constituents should reduce the metal concentrations to levels below the applicable EPA Discharge Limits through filtration via different media without actual metal treatment. However, because of the type of system and the fact the system is for temporary use, the system may not be able to continuously meet the metal discharge limits for the 10 to 15 days of the proposed operation. According to recent conversation with Mr. Papadopoulos of USEPA, it is GES' understanding that USEPA is likely to allow a compliance period given the predominance of some metals in groundwater throughout New England and the fact that the proposed system will be operating for less than a month.

### **Proposed Environmental Monitoring Plan**

Following EPA issuance of the RGP Permit, the notification, applicable approval from local agencies for discharge and the preparation of a site-specific Best Management Practices (BMP) Plan, GES will start-up system and implement compliance monitoring and sampling in accordance with the applicable RGP monitoring requirements for both categories "Gasoline Only Sites and "Fuel Oil sites."

GES personnel will conduct operation and maintenance (O&M) inspections of the temporary groundwater treatment system during each day of operation to ensure that the system is operating properly and in accordance with the Remediation General Permit. Monitoring will consist of monitoring flow rate, field screening for temperature and pH and submitting water samples from the influent, the midpoints between the LGAC vessels, and the effluent from the treatment system for laboratory analysis according to the terms in the RGP and the RGP applicable requirements. Sampling will occur on the first, second, and third day of operation at start-up and at minimum weekly hereafter for the remaining month. Recordkeeping, reporting will be performed in accordance to the applicable RGP requirements.

If you have any questions regarding this submittal, please feel free to contact the undersigned at (978) 392-0090.

Sincerely,  
GROUNDWATER & ENVIRONMENTAL SERVICES, INC.

Keith R. Parker  
Associate Engineer

Mike Decoteau  
Project Engineer



Christophe M. Henry, PE  
Senior Project Manager

Attachments:

- Figure 1 Site Locus Map
- Figure 2 Site Map
- Figure 3 Site Vicinity Map
- Figure 4 Town Of Hampton- Abutter List Map
- Figure 5 Process & Instrumentation Diagram Dewatering Treatment System
- Figure 6 Process & Instrumentation Legend
  
- Table 1 Groundwater Treatment Analytical Data Summary Table (2/03-4/06)
  
- Appendix A Remedial General Permit Notice of Intent Form
- Appendix B Copy of NOI Baseline tank pad wells Analytical Report (5/23/06)
- Appendix C Copy Groundwater semi-annual sampling Analytical Reports (10/27/05, 4/07/06)
- Appendix D Process Flow Diagram
- Appendix E Listed 303(d) Water Quality Impaired Water or Limited Water
- Appendix F Carbon Consumption Calculations
  
- C: ExxonMobil File  
NHDES-Water Division- Wastewater Engineering Bureau  
Hampton Department of Public Work

Client GES Westford (10136)  
 364 Littleton Road, Suite 4  
 Westford, MA 01886  
 Attn Keri Fitzpatrick

Work Order: NPE3431  
 Project Name: Exxon 01-MQ5  
 Project Number: Exxon 01-MQ5  
 Received: 05/25/06 07:50

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPE3431-01 (MW D - Water) Sampled: 05/23/06 10:10</b>								
General Chemistry Parameters								
Chromium (VI)	ND	H3	mg/L	0.0100	1	05/26/06 01:56	SM 3500Cr D	6055198
Cyanide	ND		mg/L	0.0050	1	06/05/06 09:27	EPA 335.3	6060442
Oil & Grease HEM	ND		mg/L	5.21	1	05/29/06 10:16	EPA 1664A	6055270
Residual Chlorine	ND	HTI	mg/L	0.0200	1	05/25/06 15:29	EPA 330.5	6055161
Total Suspended Solids	45.5		mg/L	9.09	1	05/25/06 17:32	EPA 160.2	6055208
Chromium, Trivalent	ND		mg/L	0.0150	1	05/26/06 13:16	SM 3500CrD	[CALC]

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Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPE3431-01 (MW D - Water) - cont. Sampled: 05/23/06 10:10</b>									
Total Metals by EPA Method 200.7									
Aluminum	0.0344	J	mg/L	0.0230	0.100	1	05/26/06 13:16	EPA 200.7	6055129
Antimony	ND		mg/L	0.00530	0.0100	1	05/26/06 13:16	EPA 200.7	6055129
Arsenic	0.0179		mg/L	0.00460	0.0100	1	05/26/06 13:16	EPA 200.7	6055129
Barium	0.0665		mg/L	0.00100	0.0100	1	05/26/06 13:16	EPA 200.7	6055129
Beryllium	ND		mg/L	0.00100	0.00400	1	05/26/06 13:16	EPA 200.7	6055129
Cadmium	0.00110		mg/L	0.000400	0.00100	1	05/26/06 13:16	EPA 200.7	6055129
Calcium	49.6		mg/L	0.0110	1.00	1	05/26/06 13:16	EPA 200.7	6055129
Chromium	ND		mg/L	0.00150	0.00500	1	05/26/06 13:16	EPA 200.7	6055129
Cobalt	ND		mg/L	0.00270	0.0200	1	05/26/06 13:16	EPA 200.7	6055129
Copper	ND		mg/L	0.00530	0.0100	1	05/26/06 13:16	EPA 200.7	6055129
Iron	43.1		mg/L	0.0320	0.0500	1	05/26/06 13:16	EPA 200.7	6055129
Lead	ND		mg/L	0.00270	0.00500	1	05/26/06 13:16	EPA 200.7	6055129
Magnesium	6.84		mg/L	0.0160	1.00	1	05/26/06 13:16	EPA 200.7	6055129
Manganese	1.21		mg/L	0.00100	0.0150	1	05/26/06 13:16	EPA 200.7	6055129
Nickel	ND		mg/L	0.00170	0.0100	1	05/26/06 13:16	EPA 200.7	6055129
Potassium	10.6		mg/L	0.198	1.00	1	05/26/06 13:16	EPA 200.7	6055129
Selenium	ND		mg/L	0.00820	0.0100	1	05/26/06 13:16	EPA 200.7	6055129
Silver	ND		mg/L	0.00190	0.00500	1	05/26/06 13:16	EPA 200.7	6055129
Sodium	139		mg/L	4.91	10.0	10	05/26/06 14:26	EPA 200.7	6055129
Thallium	ND		mg/L	0.00740	0.0100	1	05/26/06 13:16	EPA 200.7	6055129
Vanadium	0.00150	J	mg/L	0.00130	0.0200	1	05/26/06 13:16	EPA 200.7	6055129
Zinc	ND		mg/L	0.00170	0.0500	1	05/26/06 13:16	EPA 200.7	6055129
Mercury by EPA 245.1									
Mercury	ND		mg/L	0.000100	0.000200	1	05/26/06 15:38	EPA 245.1	6055348

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<b>Sample ID: NPE3431-01 (MW D - Water) - cont. Sampled: 05/23/06 10:10</b>								
EDB and DBCP by EPA Method 504.1								
1,2-Dibromoethane (EDB)	ND		ug/L	0.02000	1	05/30/06 21:21	EPA 504.1	6055910
<i>Surr: 1,3-Dichlorobenzene (68-134%)</i>	122 %					05/30/06 21:21	EPA 504.1	6055910
Organochlorine Pesticides and/or PCBs by EPA Method 608								
PCB-1016	ND		ug/L	1.00	1	05/30/06 14:02	EPA 608	6055577
PCB-1221	ND		ug/L	1.00	1	05/30/06 14:02	EPA 608	6055577
PCB-1232	ND		ug/L	1.00	1	05/30/06 14:02	EPA 608	6055577
PCB-1242	ND		ug/L	1.00	1	05/30/06 14:02	EPA 608	6055577
PCB-1248	ND		ug/L	1.00	1	05/30/06 14:02	EPA 608	6055577
PCB-1254	ND		ug/L	1.00	1	05/30/06 14:02	EPA 608	6055577
PCB-1260	ND		ug/L	1.00	1	05/30/06 14:02	EPA 608	6055577
PCB-1262	ND		ug/L	1.00	1	05/30/06 14:02	EPA 608	6055577
PCB-1268	ND		ug/L	1.00	1	05/30/06 14:02	EPA 608	6055577
<i>Surr: Tetrachloro-meta-xylene (44-131%)</i>	111 %					05/30/06 14:02	EPA 608	6055577
<i>Surr: Decachlorobiphenyl (24-110%)</i>	102 %					05/30/06 14:02	EPA 608	6055577
Polynuclear Aromatic Hydrocarbons by EPA Method 610 (HPLC)								
1-Methylnaphthalene	90.7	R1	ug/L	5.00	5	06/03/06 06:33	EPA 610	6055261
2-Methylnaphthalene	311		ug/L	20.0	20	06/03/06 07:24	EPA 610	6055261
Acenaphthene	91.4	R1	ug/L	5.00	5	06/03/06 06:33	EPA 610	6055261
Acenaphthylene	66.5		ug/L	5.00	5	06/03/06 06:33	EPA 610	6055261
Anthracene	ND		ug/L	1.00	1	06/03/06 06:08	EPA 610	6055261
Benzo (a) anthracene	ND		ug/L	0.200	1	06/03/06 06:08	EPA 610	6055261
Benzo (a) pyrene	0.102		ug/L	0.100	1	06/03/06 06:08	EPA 610	6055261
Benzo (b) fluoranthene	ND		ug/L	0.100	1	06/03/06 06:08	EPA 610	6055261
Benzo (g,h,i) perylene	ND		ug/L	0.200	1	06/03/06 06:08	EPA 610	6055261
Benzo (k) fluoranthene	ND		ug/L	0.140	1	06/03/06 06:08	EPA 610	6055261
Chrysene	ND		ug/L	0.100	1	06/03/06 06:08	EPA 610	6055261
Dibenz (a,h) anthracene	ND		ug/L	0.200	1	06/03/06 06:08	EPA 610	6055261
Fluoranthene	0.331		ug/L	0.200	1	06/03/06 06:08	EPA 610	6055261
Fluorene	13.6	R1	ug/L	0.500	1	06/03/06 06:08	EPA 610	6055261
Indeno (1,2,3-cd) pyrene	ND		ug/L	0.200	1	06/03/06 06:08	EPA 610	6055261
Naphthalene	217		ug/L	20.0	20	06/03/06 07:24	EPA 610	6055261
Phenanthrene	29.1	R1	ug/L	2.50	5	06/03/06 06:33	EPA 610	6055261
Pyrene	ND		ug/L	0.200	1	06/03/06 06:08	EPA 610	6055261
<i>Surr: p-Terphenyl (55-122%)</i>	198 %	ZX				06/03/06 06:08	EPA 610	6055261
Purgeable Organic Compounds by EPA Method 624								
Acrolein	ND		ug/L	50.0	1	06/02/06 19:09	EPA 624	6060406
Acrylonitrile	ND		ug/L	10.0	1	05/30/06 15:39	EPA 624	6056130
Benzene	31.6		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
Bromodichloromethane	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
Bromoform	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
Bromomethane	ND		ug/L	2.00	1	05/30/06 15:39	EPA 624	6056130
Carbon Tetrachloride	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130

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<b>Sample ID: NPE3431-01 (MW D - Water) - cont. Sampled: 05/23/06 10:10</b>								
Purgeable Organic Compounds by EPA Method 624 - cont.								
Chlorobenzene	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
Chlorodibromomethane	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
Chloroethane	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
Chloroform	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
Chloromethane	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
1,2-Dichlorobenzene	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
1,4-Dichlorobenzene	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
1,3-Dichlorobenzene	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
Dichlorodifluoromethane	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
1,2-Dichloroethane	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
1,1-Dichloroethane	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
cis-1,2-Dichloroethene	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
trans-1,2-Dichloroethene	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
1,1-Dichloroethene	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
1,2-Dichloropropane	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
cis-1,3-Dichloropropene	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
trans-1,3-Dichloropropene	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
1,4-Dioxane	ND		ug/L	100	1	05/30/06 15:39	EPA 624	6056130
Ethylbenzene	677		ug/L	20.0	20	06/01/06 21:39	EPA 624	6055718
Methylene Chloride	15.6		ug/L	5.00	1	05/30/06 15:39	EPA 624	6056130
1,1,2,2-Tetrachloroethane	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
Tetrachloroethene	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
Toluene	123		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
1,1,2-Trichloroethane	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
1,1,1-Trichloroethane	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
Trichloroethene	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
Trichlorofluoromethane	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
Vinyl chloride	ND		ug/L	1.00	1	05/30/06 15:39	EPA 624	6056130
Xylenes, total	2210		ug/L	40.0	20	06/01/06 21:39	EPA 624	6055718
Surr: 1,2-Dichloroethane-d4 (81-126%)	123 %					05/30/06 15:39	EPA 624	6056130
Surr: 1,2-Dichloroethane-d4 (81-126%)	114 %					06/01/06 21:39	EPA 624	6055718
Surr: 1,2-Dichloroethane-d4 (81-126%)	94 %					06/02/06 19:09	EPA 624	6060406
Surr: Dibromofluoromethane (88-120%)	106 %					05/30/06 15:39	EPA 624	6056130
Surr: Dibromofluoromethane (88-120%)	108 %					06/01/06 21:39	EPA 624	6055718
Surr: Dibromofluoromethane (88-120%)	102 %					06/02/06 19:09	EPA 624	6060406
Surr: Toluene-d8 (85-130%)	84 %	Z10				05/30/06 15:39	EPA 624	6056130
Surr: Toluene-d8 (85-130%)	97 %					06/01/06 21:39	EPA 624	6055718
Surr: Toluene-d8 (85-130%)	97 %					06/02/06 19:09	EPA 624	6060406
Surr: 4-Bromofluorobenzene (80-124%)	105 %					05/30/06 15:39	EPA 624	6056130
Surr: 4-Bromofluorobenzene (80-124%)	100 %					06/01/06 21:39	EPA 624	6055718
Surr: 4-Bromofluorobenzene (80-124%)	102 %					06/02/06 19:09	EPA 624	6060406
Acid and Base/Neutral Extractables by EPA Method 625								
Acenaphthene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Acenaphthylene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575

Client GES Westford (10136)  
 364 Littleton Road, Suite 4  
 Westford, MA 01886  
 Attn Keri Fitzpatrick

Work Order: NPE3431  
 Project Name: Exxon 01-MQ5  
 Project Number: Exxon 01-MQ5  
 Received: 05/25/06 07:50

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPE3431-01 (MW D - Water) - cont. Sampled: 05/23/06 10:10</b>								
Acid and Base/Neutral Extractables by EPA Method 625 - cont.								
Anthracene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Benzo (a) anthracene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Benzo (a) pyrene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Benzo (b) fluoranthene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Benzo (g,h,i) perylene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Benzo (k) fluoranthene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
4-Bromophenyl phenyl ether	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Butyl benzyl phthalate	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
4-Chloro-3-methylphenol	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Bis(2-chloroethoxy)methane	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Bis(2-chloroethyl)ether	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Bis(2-chloroisopropyl)ether	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
2-Chloronaphthalene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
2-Chlorophenol	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
4-Chlorophenyl phenyl ether	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Chrysene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Dibenz (a,h) anthracene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Di-n-butyl phthalate	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
1,3-Dichlorobenzene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
1,4-Dichlorobenzene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
1,2-Dichlorobenzene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
3,3'-Dichlorobenzidine	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
2,4-Dichlorophenol	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Diethyl phthalate	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
2,4-Dimethylphenol	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Dimethyl phthalate	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
4,6-Dinitro-2-methylphenol	ND		ug/L	25.0	1	05/28/06 14:54	EPA 625	6055575
2,4-Dinitrophenol	ND		ug/L	25.0	1	05/28/06 14:54	EPA 625	6055575
2,6-Dinitrotoluene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
2,4-Dinitrotoluene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Di-n-octyl phthalate	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Bis(2-ethylhexyl)phthalate	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Fluoranthene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Fluorene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Hexachlorobenzene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Hexachlorobutadiene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Hexachlorocyclopentadiene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Hexachloroethane	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Indeno (1,2,3-cd) pyrene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Isophorone	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Naphthalene	219		ug/L	50.0	5	05/28/06 18:42	EPA 625	6055575
Nitrobenzene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
2-Nitrophenol	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575

Client GES Westford (10136)  
 364 Littleton Road, Suite 4  
 Westford, MA 01886  
 Attn Keri Fitzpatrick

Work Order: NPE3431  
 Project Name: Exxon 01-MQ5  
 Project Number: Exxon 01-MQ5  
 Received: 05/25/06 07:50

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPE3431-01 (MW D - Water) - cont. Sampled: 05/23/06 10:10</b>								
Acid and Base/Neutral Extractables by EPA Method 625 - cont.								
4-Nitrophenol	ND		ug/L	25.0	1	05/28/06 14:54	EPA 625	6055575
N-Nitrosodimethylamine	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
N-Nitrosodiphenylamine	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
N-Nitrosodi-n-propylamine	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Pentachlorophenol	ND		ug/L	25.0	1	05/28/06 14:54	EPA 625	6055575
Phenanthrene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Phenol	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Pyrene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
1,2,4-Trichlorobenzene	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
2,4,6-Trichlorophenol	ND		ug/L	10.0	1	05/28/06 14:54	EPA 625	6055575
Surr: Terphenyl-d14 (34-116%)	92 %					05/28/06 14:54	EPA 625	6055575
Surr: 2,4,6-Tribromophenol (16-130%)	98 %					05/28/06 14:54	EPA 625	6055575
Surr: Phenol-d5 (10-66%)	34 %					05/28/06 14:54	EPA 625	6055575
Surr: 2-Fluorobiphenyl (32-99%)	81 %					05/28/06 14:54	EPA 625	6055575
Surr: 2-Fluorophenol (10-81%)	45 %					05/28/06 14:54	EPA 625	6055575
Surr: Nitrobenzene-d5 (19-116%)	60 %					05/28/06 14:54	EPA 625	6055575
Extractable Petroleum Hydrocarbons								
Diesel	4660		ug/L	190	2	05/30/06 07:19	SW846 8015B	6055318
Surr: o-Terphenyl (55-150%)	98 %					05/30/06 07:19	SW846 8015B	6055318
Purgeable Petroleum Hydrocarbons								
GRO as Gasoline	17900		ug/L	1000	10	06/05/06 04:54	SW846 8015B	6060764
Surr: a,a,a-Trifluorotoluene (63-134%)	101 %					06/05/06 04:54	SW846 8015B	6060764

### Sample ID: NPE3431-02 (MW C - Water) Sampled: 05/23/06 11:15

#### General Chemistry Parameters

Chromium (VI)	ND	H3	mg/L	0.0100	1	05/26/06 01:57	SM 3500Cr D	6055198
Cyanide	ND		mg/L	0.0050	1	06/05/06 09:27	EPA 335.3	6060442
Oil & Grease HEM	ND		mg/L	5.21	1	05/29/06 10:16	EPA 1664A	6055270
Residual Chlorine	ND	HTI	mg/L	0.0200	1	05/25/06 15:29	EPA 330.5	6055161
Total Suspended Solids	58.2		mg/L	5.88	1	05/25/06 17:32	EPA 160.2	6055208
Chromium, Trivalent	ND		mg/L	0.0150	1	05/26/06 13:21	SM 3500CrD	[CALC]

**Form for Notice of Intent (NOI) for the Remediation General Permit**

a) Name of <b>facility/site</b> : Mobil Service Station 01-MQ5 Hampton, NH		<b>Facility/site address:</b>	
Location of <b>facility/site</b> : longitude: <u>-70°50'18"</u> latitude: <u>42°56'09"</u>	Facility SIC code(s): 5541	Street: 280 Lafayette Road	
b) Name of <b>facility/site owner</b> : <b>Exxon Mobil Corporation</b>		Town: Hampton	
Email address of owner: david.j.baker@exxonmobil.com		State: New Hampshire	Zip: 03842 County: Rockingham
Telephone no. of facility/site <b>owner</b> : (617) 381-2807			
Fax no. of facility/site <b>owner</b> : (262) 313-1820		<b>Owner</b> is (check one): 1. Federal ___ 2. State/Tribal ___ 3. Private <u>X</u> ___	
Address of <b>owner</b> (if different from site):		4. other, if so, describe:	
Street: 52 Beacham Street			
Town: Everett	State: MA	Zip: 02149	County: Middlesex
c) Legal name of <b>operator</b> :		<b>Operator</b> telephone no: (978) 392-0090	
Groundwater and Environmental Services, Inc		<b>Operator</b> fax no.: (978) 392-8583	<b>Operator</b> email: MDecoteau@gesonline.com
<b>Operator</b> contact name and title: Mike Decoteau, Project Engineer/ Keith Parker, Associate Engineer/ Christophe Henry, Senior Project Engineer			
Address of <b>operator</b> (if different from owner):		Street: 364 Littleton Road	
Town: Westford	State: MA	Zip: 01886	County: Middlesex
d) Check "yes" or "no" for the following:			
1. Has a prior NPDES permit exclusion been granted for the discharge? Yes__ No X , if "yes," number:			
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes__ No X, if "yes," date and tracking #:			
3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes X No__			
4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes__ No X			

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

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

<p>a) Describe the discharge activities for which the owner/applicant is seeking coverage: The discharge system will be a temporary dewatering system while excavation of the tank field and connecting piping is excavated. The purpose will be to lower the water table to 6 feet below ground level in order for workers to properly perform work. The system will consist of four 20,000 gallon frac tanks in series, sand filter, bag filters, and at least 2 sets of 3 X 2,000 pound liquid phase granular activated carbon units placed in series.</p>	
<p>b) Provide the following information about each discharge:</p>	<p>1) Number of discharge points: 2</p> <p>2) What is the <b>maximum and average flow rate</b> of discharge (in cubic feet per second, ft<sup>3</sup>/s)? Max. flow 100 gpm (0.22 ft<sup>3</sup>/s) Average flow <u>85 gpm (0.18 ft<sup>3</sup>/s)</u> Is maximum flow a <b>design value</b>? Y <u>X</u> N ___ For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.</p> <p>Average flow is based on the amount of water expected to be generated during the proposed de-watering activities.</p>
<p>3) Latitude and longitude of each discharge within 100 feet: pt.1:long. <u>-70°50'18"</u> lat. <u>42°56'09"</u>; pt.2: long. ___ lat. ___; pt.3: long. ___ lat. ___; pt.4:long. ___ lat. ___; pt.5: long. ___ lat. ___; pt.6:long. ___ lat. ___; pt.7: long. ___ lat. ___; pt.8:long. ___ lat. ___; etc.</p>	
<p>4) If hydrostatic testing, total volume of the discharge (gals): N/A</p>	<p>5) Is the discharge intermittent <u>X</u> or seasonal ___? Is discharge ongoing Yes ___ No <u>X</u>?</p>
<p>c) Expected dates of discharge (mm/dd/yy): start <u>8/14/06</u> end <u>9/1/06</u></p>	
<p>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).</p>	

**3. Contaminant information.** In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for **all** of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to:

- i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E");
- ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or
- iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

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

<input checked="" type="checkbox"/> Gasoline Only	<input type="checkbox"/> VOC Only	<input type="checkbox"/> Primarily Metals	<input type="checkbox"/> Urban Fill Sites	<input type="checkbox"/> Contaminated Sumps	<input type="checkbox"/> Mixed Contaminants	<input type="checkbox"/> Aquifer Testing
<input checked="" type="checkbox"/> Fuel Oils (and Other Oils) only	<input type="checkbox"/> VOC with Other Contaminants	<input type="checkbox"/> Petroleum with Other Contaminants	<input type="checkbox"/> Listed Contaminated Sites	<input type="checkbox"/> Contaminated Dredge Condensates	<input type="checkbox"/> Hydrostatic Testing of Pipelines/Tanks	<input type="checkbox"/> Well Development or Rehabilitation

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

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids		X	3	GRAB	EPA 160.2	5,880 ug/l	81,200	44.34	61,633	28.6
2. Total Residual Chlorine	X		3	GRAB	EPA 330.5	20.0 ug/l	ND			
3. Total Petroleum Hydrocarbons		X	3	GRAB	SW846 8015B	190 ug/l DRO 1000 ug/l GRO	116,740	63.74	60,863	28.24
4. Cyanide	X		3	GRAB	EPA 335.3	5.0 ug/l	ND			
5. Benzene		X	6	GRAB	SW846 8260B	0.500 ug/l	510	0.28	197	0.09
6. Toluene		X	6	GRAB	SW846 8260B	0.500 ug/l	612	0.33	344	0.16
7. Ethylbenzene		X	6	GRAB	SW846 8260B	25.0 ug/l	755	0.41	557	0.26
8. (m,p,o) Xylenes		X	6	GRAB	SW846 8260B	25 ug/l	11,000	6.00	3303	1.53
9. Total BTEX <sup>4</sup>		X	6	GRAB	SW846 8260B		12,699	6.93	4401	2.04

<sup>4</sup>BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide 5 (1,2- Dibromo-methane)	X		3	GRAB	EPA 504.1	0.01994 ug/l	ND			
11. Methyl-tert-Butyl Ether (MtBE)		X	6	GRAB	SW846 8260B	2500 ug/l	215,000	117.39	47,278	21.93
12. tert-Butyl Alcohol (TBA)		X	6	GRAB	SW846 8260B	1000 ug/l	24,100	13.16	5,598	2.60
13. tert-Amyl Methyl Ether (TAME)		X	6	GRAB	SW846 8260B	25 ug/l	688	0.38	213	0.10
14. Naphthalene		X	6	GRAB	SW846 8260B	100 ug/l	921	0.50	433	0.20
15. Carbon Tetrachloride	X		3	GRAB	EPA 624	1.00 ug/l	ND			
16. 1,4 Dichlorobenzene	X		3	GRAB	EPA 624	1.00 ug/l	ND			
17. 1,2 Dichlorobenzene	X		3	GRAB	EPA 624	1.00 ug/l	ND			
18. 1,3 Dichlorobenzene	X		3	GRAB	EPA 624	1.00 ug/l	ND			
19. 1,1 Dichloroethane	X		3	GRAB	EPA 624	1.00 ug/l	ND			
20. 1,2 Dichloroethane	X		3	GRAB	EPA 624	1.00 ug/l	ND			
21. 1,1 Dichloroethylene	X		3	GRAB	EPA 624	0.500 ug/l	ND			
22. cis-1,2 Dichloroethylene	X		3	GRAB	EPA 624	0.500 ug/l	ND			
23. Dichloromethane (Methylene Chloride)	X		3	GRAB	EPA 624	5.00 ug/l	15.6 (1)	N/A	8.5 (1)	N/A
24. Tetrachloroethylene	X		3	GRAB	EPA 624	1.00 ug/l	ND			

(1) Methylene Chloride has been attributed to laboratory cross contamination, since it was detected in only one sample and based on historic data at this site.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane	X		3	GRAB	EPA 624	1.00 ug/l	ND			
26. 1,1,2 Trichloroethane	X		3	GRAB	EPA 624	1.00 ug/l	ND			
27. Trichloroethylene	X		3	GRAB	EPA 624	1.00 ug/l	ND			
28. Vinyl Chloride	X		3	GRAB	EPA 624	1.00 ug/l	ND			
29. Acetone	X		6	GRAB	SW846 8260B	10.0 ug/l	ND			
30. 1,4 Dioxane	X		3	GRAB	EPA 624	100 ug/l	ND			
31. Total Phenols	X		3	GRAB	EPA 625	4.60 ug/l	ND			
32. Pentachlorophenol	X		3	GRAB	EPA 625	3.00 ug/l	ND			
33. Total Phthalates 6 (Phthalate esthers)	X		3	GRAB	EPA 625	3.50 ug/l	ND			
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	X		3	GRAB	EPA 625	3.50 ug/l	ND			
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		X	3	GRAB	EPA 610	NA	0.102	0.000	0.100	0.000
a. Benzo(a) Anthracene	X		3	GRAB	EPA 610	0.200 ug/l	ND			
b. Benzo(a) Pyrene		X	3	GRAB	EPA 610	0.100 ug/l	0.102	0.000	0.100	0.000
c. Benzo(b)Fluoranthene	X		3	GRAB	EPA 610	0.100 ug/l	ND			
d. Benzo(k) Fluoranthene	X		3	GRAB	EPA 610	0.140 ug/l	ND			
e. Chrysene	X		3	GRAB	EPA 610	0.100 ug/l	ND			

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzo(a,h) anthracene	X		3	GRAB	EPA 610	0.200 ug/l	ND			
g. Indeno(1,2,3-cd) Pyrene	X		3	GRAB	EPA 610	0.200 ug/l	ND			
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		X	3	GRAB	EPA 610	NA	1,066	0.58	622	0.29
h. Acenaphthene		X	3	GRAB	EPA 610	5.00 ug/l	172	0.09	131	0.06
i. Acenaphthylene		X	3	GRAB	EPA 610	5.00 ug/l	169	0.09	109	0.05
j. Anthracene	X		3	GRAB	EPA 610	1.00 ug/l	ND			
k. Benzo(ghi) Perylene	X		3	GRAB	EPA 610	0.200 ug/l	ND			
l. Fluoranthene		X	3	GRAB	EPA 610	0.200 ug/l	0.413	0.000	0.372	0.000
m. Fluorene		X	3	GRAB	EPA 610	0.500 ug/l	17.6	0.01	14.5	0.007
n. Naphthalene-		X	3	GRAB	EPA 610	5.0 ug/l	502	0.27	336	0.16
o. Phenanthrene		X	3	GRAB	EPA 610	2.50 ug/l	33.0	0.02	31.5	0.01
p. Pyrene	X		3	GRAB	EPA 610	0.200 ug/l	ND			
37. Total Polychlorinated Biphenyls (PCBs)	X		3	GRAB	EPA 608	1.00 ug/l	ND			
38. Antimony	X		3	GRAB	EPA 200.7	5.30 ug/l	ND			
39. Arsenic		X	3	GRAB	EPA 200.7	4.60 ug/l	35.7	0.02	29.2	0.01
40. Cadmium		X	3	GRAB	EPA 200.7	0.400 ug/l	1.70	0.001	1.36	0.001
41. Chromium III	X		3	GRAB	SM 3500Cr D	15.0 ug/l	ND			
42. Chromium VI	X		3	GRAB	SM 3500Cr D	10.0 ug/l	ND			

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper	X		3	GRAB	EPA 200.7	5.30 ug/l	ND		ND	
44. Lead	X		3	GRAB	EPA 200.7	2.70 ug/l	ND		ND	
45. Mercury	X		3	GRAB	EPA 245.1	0.100 ug/l	ND		ND	
46. Nickel	X		3	GRAB	EPA 200.7	1.70 ug/l	ND		ND	
47. Selenium	X		3	GRAB	EPA 200.7	8.20 ug/l	ND		ND	
48. Silver	X		3	GRAB	EPA 200.7	1.90 ug/l	ND		ND	
49. Zinc		X	3	GRAB	EPA 200.7	1.70 ug/l	17.6	0.01	15.6	0/01
50. Iron		X	3	GRAB	EPA 200.7	32.0 ug/l	57,600	31.45	52,000	24.13
Other (describe):										

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

<p><i>Step 1:</i> Do any of the metals in the influent have a <b>reasonable potential</b> to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y_X_N___</p>	<p>If yes, which metals? <u>Arsenic, Cadmium, Iron, Zinc</u></p>
<p><i>Step 2:</i> For any metals which have <b>reasonable potential</b> to exceed the <b>Appendix III</b> limits, calculate the <b>dilution factor (DF)</b> using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: <u>Arsenic, Cadmium, Iron, Zinc</u> DF: ___0___ (see NOI cover letter)</p>	<p>Look up the limit calculated at the corresponding dilution factor in <b>Appendix IV</b>. Do any of the metals in the <b>influent</b> have the potential to exceed the corresponding <b>effluent</b> limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y_X_N___ If "Yes," list which metals: <u>Arsenic, Cadmium, Iron, Zinc</u> (see NOI cover letter)</p>

**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
	X				X	X
	Chlorination	Dechlorination	Other (please describe):	Sand Filter		
			X			
c) Proposed <b>average</b> and <b>maximum flow rates</b> (gallons per minute) for the discharge and the <b>design flow rate(s)</b> (gallons per minute) of the treatment system: Average flow rate of discharge <u>85 gpm</u> Maximum flow rate of treatment system <u>100 gpm</u> Design flow rate of treatment system <u>100 gpm</u>						
d) A description of chemical additives being used or planned to be used (attach MSDS sheets): Not Applicable						

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

a) Identify the discharge pathway:	Direct	Within facility	Storm drain	River/brook	Wetlands	Other (describe):
	_____	__	X	_____	_____	
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:						
<p>There are two proposed pathways which may be used once discharge begins.</p> <p>CB-1, which is located along on the Mobil property on the northeast side along the eastern landscaped area. CB-1 is discharging to a 12-inch diameter pipe , which discharges to the municipal storm-water system located within Lafayette Road. Based on conversations with the Town of Hampton Public Works Department and review of available utility site plans, this storm-water drainage conveyance system is flowing to the south towards Lafayette Park Avenue and then discharges into a wetland marsh by the Hampton High School, which is located approximately 3,000 feet from the Mobil property and then into the Taylor River, which is located approximately 1.0 mile south of the Mobil property;</p> <p>CB-2, which is located within Stickney Terrace and is discharging to a series of 12-inch diameter discharge pipes, which are flowing in a northern direction through an easement and then in a western direction beneath the railroad track and ultimately discharge to a wetland area. The wetland area is located approximately 500 feet west of the Mobil property and ultimately discharge to the Drakes River and then to the Taylor River, which are located approximately 3,000 feet and 1.2 miles southwest of the Mobil property.</p>						
c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water: 1. For multiple discharges, number the discharges sequentially. 2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.						
d) Provide the state water quality classification of the receiving water <u>Class B</u>						
e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water <u>N/A</u> cfs Please attach any calculation sheets used to support stream flow and dilution calculations. Used conservative Dilution Factor of 0 since discharge is into wetlands						
f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes <u>X</u> No <u>_____</u> If yes, for which pollutant(s)? Is there a TMDL? Yes <u>X</u> No <u>_____</u> If yes, for which pollutant(s)? Mercury, Polychlorinated biphenyls, Dioxin, Fecal Coliform (See attached Appendix E of NOI)						

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

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes \_\_\_ No X  
Has any consultation with the federal services been completed? Yes \_\_\_ No X or is consultation underway? Yes \_\_\_ No X  
What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one): N/A  
a “no jeopardy” opinion? N/A or written concurrence N/A on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?

b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge? Yes X No \_\_\_ Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes \_\_\_ No \_\_\_

**7. Supplemental information. :**

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

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

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

Facility/Site Name: Mobil Service Station 01-MQ5 Hampton, New Hampshire

Operator signature:

  
CHRISTOPHE HENRY OF GES

Title: Senior Project Manager

Date: July 20, 2006