

May 1, 2006

U.S. Environmental Protection Agency
EPA-NE
RGP-NOC Processing
Municipal Assistance Unit (CMU)
One Congress Street, Suite 1,100
Boston, Massachusetts 02114-2023

**Re: Notice of Intent
NPDES Remediation General Permit
12 Wheeler Road
Hudson, Massachusetts
MADEP RTN 2-10526**

Dear Sir or Madam:

On behalf of Thorndike Properties of Massachusetts III, LLC (Thorndike), the owner of the above referenced property, and Borggaard Construction Corporation (Borggaard), the operator of the proposed lagoon water and groundwater dewatering, treatment and discharge system, Rizzo Associates, Inc. (RAI) is submitting this Notice of Intent (NOI) to be covered by the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP). This NOI has been prepared in accordance with the provisions of the NPDES RGP (Federal Register Volume 70, No. 174) and related guidance documentation provided by the U.S. EPA.

Site Information

The property comprises approximately 43.9 acres of undeveloped woodlands in Hudson, Massachusetts with remnants of bermed lagoons formerly used to collect wastewater generated from wool washing operations at off-site locations. The portion of the property located within the remnants of the bermed lagoons is a confirmed Disposal Site identified by the Massachusetts Department of Environmental Protection (DEP) by Release Tracking Number (RTN) 2-10526, herein referred to as the Site. There are no buildings located at the Site. A small unnamed tributary to the Assabet River flows south to north and traverses the western portion of the Site.

Thorndike owns the above referenced property and plans to construct an over-55 years of age residential housing project at the Site. The first phase of construction will include the implementation of remedial activities in accordance with the requirements of the Massachusetts Contingency Plan (310 CMR 40.0000) (the MCP). Planned remedial activities will be conducted

in accordance with a MCP Phase IV – Remedy Implementation Plan (RIP) document submitted to the DEP. The RIP outlines the selected remedial activities necessary to achieve a Permanent Solution under the MCP. The RIP will involve the consolidation of the lagoon deposits into one or more of the former lagoon areas, capping the consolidation area to restrict direct contact with the impacted lagoon deposits, and placement of an environmental restriction (Activity and Use Limitation) on the consolidated areas(s) to restrict potential exposure to the impacted lagoon deposits. During consolidation of the lagoon deposits, dewatering activities will be required to remove standing water (and possibly infiltration waters) within the lagoons. Dewatering, treatment and discharge operations will be conducted in accordance with the provisions of the MCP and the NPDES RGP.

The first phase of construction and lagoon dewatering is scheduled to commence in the spring/summer of 2006. Borggaard will be the Operator and sole permittee for the discharge and is herein requesting coverage under the NPDES RGP for discharges of treated wastewater from lagoon dewatering operations to be conducted associated with the remedial activities at the Site.

Facility Permitting Information

The property owner filed a Notice of Intent under the Massachusetts Wetlands Protection Act for the subject property on January 15, 2004 for the proposed construction activities. A public hearing was held by the Hudson Conservation Commission (ConCom) and hearings were closed on March 18, 2004 and the Hudson ConCom issued an Order of Conditions for the project. The Order of Conditions specified Site specific conditions to be implemented during the construction. Borggaard will comply with the provisions of the Order of Conditions issued by the Hudson ConCom and their requisite Site specific conditions.

The construction general contractor (Borggaard) submitted a Notice of Intent for coverage under the U.S. EPA Construction Storm Water General Permit (CGP). General construction activities undertaken at the property will be covered under the CGP. Borggaard will also implement a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the CGP. The SWPPP was prepared for the Site and includes measures to mitigate potential impacts caused by storm water run-off at the construction site.

Proposed Discharge Information

This NPDES Remediation General Permit will cover discharges from the temporary lagoon dewatering system to be installed at the Site as part of proposed remedial construction activities. Dewatering will be conducted from one or more of the lagoon areas where standing water exists. In addition, infiltration of groundwater through the lagoon berms or from the granular soils

underlying the lagoon bottoms may add additional volumes to the wastewater. The wastewater will be pumped from the lagoons via a dewatering system to an on-site treatment system described below. The dewatering system may include well points or trenches with wrapped collection structures to minimize the amount of suspended sediment pumped into the fractionation tanks. This discharge is expected to be intermittent, with maximum flows during initial dewatering of the standing water within the lagoons and limited flows to maintain the dewatered state during consolidation of the lagoon deposits. The wastewater discharge will be directed to a gravity discharge pipe located approximately 300 feet upstream from the Assabet River. The gravity discharge pipe will be located adjacent to a small unnamed tributary of the Assabet River and will discharge treated wastewater at the confluence of the unnamed tributary and the Assabet River. The location of the discharge to the Assabet River is at a Longitude of -71°33'39" and a Latitude of 42°23'15".

Contaminant Information

One water sample representing the proposed influent stream to the wastewater dewatering and treatment system was collected and submitted for laboratory analysis at Alpha Analytical Laboratories of Westborough, Massachusetts for parameters required to be analyzed under the NPDES RGP. The laboratory analysis identified the following compounds in the water sample at the following concentrations:

- Total Suspended Solids (TSS) (8,400mg/l)
- Total Petroleum Hydrocarbons (TPH) (20mg/l)
- Benzene (4.2µg/l)
- Acetone (20µg/l)
- Toluene (1.8µg/l)
- Total Phenols (80µg/l)
- Total metals including: arsenic (39µg/l) cadmium (0.7µg/l), chromium III (10µg/l), copper (60µg/l), iron (13,000µg/l), lead (106µg/l), and zinc (220µg/l).

The detected influent concentrations for TSS, TPH, and metals exceed the NPDES RGP effluent limitations listed in Appendix III of the NPDES RGP. Concentrations of some detected metals (arsenic, cadmium, copper, iron, lead, and zinc) identified as believed present in the discharge water have the potential to exceed the NPDES RGP effluent limits at a zero dilution factor. In accordance with the guidance documentation, the dilution factor of 20 was calculated for discharge to the Assabet River. Following determination of the appropriate dilution factor copper, lead, and iron have the potential to exceed the NPDES RGP effluent limits using the calculated dilution factor.

Treatment System Information

The water removed from the lagoons will require treatment and may be treated using readily available technologies such as sedimentation (settling in a tank), filtration (sand and/or bag filters), and adsorption (granular activated carbon) in order to achieve effluent concentrations below the NPDES discharge limitations prior to discharge to the Assabet River. The proposed wastewater treatment train will consist of a minimum of three 20,000 gallon fractionation (frac) tanks connected in series to allow adequate retention time for solids to settle and separate. If residence time within the fractionation tanks is not sufficient to allow for adequate settlement of solids within the fractionation tanks prior to discharge additional treatment including the addition of filtration units (sand filters, bag filters and/or cartridge filters) and/or coagulants/flocculants may be used to remove or drop-out suspended solids. The frac tanks will be pumped via pumps capable of pumping up to 300 gallons per minute (gpm) or 0.7 cubic feet per second (cfs) through the entire treatment train. The pumps will direct water through, a minimum of two duplex bag filter units equipped with a filter size of 25 μ connected in parallel, then to a minimum of two duplex bag filter units equipped with a filter size of 10 μ connected in parallel. A contingency is included for the addition of a minimum of two additional filters equipped with a filter size of 1 μ connected in parallel should metals or suspended solids be detected at concentrations exceeding the NPDES RGP discharge limits or at levels that may expend the downgradient filters (carbon filters). In addition, an equivalent set of sand filters and/or larger bag filters (50 μ) capable of removing the targeted sized particles may be installed upgradient of the 25 μ bag filters to minimize loading of large particles to the small aperture size filters. Following solids removal the water will be pumped through two sets of granular activated carbon (GAC) filters connected in series each consisting of two 2,000 pound liquid phase GAC filters connected in parallel. The treatment system will have sample ports to collect water samples from the system influent, system midpoint and system effluent. A schematic of the proposed treatment system train has been attached to the NOI form included with this letter.

The design maximum flow of the proposed treatment system is approximately 300 gpm (0.7 cfs). This design maximum flow is primarily restricted by the filter units including: bag filters, and liquid phase GAC filters. We estimate the average flow through the treatment system to be approximately 150 gpm (0.3 cfs).

If the retention time within the frac tanks is insufficient to allow adequate settlement of sediments in the influent waters within the frac tanks prior to treatment in the filter units (i.e. filters clog too quickly), the addition of chemical additives (coagulants/flocculants) may be necessary to remove and dropout suspended solids. The Material Safety Data Sheets (MSDS) for the selected coagulants and flocculants and a Notice of Change form will be submitted to EPA, if necessary to treat suspended solids. The addition of these coagulant/flocculant

chemicals to the wastewater stream will not cause or contribute to a violation of the Massachusetts water quality standards.

Following treatment, the effluent water will be discharged to the Assabet River. Energy dissipation measures will be implemented to prevent erosion of the banks, water course and sediments of the Assabet River. The energy dissipation feature will include one or a combination of the following: perforated hoses, spillway, vertical direction of the discharge into the water column, or discharge within rip-rap structures.

Receiving Surface Water Information

Effluent from the remedial system discharge will be directed to a gravity feed discharge pipe that will eventually discharge to the Assabet River at the confluence of the Assabet and the unnamed tributary following flow through the energy dissipation feature(s). The Assabet River is not used as a drinking water supply and is classified as a Class B surface water body. The seven day-ten year low flow (7Q10) of the receiving water is estimated at approximately 12.5 cfs.

The Assabet River (listing ID#8246775) is a Massachusetts Category 5 Water (waters requiring a total maximum daily load (TMDL)). The TMDL is required for Segment ID MA82B-04_2004, which includes the discharge point for the proposed remedial discharge. The segment includes the portion of the Assabet River located between the Marlborough West Waste Water Treatment Plant and the Hudson Waste Water Treatment Plant. This segment identifies the pollutants requiring a TMDL including: metals, nutrients, organic enrichment/low dissolved oxygen; and pathogens. The cause of the pollution requiring a TMDL is listed as unknown.

Endangered and Threatened Species and/or Critical Habitat

According to the Massachusetts Natural Heritage and Endangered Species Atlas, and the Atlas of Estimated Habitats of State-Listed Rare Wetlands Wildlife, Hudson Quadrangle, 2000-2001, no estimated habitat areas or certified vernal pools are located on or in the immediate vicinity of the Site. A review of the Massachusetts Natural Heritage Program on-line database indicates that there are no federally ranked species in the Town of Hudson, Massachusetts. A few state ranked species were identified including: two species of special concern (SC) the spotted turtle (*Clemmys guttata*) and the eastern box turtle (*Terrapene carolina*); and one threatened species (T) the climbing fumitory (*Adlumia fungosa*). A listing and ranking of species identified in the Town of Hudson is attached to this NOI.

No consultation with federal and/or state wildlife officials was determined to be necessary since the Site is not located within an area where federally listed endangered and/or threatened species

exists nor is the Site located at or near a federally designated critical habitat. In addition, the proposed construction activities are being conducted in accordance with an Order of Conditions from the Hudson ConCom which includes protective measures for sensitive habitat areas at the Site.

Impacts to Locations of Historic Significance

In order to determine whether the discharge to the Assabet River will have the potential to affect a property that is either listed or eligible for listing on the National Register of Historic Places research was completed identifying locations listed on the National Register of Historic Places and properties listed by the Massachusetts Historical Commission.

The results of our research did not identify properties listed on the National Register of Historic Places located in the vicinity of the Site. Our research did identify three properties listed on the National Register of Historic Places located in the geographic area of the Site. These locations include the following: the Goodale Homestead, at 100 Chestnut St. located approximately 2.32 miles east of the Site; the Col. Adelbert Mossman House, at 76 Park Street located approximately 1.09 miles west of the Site; and the Felton Street School, at 20 Felton Street located approximately 1.04 miles northwest of the Site. Two locations identified as being eligible for listing were identified along the Assabet River and included: the Broad Street bridge over the Assabet River located approximately 0.1 miles west (upstream) of the Site; and the Forest Avenue Bridge of the Assabet River located approximately 0.2 miles east (downstream) of the Site.

Since the Site is currently undeveloped there is no facility or operation that could affect locations of historic significance. Also the discharge is to the Assabet River and none of the properties identified on the National Register of Historic Places are located near the Assabet River downstream from the proposed discharge point, it is our opinion that the proposed discharge will not adversely affect any of the listed locations. One of the eligible locations (the Forest Avenue Bridge) is located downstream from the Site, however the proposed discharge is located over 1,000 feet upstream from the bridge and flows will not likely adversely affect the bridge structure or impair its historic value or use in any way.

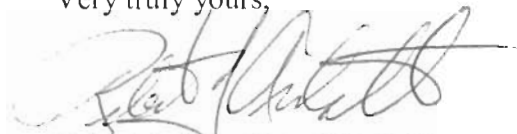
No consultation with federal and/or state officials was determined to be necessary since the Site is not expected to adversely impact locations of historic significance.

Request for Coverage Under NPDES RGP

On behalf of Thorndike and Borggaard, Rizzo Associates hereby requests coverage under the NPDES Remediation General Permit for discharges of remedial wastewater to the Assabet River, from remedial dewatering and treatment operations at the Site. Sampling and laboratory analysis of the remedial influent waters has indicated the likely presence of the following compounds in the remedial wastewater influent: TSS, TPH, acetone, benzene, toluene, total phenols, arsenic, cadmium, chromium III, copper, lead, zinc, and iron. The attached NOI form provides additional information pertaining to this NOI letter and appropriate signatures of the Operator and sole permittee of the treatment system (Borggaard). Applicable treatment of water, compliance sampling, required reporting and submittals, requests for permit modifications, and any other requirements of this permit will be conducted by Borggaard. Discharge of remedial wastewater is anticipated to begin around May 15, 2006 and be completed by November 2006. Upon receipt of notification from EPA and per the proposed construction schedule, the mobilization of the appropriate treatment system components and remedial dewatering operations, treatment, and discharge will commence under the NPDES RGP. Dewatering, treatment and discharge will be conducted in accordance with sampling and monitoring requirements determined by the EPA.

Please contact the undersigned at (508) 903-2000 if you have any questions.

Very truly yours,



Robert J. Ankstius, P.E., L.S.P.
Senior Project Manager

CC: Massachusetts Department of Environmental Protection – CERO
Hudson Conservation Commission
Thorndike Properties of Massachusetts III, LLC
Borggaard Construction Corporation

Attachments

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

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

a) Name of facility/site: Lagoon Dewatering and Treatment System		Facility/site address:	
Location of facility/site: longitude: <u>71°33'39"</u> latitude: <u>42°23'08"</u>	Facility SIC code(s): None	Street: 12 Wheeler Road	
b) Name of facility/site owner: Thorndike Development of Massachusetts III, LLC		Town: Hudson	
Email address of owner: 'Lloyd.Geisinger@thorndikedevlopment.com'	State: MA	Zip: 01749	County: Middlesex
Telephone no. of facility/site owner: (508) 285-9814			
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: 7 Barker Lane			
Town: Norton	State: MA	Zip: 02766	County: Bristol
c) Legal name of operator: Borggaard Construction Corporation	Operator telephone no: (508) 839-5431		
	Operator fax no.: (508) 839-9625		Operator email: 'wpeckham@borggaard.com'
Operator contact name and title: William Peckham, Project Manager			

Address of operator (if different from owner):		Street: 70 Creeper Hill Road	
Town: North Grafton	State: MA	Zip: 01536	County: Worcester

d) Check "yes" or "no" for the following:

1. Has a prior NPDES permit exclusion been granted for the discharge? Yes ☐ No ☒. If "yes," number: _____
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes ☐ No ☒. If "yes," date and tracking #: _____
3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes ☒ No ☐
4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes ☒ No ☐

e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes ☒ No ☐ If "yes," please list: 1. site identification # assigned by the state of NH or MA: RTN 2-10526 2. permit or license # assigned: _____ 3. state agency contact information: name, location, and telephone number: _____ MADEP CER0 - 627 Main St., Worcester, MA (508) 792-7650	f) Is the site/facility covered by any other EPA permit, including: 1. multi-sector storm water general permit? Y ☐ N ☒. If Y, number: _____ 2. phase I or II construction storm water general permit? Y ☒ N ☐. If Y, number: _____ 3. individual NPDES permit? Y ☐ N ☒. If Y, number: _____ 4. any other water quality related permit? Y ☐ N ☒. If Y, number: _____
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2. Discharge information. Please provide information about the discharge. (attaching additional sheets as needed) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage: Discharge activities will include lagoon dewatering and treatment. See attached NOI letter for further information.		
b) Provide the following information about each discharge:	1) Number of discharge points: 1	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft³/s)? Max. flow <u>0.7</u> Average flow <u>0.3</u> Is maximum flow a design value? Y ☒ N ☐ For average flow, include the units and appropriate notation if this value is a design value or estimate if not available. Average flow is the estimated average flow for the discharge
3) Latitude and longitude of each discharge within 100 feet: pt.1: long. <u>71°33'37"</u> lat. <u>42°23'15"</u>; pt.2: long. _____ lat. _____; pt.3: long. _____ lat. _____; pt.4: long. _____ lat. _____; pt.5: long. _____ lat. _____; pt.6: long. _____ lat. _____; pt.7: long. _____ lat. _____; pt.8: long. _____ lat. _____; etc.		

4) If hydrostatic testing, total volume of the discharge (gals):	5) Is the discharge intermittent _____ or seasonal _____? Is discharge ongoing Yes _____ No _____?
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. In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for **all** of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to: i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

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

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

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

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids										
2. Total Residual Chlorine										
3. Total Petroleum Hydrocarbons										
4. Cyanide										
5. Benzene										
6. Toluene										
7. Ethylbenzene										
8. (m,p,o) Xylenes										
9. Total BTEX ⁴										

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

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide (1,2- Dibromo-methane)										
11. Methyl-tert-Butyl Ether (MtBE)										
12. tert-Butyl Alcohol (TBA)										
13. tert-Amyl Methyl Ether (TAME)										
14. Naphthalene										
15. Carbon Tetra-chloride										
16. 1,4 Dichlorobenzene										
17. 1,2 Dichlorobenzene										
18. 1,3 Dichlorobenzene										
19. 1,1 Dichloroethane										
20. 1,2 Dichloroethane										
21. 1,1 Dichloroethylene										
22. cis-1,2 Dichloro-ethylene										
23. Dichloromethane (Methylene Chloride)										
24. Tetrachloroethylene										

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										
26. 1,1,2 Trichloroethane										
27. Trichloroethylene										
28. Vinyl Chloride										
29. Acetone										
30. 1,4 Dioxane										
31. Total Phenols										
32. Pentachlorophenol										
33. Total Phthalates ⁵ (Phthalate esthers)										
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]										
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)										
a. Benzo(a) Anthracene										
b. Benzo(a) Pyrene										
c. Benzo(b)Fluoranthene										
d. Benzo(k) Fluoranthene										
e. Chrysene										

⁵The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min- imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzo(a,h) anthracene										
g. Indeno(1,2,3-cd) Pyrene										
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)										
h. Acenaphthene										
i. Acenaphthylene										
j. Anthracene										
k. Benzo(ghi) Perylene										
l. Fluoranthene										
m. Fluorene										
n. Naphthalene-										
o. Phenanthrene										
p. Pyrene										
37. Total Polychlorinated Biphenyls (PCBs)										
38. Antimony										
39. Arsenic										
40. Cadmium										
41. Chromium III										
42. Chromium VI										

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										
44. Lead										
45. Mercury										
46. Nickel										
47. Selenium										
48. Silver										
49. Zinc										
50. Iron										
Other (describe):										

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

<i>Step 1:</i> Do any of the metals in the influent have a reasonable potential to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y____ N____	If yes, which metals?
<i>Step 2:</i> For any metals which have reasonable potential to exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: _____ DF: _____	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 “Yes,” list which metals:

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

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:						
b) Identify each applicable treatment unit (check all that apply):	Frac. tank	Air stripper	Oil/water separator	Equalization tanks	Bag filter	GAC filter
	Chlorination	Dechlorination	Other (please describe):			
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 _____ Maximum flow rate of treatment system _____ Design flow rate of treatment system _____						
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 _____	Within facility__	Storm drain____	River/brook____	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? Yes____ No____ If yes, for which pollutant(s)?

Is there a TMDL? Yes____ No____ If yes, for which pollutant(s)?

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

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes____ No____

Has any consultation with the federal services been completed? No____ or is consultation underway? No____

What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service? Yes (check one):

a “no jeopardy” opinion? _____ or written concurrence _____ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?

b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge?

Yes____ No____ Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes____ No____

7. Supplemental information. :

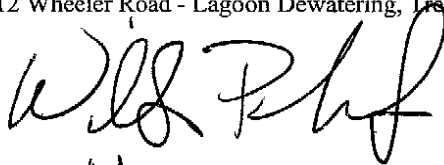
Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

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

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

Facility/Site Name: 12 Wheeler Road - Lagoon Dewatering, Treatment and Discharge

Operator signature:



Title:

Project Manager

Date:

5/2/06



Project No. 9548.01

**RIZZO
ASSOCIATES**

A TETRA TECH COMPANY

Information obtained from
USGS Map of Hudson, Massachusetts
Quadrangle dated 1988 and
USGS Map of Marlborough, Massachusetts
Quadrangle dated 1982-1985.



14 Wheeler Road
Hudson, Massachusetts
RTN 2-10526

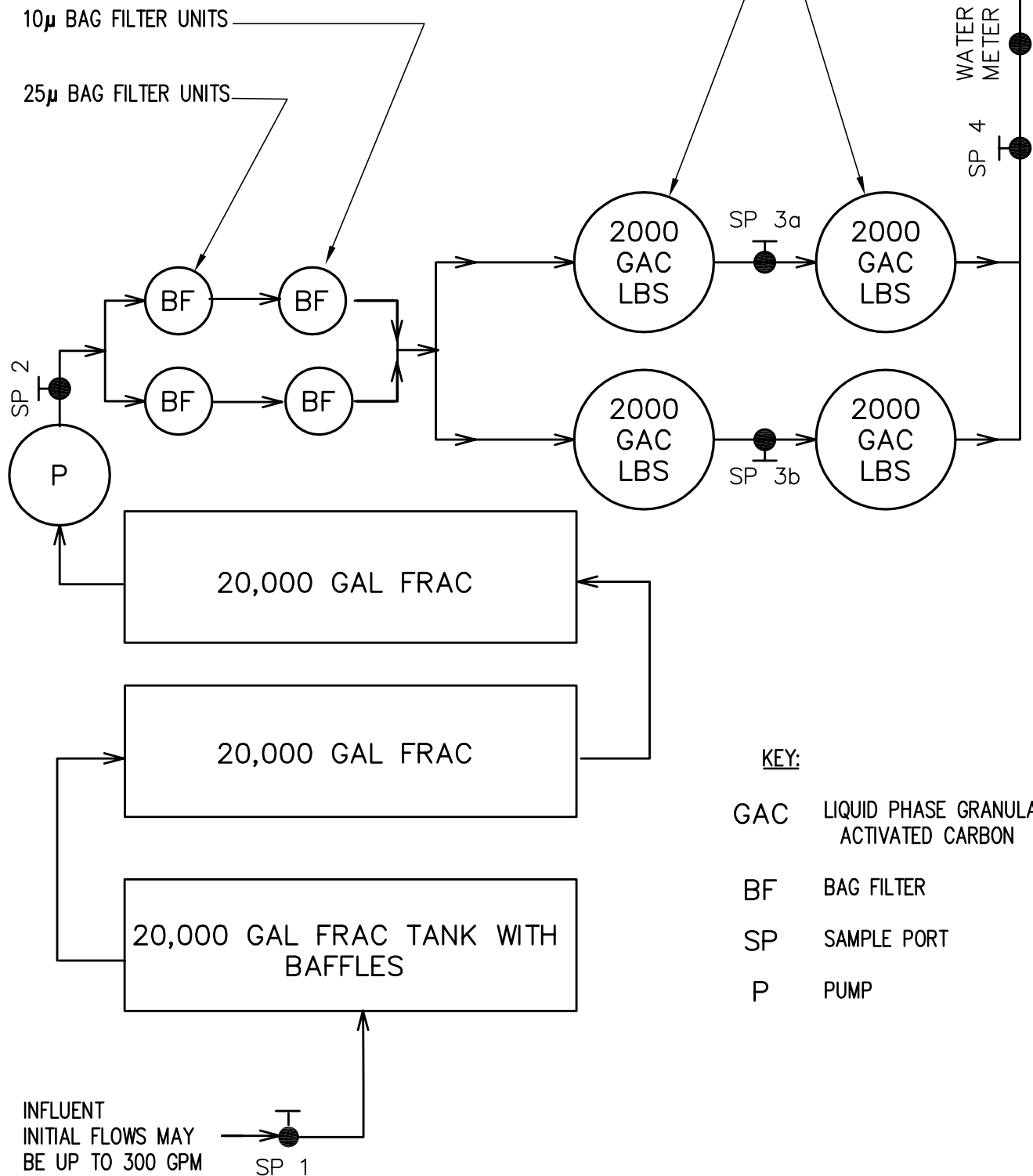
Site Locus Plan

Figure

1

GAC TREATMENT FOR FLOWS GREATER THAN 50 GPM
 ONCE FLOW IS REDUCED BELOW 50 GPM, MAY REMOVE
 ONE PARALLEL SET OF GAC UNITS

DISCHARGE TO
 ASSABET RIVER



KEY:

- GAC LIQUID PHASE GRANULAR ACTIVATED CARBON
- BF BAG FILTER
- SP SAMPLE PORT
- P PUMP

J:\Project\12700219\NPDES\Process Flow Diagram

12 Wheeler Road
 Hudson, Massachusetts

Not to Scale

RIZZO
 ASSOCIATES

A TETRA TECH COMPANY

Process Flow Diagram

Figure

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client: Rizzo Associates

Laboratory Job Number: L0600286

Address: 1 Grant Street

Framingham, MA 01701-9005

Date Received: 10-JAN-2006

Attn: Mr. Ron Myrick

Date Reported: 17-JAN-2006

Project Number: 12700219002

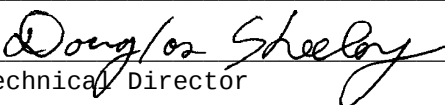
Delivery Method: Client

Site: WHEELER ROAD-HUDSON

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0600286-01	IN-010906	HUDSON, MA

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by:


Technical Director

**ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT**

Laboratory Job Number: L0600286

Semi-Volatile Organics

L0600286-01 has elevated limits of detection due to the 20x dilutions required by the elevated concentrations of non-target compounds in the sample. The surrogates could not be recovered due to the dilutions required to quantitate the samples.

PAH-LOW

L0600286-01 has elevated limits of detection due to the 20x dilutions required by the elevated concentrations of non-target compounds in the sample.

L0600286-01 has high surrogate recovery for 2,4,6-Tribromophenol due to high concentrations of non-target compounds in the sample. Sample is non-detect, therefore no further action was taken.

Metals

L0600286-01 has an elevated limit of detection for Pb due to the 4X dilution required to quantitate the sample within the calibration curve.

Chlorine, Total Residual

L0600286-01 was analyzed outside of the method required hold time.

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0600286-01	Date Collected: 09-JAN-2006 11:00
	Date Received : 10-JAN-2006
Sample Matrix: IN-010906 WATER	Date Reported : 17-JAN-2006
Condition of Sample: Satisfactory	Field Prep: None
Number & Type of Containers: 8-Amber,4-Plastic,4-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Solids, Total Suspended	8400	mg/l	200	4 160.2		0111 10:30	DT
Cyanide, Total	ND	mg/l	0.005	4 335.2	0112 10:00	0112 16:27	DD
Chlorine, Total Residual	ND	mg/l	0.05	4 330.1		0110 15:30	DD
TPH	20.0	mg/l	4.40	74 1664A	0112 10:30	0116 12:00	AT
Phenolics, Total	0.08	mg/l	0.03	4 420.1		0116 11:00	AT
Chromium, Hexavalent	ND	mg/l	0.02	30 3500CR-D	0110 10:00	0110 10:00	ST
Total Metals				19 200.7			
Antimony, Total	ND	mg/l	0.005	3 200.9	0111 15:00	0112 15:57	PY
Arsenic, Total	0.039	mg/l	0.005	19 200.7	0111 15:00	0113 07:48	RW
Cadmium, Total	0.0007	mg/l	0.0002	4 213.2	0111 15:00	0116 12:35	PY
Chromium, Total	0.01	mg/l	0.01	19 200.7	0111 15:00	0113 07:48	RW
Copper, Total	0.06	mg/l	0.01	19 200.7	0111 15:00	0113 07:48	RW
Iron, Total	13.	mg/l	0.05	19 200.7	0111 15:00	0113 07:48	RW
Lead, Total	0.106	mg/l	0.004	3 200.9	0111 15:00	0116 16:39	PY
Mercury, Total	ND	mg/l	0.0002	4 245.2	0112 16:10	0113 14:12	DM
Nickel, Total	ND	mg/l	0.025	19 200.7	0111 15:00	0113 07:48	RW
Selenium, Total	ND	mg/l	0.005	19 200.7	0111 15:00	0113 07:48	RW
Silver, Total	ND	mg/l	0.0004	4 272.2	0111 15:00	0116 19:30	PY
Zinc, Total	0.220	mg/l	0.050	19 200.7	0111 15:00	0113 07:48	RW
Pesticides by GC 504				14 504.1	0111 11:41	0111 15:50	JB
1,2-Dibromoethane	ND	ug/l	0.020				
Volatile Organics by GC/MS 624				5 624		0112 14:20	MM
Methylene chloride	ND	ug/l	5.0				
1,1-Dichloroethane	ND	ug/l	1.5				
Chloroform	ND	ug/l	1.5				
Carbon tetrachloride	ND	ug/l	1.0				
1,2-Dichloropropane	ND	ug/l	3.5				
Dibromochloromethane	ND	ug/l	1.0				
1,1,2-Trichloroethane	ND	ug/l	1.5				
2-Chloroethylvinyl ether	ND	ug/l	10.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0600286-01
IN-010906

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
Volatile Organics by GC/MS 624 cont'd				5 624	0112 14:20 MM	
Tetrachloroethene	ND	ug/l	1.5			
Chlorobenzene	ND	ug/l	3.5			
Trichlorofluoromethane	ND	ug/l	5.0			
1,2-Dichloroethane	ND	ug/l	1.5			
1,1,1-Trichloroethane	ND	ug/l	2.0			
Bromodichloromethane	ND	ug/l	1.0			
trans-1,3-Dichloropropene	ND	ug/l	1.5			
cis-1,3-Dichloropropene	ND	ug/l	1.5			
Bromoform	ND	ug/l	1.0			
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0			
Benzene	4.2	ug/l	1.0			
Toluene	1.8	ug/l	1.0			
Ethylbenzene	ND	ug/l	1.0			
Chloromethane	ND	ug/l	10.			
Bromomethane	ND	ug/l	5.0			
Vinyl chloride	ND	ug/l	2.0			
Chloroethane	ND	ug/l	2.0			
1,1-Dichloroethene	ND	ug/l	1.0			
trans-1,2-Dichloroethene	ND	ug/l	1.5			
cis-1,2-Dichloroethene	ND	ug/l	1.0			
Trichloroethene	ND	ug/l	1.0			
1,2-Dichlorobenzene	ND	ug/l	5.0			
1,3-Dichlorobenzene	ND	ug/l	5.0			
1,4-Dichlorobenzene	ND	ug/l	5.0			
p/m-Xylene	ND	ug/l	2.0			
o-xylene	ND	ug/l	1.0			
Xylene (Total)	ND	ug/l	2.0			
Styrene	ND	ug/l	1.0			
Acetone	20.	ug/l	10.			
Carbon disulfide	ND	ug/l	5.0			
2-Butanone	ND	ug/l	10.			
Vinyl acetate	ND	ug/l	20.			
4-Methyl-2-pentanone	ND	ug/l	10.			
2-Hexanone	ND	ug/l	10.			
Acrolein	ND	ug/l	8.0			
Acrylonitrile	ND	ug/l	10.			
Methyl tert butyl ether	ND	ug/l	20.			
1,4-Dioxane	ND	ug/l	2000			
Tert-Butyl Alcohol	ND	ug/l	100			
Tertiary-Amyl Methyl Ether	ND	ug/l	20.			
Surrogate(s)	Recovery		QC Criteria			
Pentafluorobenzene	102.	%	80-120			
Fluorobenzene	102.	%	80-120			
4-Bromofluorobenzene	101.	%	80-120			
SVOC's by GC/MS 8270				1 8270C	0111 13:00 0114 20:55 RL	
Acenaphthene	ND	ug/l	110			
Benzidine	ND	ug/l	1100			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0600286-01
IN-010906

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
SVOC's by GC/MS 8270 cont'd				1	8270C	0111 13:00	0114 20:55 RL
1,2,4-Trichlorobenzene	ND	ug/l	110				
Hexachlorobenzene	ND	ug/l	110				
Bis(2-chloroethyl)ether	ND	ug/l	110				
1-Chloronaphthalene	ND	ug/l	110				
2-Chloronaphthalene	ND	ug/l	130				
1,2-Dichlorobenzene	ND	ug/l	110				
1,3-Dichlorobenzene	ND	ug/l	110				
1,4-Dichlorobenzene	ND	ug/l	110				
3,3'-Dichlorobenzidine	ND	ug/l	1100				
2,4-Dinitrotoluene	ND	ug/l	130				
2,6-Dinitrotoluene	ND	ug/l	110				
Azobenzene	ND	ug/l	110				
Fluoranthene	ND	ug/l	110				
4-Chlorophenyl phenyl ether	ND	ug/l	110				
4-Bromophenyl phenyl ether	ND	ug/l	110				
Bis(2-chloroisopropyl)ether	ND	ug/l	110				
Bis(2-chloroethoxy)methane	ND	ug/l	110				
Hexachlorobutadiene	ND	ug/l	210				
Hexachlorocyclopentadiene	ND	ug/l	210				
Hexachloroethane	ND	ug/l	110				
Isophorone	ND	ug/l	110				
Naphthalene	ND	ug/l	110				
Nitrobenzene	ND	ug/l	110				
NDPA/DPA	ND	ug/l	320				
n-Nitrosodi-n-propylamine	ND	ug/l	110				
Bis(2-ethylhexyl)phthalate	ND	ug/l	210				
Butyl benzyl phthalate	ND	ug/l	110				
Di-n-butylphthalate	ND	ug/l	110				
Di-n-octylphthalate	ND	ug/l	110				
Diethyl phthalate	ND	ug/l	110				
Dimethyl phthalate	ND	ug/l	110				
Benzo(a)anthracene	ND	ug/l	110				
Benzo(a)pyrene	ND	ug/l	110				
Benzo(b)fluoranthene	ND	ug/l	110				
Benzo(k)fluoranthene	ND	ug/l	110				
Chrysene	ND	ug/l	110				
Acenaphthylene	ND	ug/l	110				
Anthracene	ND	ug/l	110				
Benzo(ghi)perylene	ND	ug/l	110				
Fluorene	ND	ug/l	110				
Phenanthrene	ND	ug/l	110				
Dibenzo(a,h)anthracene	ND	ug/l	110				
Indeno(1,2,3-cd)pyrene	ND	ug/l	150				
Pyrene	ND	ug/l	110				
Benzo(e)pyrene	ND	ug/l	110				
Biphenyl	ND	ug/l	110				
Perylene	ND	ug/l	110				
Aniline	ND	ug/l	210				
4-Chloroaniline	ND	ug/l	110				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0600286-01
IN-010906

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
SVOC's by GC/MS 8270 cont'd				1	8270C	0111 13:00	0114 20:55 RL
1-Methylnaphthalene	ND	ug/l	110				
2-Nitroaniline	ND	ug/l	110				
3-Nitroaniline	ND	ug/l	110				
4-Nitroaniline	ND	ug/l	150				
Dibenzofuran	ND	ug/l	110				
a,a-Dimethylphenethylamine	ND	ug/l	1100				
Hexachloropropene	ND	ug/l	210				
Nitrosodi-n-butylamine	ND	ug/l	210				
2-Methylnaphthalene	ND	ug/l	110				
1,2,4,5-Tetrachlorobenzene	ND	ug/l	420				
Pentachlorobenzene	ND	ug/l	420				
a-Naphthylamine	ND	ug/l	420				
b-Naphthylamine	ND	ug/l	420				
Phenacetin	ND	ug/l	210				
Dimethoate	ND	ug/l	420				
4-Aminobiphenyl	ND	ug/l	210				
Pentachloronitrobenzene	ND	ug/l	210				
Isodrin	ND	ug/l	210				
p-Dimethylaminoazobenzene	ND	ug/l	210				
Chlorobenzilate	ND	ug/l	420				
3-Methylcholanthrene	ND	ug/l	420				
Ethyl Methanesulfonate	ND	ug/l	320				
Acetophenone	ND	ug/l	420				
Nitrosodipiperidine	ND	ug/l	420				
7,12-Dimethylbenz(a)anthracene	ND	ug/l	210				
n-Nitrosodimethylamine	ND	ug/l	1100				
2,4,6-Trichlorophenol	ND	ug/l	110				
p-Chloro-m-cresol	ND	ug/l	110				
2-Chlorophenol	ND	ug/l	130				
2,4-Dichlorophenol	ND	ug/l	210				
2,4-Dimethylphenol	ND	ug/l	210				
2-Nitrophenol	ND	ug/l	420				
4-Nitrophenol	ND	ug/l	210				
2,4-Dinitrophenol	ND	ug/l	420				
4,6-Dinitro-o-cresol	ND	ug/l	420				
Pentachlorophenol	ND	ug/l	420				
Phenol	ND	ug/l	150				
2-Methylphenol	ND	ug/l	130				
3-Methylphenol/4-Methylphenol	ND	ug/l	130				
2,4,5-Trichlorophenol	ND	ug/l	110				
2,6-Dichlorophenol	ND	ug/l	210				
Benzoic Acid	ND	ug/l	1100				
Benzyl Alcohol	ND	ug/l	210				
Carbazole	ND	ug/l	110				
Pyridine	ND	ug/l	1100				
2-Picoline	ND	ug/l	420				
Pronamide	ND	ug/l	420				
Methyl methanesulfonate	ND	ug/l	420				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0600286-01
IN-010906

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
SVOC's by GC/MS 8270 cont'd						
				1 8270C	0111 13:00 0114 20:55 RL	
Surrogate(s)	Recovery		QC Criteria			
2-Fluorophenol	ND	%	21-120			
Phenol-d6	ND	%	10-120			
Nitrobenzene-d5	ND	%	23-120			
2-Fluorobiphenyl	ND	%	43-120			
2,4,6-Tribromophenol	ND	%	10-120			
4-Terphenyl-d14	ND	%	33-120			
PAH by GC/MS SIM 8270M						
				1 8270C-M	0111 13:00 0113 23:27 RL	
Acenaphthene	ND	ug/l	4.2			
2-Chloronaphthalene	ND	ug/l	4.2			
Fluoranthene	ND	ug/l	4.2			
Hexachlorobutadiene	ND	ug/l	11.			
Naphthalene	ND	ug/l	4.2			
Benzo(a)anthracene	ND	ug/l	4.2			
Benzo(a)pyrene	ND	ug/l	4.2			
Benzo(b)fluoranthene	ND	ug/l	4.2			
Benzo(k)fluoranthene	ND	ug/l	4.2			
Chrysene	ND	ug/l	4.2			
Acenaphthylene	ND	ug/l	4.2			
Anthracene	ND	ug/l	4.2			
Benzo(ghi)perylene	ND	ug/l	4.2			
Fluorene	ND	ug/l	4.2			
Phenanthrene	ND	ug/l	4.2			
Dibenzo(a,h)anthracene	ND	ug/l	4.2			
Indeno(1,2,3-cd)Pyrene	ND	ug/l	4.2			
Pyrene	ND	ug/l	4.2			
1-Methylnaphthalene	ND	ug/l	4.2			
2-Methylnaphthalene	ND	ug/l	4.2			
Pentachlorophenol	ND	ug/l	17.			
Hexachlorobenzene	ND	ug/l	17.			
Perylene	ND	ug/l	4.2			
Biphenyl	ND	ug/l	4.2			
2,6-Dimethylnaphthalene	ND	ug/l	4.2			
1-Methylphenanthrene	ND	ug/l	4.2			
Benzo(e)Pyrene	ND	ug/l	4.2			
Hexachloroethane	ND	ug/l	17.			
Surrogate(s)	Recovery		QC Criteria			
2-Fluorophenol	78.0	%	21-120			
Phenol-d6	69.0	%	10-120			
Nitrobenzene-d5	104.	%	23-120			
2-Fluorobiphenyl	109.	%	43-120			
2,4,6-Tribromophenol	137.	%	10-120			
4-Terphenyl-d14	120.	%	33-120			
Polychlorinated Biphenyls						
				5 608	0111 15:00 0113 03:52 SS	
Aroclor 1221	ND	ug/l	0.298			
Aroclor 1232	ND	ug/l	0.298			

Comments: Complete list of References and Glossary of Terms found in Addendum I

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0600286-01
IN-010906

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Polychlorinated Biphenyls cont'd				5	608	0111 15:00	0113 03:52 SS
Aroclor 1242/1016	ND	ug/l	0.298				
Aroclor 1248	ND	ug/l	0.298				
Aroclor 1254	ND	ug/l	0.298				
Aroclor 1260	ND	ug/l	0.298				
Surrogate(s)	Recovery		QC Criteria				
2,4,5,6-Tetrachloro-m-xylene	45.0	%	30-150				
Decachlorobiphenyl	34.0	%	30-150				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0600286

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Solids, Total Suspended for sample(s) 01 (L0600286-01, WG226373-2)					
Solids, Total Suspended	8400	8400	mg/l	0	20
Cyanide, Total for sample(s) 01 (L0600027-04, WG226510-4)					
Cyanide, Total	ND	ND	mg/l	NC	30
Chlorine, Total Residual for sample(s) 01 (L0600286-01, WG226276-3)					
Chlorine, Total Residual	ND	ND	mg/l	NC	
TPH for sample(s) 01 (L0600286-01, WG226816-4)					
TPH	20.0	21.6	mg/l	8	34
Phenolics, Total for sample(s) 01 (L0600518-01, WG226902-4)					
Phenolics, Total	ND	ND	mg/l	NC	
Chromium, Hexavalent for sample(s) 01 (L0600286-01, WG226339-3)					
Chromium, Hexavalent	ND	ND	mg/l	NC	
Total Metals for sample(s) 01 (L0600336-01, WG226453-1)					
Antimony, Total	ND	ND	mg/l	NC	
Arsenic, Total	ND	ND	mg/l	NC	
Cadmium, Total	0.0003	0.0003	mg/l	0	
Chromium, Total	ND	ND	mg/l	NC	
Copper, Total	ND	ND	mg/l	NC	
Iron, Total	0.18	0.07	mg/l	83	
Lead, Total	ND	ND	mg/l	NC	
Nickel, Total	ND	ND	mg/l	NC	
Selenium, Total	ND	ND	mg/l	NC	
Silver, Total	ND	ND	mg/l	NC	
Zinc, Total	ND	ND	mg/l	NC	
Total Metals for sample(s) 01 (L0600336-01, WG226571-3)					
Mercury, Total	ND	ND	mg/l	NC	
Volatile Organics by GC/MS 624 for sample(s) 01 (L0600336-01, WG226636-2)					
Methylene chloride	ND	ND	ug/l	NC	30
1,1-Dichloroethane	ND	ND	ug/l	NC	30
Chloroform	4.7	3.8	ug/l	21	30
Carbon tetrachloride	ND	ND	ug/l	NC	30
1,2-Dichloropropane	ND	ND	ug/l	NC	30
Dibromochloromethane	2.8	2.2	ug/l	24	30
1,1,2-Trichloroethane	ND	ND	ug/l	NC	30
2-Chloroethylvinyl ether	ND	ND	ug/l	NC	30
Tetrachloroethene	ND	ND	ug/l	NC	30
Chlorobenzene	ND	ND	ug/l	NC	30
Trichlorofluoromethane	ND	ND	ug/l	NC	30
1,2-Dichloroethane	ND	ND	ug/l	NC	30
1,1,1-Trichloroethane	ND	ND	ug/l	NC	30
Bromodichloromethane	4.9	4.0	ug/l	20	30

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0600286

Continued

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Volatile Organics by GC/MS 624 for sample(s) 01 (L0600336-01, WG226636-2)					
trans-1,3-Dichloropropene	ND	ND	ug/l	NC	30
cis-1,3-Dichloropropene	ND	ND	ug/l	NC	30
Bromoform	ND	ND	ug/l	NC	30
1,1,2,2-Tetrachloroethane	ND	ND	ug/l	NC	30
Benzene	ND	ND	ug/l	NC	30
Toluene	ND	ND	ug/l	NC	30
Ethylbenzene	ND	ND	ug/l	NC	30
Chloromethane	ND	ND	ug/l	NC	30
Bromomethane	ND	ND	ug/l	NC	30
Vinyl chloride	ND	ND	ug/l	NC	30
Chloroethane	ND	ND	ug/l	NC	30
1,1-Dichloroethene	ND	ND	ug/l	NC	30
trans-1,2-Dichloroethene	ND	ND	ug/l	NC	30
cis-1,2-Dichloroethene	ND	ND	ug/l	NC	30
Trichloroethene	5.3	4.3	ug/l	21	30
1,2-Dichlorobenzene	ND	ND	ug/l	NC	30
1,3-Dichlorobenzene	ND	ND	ug/l	NC	30
1,4-Dichlorobenzene	ND	ND	ug/l	NC	30
p/m-Xylene	ND	ND	ug/l	NC	30
o-Xylene	ND	ND	ug/l	NC	30
XYLENE (TOTAL)	ND	ND	ug/l	NC	30
Styrene	ND	ND	ug/l	NC	30
Acetone	ND	ND	ug/l	NC	30
Carbon disulfide	ND	ND	ug/l	NC	30
2-Butanone	ND	ND	ug/l	NC	30
Vinyl acetate	ND	ND	ug/l	NC	30
4-Methyl-2-pentanone	ND	ND	ug/l	NC	30
2-Hexanone	ND	ND	ug/l	NC	30
Acrolein	ND	ND	ug/l	NC	30
Acrylonitrile	ND	ND	ug/l	NC	30
Surrogate(s)	Recovery				QC Criteria
Pentafluorobenzene	93.0	99.0	%	6	80-120
Fluorobenzene	95.0	98.0	%	3	80-120
4-Bromofluorobenzene	100.	102.	%	2	80-120
Polychlorinated Biphenyls for sample(s) 01 (L0600336-01, WG226435-4)					
Aroclor 1221	ND	ND	ug/l	NC	30
Aroclor 1232	ND	ND	ug/l	NC	30
Aroclor 1242/1016	ND	ND	ug/l	NC	30
Aroclor 1248	ND	ND	ug/l	NC	30
Aroclor 1254	ND	ND	ug/l	NC	30
Aroclor 1260	ND	ND	ug/l	NC	30
Surrogate(s)	Recovery				QC Criteria
2,4,5,6-Tetrachloro-m-xylene	76.0	79.0	%	4	30-150
Decachlorobiphenyl	93.0	86.0	%	8	30-150

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0600286

Parameter	% Recovery	QC Criteria
Cyanide, Total LCS for sample(s) 01 (WG226510-2)		
Cyanide, Total	104	90-110
Chlorine, Total Residual LCS for sample(s) 01 (WG226276-1)		
Chlorine, Total Residual	105	
TPH LCS for sample(s) 01 (WG226816-2)		
TPH	85	64-132
Phenolics, Total LCS for sample(s) 01 (WG226902-2)		
Phenolics, Total	94	
Chromium, Hexavalent LCS for sample(s) 01 (WG226339-2)		
Chromium, Hexavalent	101	
Total Metals LCS for sample(s) 01 (WG226453-4)		
Antimony, Total	99	
Arsenic, Total	101	
Cadmium, Total	99	
Chromium, Total	90	
Copper, Total	88	
Iron, Total	86	
Lead, Total	107	
Nickel, Total	91	
Selenium, Total	117	
Silver, Total	104	
Zinc, Total	95	
Total Metals LCS for sample(s) 01 (WG226571-1)		
Mercury, Total	97	
Pesticides by GC 504 LCS for sample(s) 01 (WG226436-2)		
1,2-Dibromoethane	98	
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG226636-3)		
Methylene chloride	90	10-221
1,1-Dichloroethane	90	59-155
Chloroform	85	51-138
Carbon tetrachloride	89	70-140
1,2-Dichloropropane	90	10-210
Dibromochloromethane	93	53-149
1,1,2-Trichloroethane	95	52-150
2-Chloroethylvinyl ether	96	10-305
Tetrachloroethene	98	64-148
Chlorobenzene	105	37-160
Trichlorofluoromethane	98	17-181
1,2-Dichloroethane	87	49-155
1,1,1-Trichloroethane	89	52-162
Bromodichloromethane	89	35-155

**ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES**

Laboratory Job Number: L0600286

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG226636-3)		
trans-1,3-Dichloropropene	84	17-183
cis-1,3-Dichloropropene	91	10-227
Bromoform	94	45-169
1,1,2,2-Tetrachloroethane	96	46-157
Benzene	95	37-151
Toluene	99	47-150
Ethylbenzene	112	37-162
Chloromethane	65	10-273
Bromomethane	98	10-242
Vinyl chloride	91	10-251
Chloroethane	102	14-230
1,1-Dichloroethene	91	10-234
trans-1,2-Dichloroethene	88	54-156
cis-1,2-Dichloroethene	93	60-140
Trichloroethene	94	71-157
1,2-Dichlorobenzene	105	18-190
1,3-Dichlorobenzene	107	59-156
1,4-Dichlorobenzene	106	18-190
p/m-Xylene	116	40-160
o-Xylene	114	40-160
XYLENE (TOTAL)	116	40-160
Styrene	100	40-160
Acetone	92	40-160
Carbon disulfide	82	40-160
2-Butanone	78	40-160
Vinyl acetate	140	40-160
4-Methyl-2-pentanone	108	40-160
2-Hexanone	99	40-160
Acrolein	87	40-160
Acrylonitrile	85	40-160
Surrogate(s)		
Pentafluorobenzene	104	80-120
Fluorobenzene	100	80-120
4-Bromofluorobenzene	110	80-120
SVOC's by GC/MS 8270 LCS for sample(s) 01 (WG226419-2)		
Acenaphthene	66	46-118
1,2,4-Trichlorobenzene	64	39-98
2-Chloronaphthalene	68	40-140
1,2-Dichlorobenzene	53	40-140
1,4-Dichlorobenzene	52	36-97
2,4-Dinitrotoluene	86	24-96
2,6-Dinitrotoluene	86	40-140
Fluoranthene	84	40-140
4-Chlorophenyl phenyl ether	74	40-140
n-Nitrosodi-n-propylamine	49	41-116
Butyl benzyl phthalate	82	40-140

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0600286

Continued

Parameter	% Recovery	QC Criteria
SVOC's by GC/MS 8270 LCS for sample(s) 01 (WG226419-2)		
Anthracene	53	40-140
Pyrene	80	26-127
Hexachloropropene	64	40-140
P-Chloro-M-Cresol	70	23-97
2-Chlorophenol	58	27-123
2-Nitrophenol	66	30-130
4-Nitrophenol	44	10-80
2,4-Dinitrophenol	81	30-130
Pentachlorophenol	77	9-103
Phenol	24	12-110
Surrogate(s)		
2-Fluorophenol	39	21-120
Phenol-d6	33	10-120
Nitrobenzene-d5	61	23-120
2-Fluorobiphenyl	70	43-120
2,4,6-Tribromophenol	93	10-120
4-Terphenyl-d14	90	33-120
PAH by GC/MS SIM 8270M LCS for sample(s) 01 (WG226420-2)		
Acenaphthene	71	46-118
2-Chloronaphthalene	84	
Fluoranthene	92	
Anthracene	58	
Pyrene	93	26-127
Pentachlorophenol	76	9-103
Surrogate(s)		
2-Fluorophenol	61	21-120
Phenol-d6	47	10-120
Nitrobenzene-d5	88	23-120
2-Fluorobiphenyl	73	43-120
2,4,6-Tribromophenol	77	10-120
4-Terphenyl-d14	81	33-120
Polychlorinated Biphenyls LCS for sample(s) 01 (WG226435-2)		
Aroclor 1242/1016	74	30-150
Aroclor 1260	83	30-150
Surrogate(s)		
2,4,5,6-Tetrachloro-m-xylene	76	30-150
Decachlorobiphenyl	72	30-150
Cyanide, Total SPIKE for sample(s) 01 (L0600027-02, WG226510-3)		
Cyanide, Total	105	80-120

**ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES**

Laboratory Job Number: L0600286

Continued

Parameter	% Recovery	QC Criteria
TPH SPIKE for sample(s) 01 (L0600336-01, WG226816-3)		
TPH	83	64-132
Phenolics, Total SPIKE for sample(s) 01 (L0600384-02, WG226902-3)		
Phenolics, Total	90	
Chromium, Hexavalent SPIKE for sample(s) 01 (L0600286-01, WG226339-4)		
Chromium, Hexavalent	84	
Total Metals SPIKE for sample(s) 01 (L0600336-01, WG226453-2)		
Antimony, Total	99	
Arsenic, Total	114	
Cadmium, Total	99	
Chromium, Total	95	
Copper, Total	100	
Iron, Total	82	
Lead, Total	106	
Nickel, Total	102	
Selenium, Total	135	
Silver, Total	106	
Zinc, Total	111	
Total Metals SPIKE for sample(s) 01 (L0600336-01, WG226571-2)		
Mercury, Total	110	
Pesticides by GC 504 SPIKE for sample(s) 01 (L0600087-01, WG226436-3)		
1,2-Dibromoethane	92	
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0600336-01, WG226636-1)		
Methylene chloride	107	10-221
1,1-Dichloroethane	106	59-155
Chloroform	99	51-138
Carbon tetrachloride	104	70-140
1,2-Dichloropropane	110	10-210
Dibromochloromethane	120	53-149
1,1,2-Trichloroethane	121	52-150
2-Chloroethylvinyl ether	92	10-305
Tetrachloroethene	114	64-148
Chlorobenzene	111	37-160
Trichlorofluoromethane	112	17-181
1,2-Dichloroethane	109	49-155
1,1,1-Trichloroethane	109	52-162
Bromodichloromethane	110	35-155
trans-1,3-Dichloropropene	108	17-183
cis-1,3-Dichloropropene	112	10-227
Bromoform	116	45-169
1,1,2,2-Tetrachloroethane	117	46-157
Benzene	115	35-151
Toluene	117	47-150

**ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES**

Laboratory Job Number: L0600286

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0600336-01, WG226636-1)		
Ethylbenzene	118	37-162
Chloromethane	96	10-273
Bromomethane	96	10-242
Vinyl chloride	108	10-251
Chloroethane	117	14-230
1,1-Dichloroethene	105	10-234
trans-1,2-Dichloroethene	109	54-156
cis-1,2-Dichloroethene	112	60-140
Trichloroethene	113	71-157
1,2-Dichlorobenzene	114	18-190
1,3-Dichlorobenzene	115	59-156
1,4-Dichlorobenzene	114	18-190
p/m-Xylene	120	40-160
o-Xylene	119	40-160
XYLENE (TOTAL)	120	40-160
Styrene	108	40-160
Acetone	105	40-160
Carbon disulfide	105	40-160
2-Butanone	101	40-160
Vinyl acetate	146	40-160
4-Methyl-2-pentanone	121	40-160
2-Hexanone	114	40-160
Acrolein	85	40-160
Acrylonitrile	86	40-160
Surrogate(s)		
Pentafluorobenzene	100	80-120
Fluorobenzene	100	80-120
4-Bromofluorobenzene	97	80-120
Polychlorinated Biphenyls SPIKE for sample(s) 01 (L0600336-01, WG226435-3)		
Aroclor 1242/1016	80	30-150
Aroclor 1260	88	30-150
Surrogate(s)		
2,4,5,6-Tetrachloro-m-xylene	71	30-150
Decachlorobiphenyl	81	30-150

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0600286

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
SVOC's by GC/MS 8270 for sample(s) 01 (L0600336-01, WG226419-4)					
Acenaphthene	73	73	0	30	46-118
1,2,4-Trichlorobenzene	68	78	14	30	39-98
2-Chloronaphthalene	78	78	0	30	40-140
1,2-Dichlorobenzene	58	63	8	30	40-140
1,4-Dichlorobenzene	58	58	0	30	36-97
2,4-Dinitrotoluene	87	92	6	30	24-96
2,6-Dinitrotoluene	87	92	6	30	40-140
Fluoranthene	82	87	6	30	40-140
4-Chlorophenyl phenyl ether	82	82	0	30	40-140
n-Nitrosodi-n-propylamine	53	53	0	30	41-116
Butyl benzyl phthalate	82	87	6	30	40-140
Anthracene	49	53	8	30	40-140
Pyrene	78	82	5	30	26-127
Hexachloropropene	68	78	14	30	40-140
p-Chloro-M-Cresol	78	82	5	30	23-97
2-Chlorophenol	65	68	5	30	27-123
2-Nitrophenol	73	73	0	30	30-130
4-Nitrophenol	63	68	8	30	10-80
2,4-Dinitrophenol	87	90	3	30	30-130
Pentachlorophenol	78	82	5	30	9-103
Phenol	41	44	7	30	12-110
Surrogate(s)					
2-Fluorophenol	55	53	4		21-120
Phenol-d6	56	57	2		10-120
Nitrobenzene-d5	66	64	3		23-120
2-Fluorobiphenyl	79	78	1		43-120
2,4,6-Tribromophenol	94	93	1		10-120
4-Terphenyl-d14	89	90	1		33-120
PAH by GC/MS SIM 8270M for sample(s) 01 (L0600336-01, WG226420-4)					
Acenaphthene	58	58	0	40	46-118
2-Chloronaphthalene	63	63	0	40	
Fluoranthene	73	78	7	40	
Anthracene	58	58	0	40	
Pyrene	68	73	7	40	26-127
Pentachlorophenol	78	75	4	40	9-103
Surrogate(s)					
2-Fluorophenol	77	73	5		21-120
Phenol-d6	74	69	7		10-120
Nitrobenzene-d5	88	84	5		23-120
2-Fluorobiphenyl	72	71	1		43-120
2,4,6-Tribromophenol	83	77	8		10-120
4-Terphenyl-d14	83	81	2		33-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0600286

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
Blank Analysis for sample(s) 01 (WG226373-1)						
Solids, Total Suspended	ND	mg/l	5.0	4 160.2	0111 10:30	DT
Blank Analysis for sample(s) 01 (WG226510-1)						
Cyanide, Total	ND	mg/l	0.005	4 335.2	0112 10:00 0112 16:17	DD
Blank Analysis for sample(s) 01 (WG226276-2)						
Chlorine, Total Residual	ND	mg/l	0.05	4 330.1	0110 15:30	DD
Blank Analysis for sample(s) 01 (WG226816-1)						
TPH	ND	mg/l	4.00	74 1664A	0112 10:30 0116 12:00	AT
Blank Analysis for sample(s) 01 (WG226902-1)						
Phenolics, Total	ND	mg/l	0.03	4 420.1	0116 11:00	AT
Blank Analysis for sample(s) 01 (WG226339-1)						
Chromium, Hexavalent	ND	mg/l	0.02	30 3500CR-D	0110 10:00 0110 10:00	ST
Blank Analysis for sample(s) 01 (WG226453-3)						
Total Metals			19	200.7		
Antimony, Total	ND	mg/l	0.005	3 200.9	0111 15:00 0112 15:11	PY
Arsenic, Total	ND	mg/l	0.005	19 200.7	0111 15:00 0112 09:09	MG
Cadmium, Total	ND	mg/l	0.0002	4 213.2	0111 15:00 0116 12:10	PY
Chromium, Total	ND	mg/l	0.01	19 200.7	0111 15:00 0112 09:09	MG
Copper, Total	ND	mg/l	0.01	19 200.7	0111 15:00 0112 09:09	MG
Iron, Total	ND	mg/l	0.05	19 200.7	0111 15:00 0112 09:09	MG
Lead, Total	ND	mg/l	0.001	3 200.9	0111 15:00 0116 15:58	PY
Nickel, Total	ND	mg/l	0.025	19 200.7	0111 15:00 0112 09:09	MG
Selenium, Total	ND	mg/l	0.005	19 200.7	0111 15:00 0112 09:09	MG
Silver, Total	ND	mg/l	0.0004	4 272.2	0111 15:00 0116 18:50	PY
Zinc, Total	ND	mg/l	0.050	19 200.7	0111 15:00 0112 09:09	MG
Blank Analysis for sample(s) 01 (WG226571-4)						
Total Metals						
Mercury, Total	ND	mg/l	0.0002	4 245.2	0112 16:10 0113 14:09	DM
Blank Analysis for sample(s) 01 (WG226436-1)						
Pesticides by GC 504				14 504.1	0111 11:41 0111 13:16	JB
1,2-Dibromoethane	ND	ug/l	0.020			

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0600286

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG226636-4)							
Volatile Organics by GC/MS 624				5 624		0112 08:48 MM	
Methylene chloride	ND	ug/l	5.0				
1,1-Dichloroethane	ND	ug/l	1.5				
Chloroform	ND	ug/l	1.5				
Carbon tetrachloride	ND	ug/l	1.0				
1,2-Dichloropropane	ND	ug/l	3.5				
Dibromochloromethane	ND	ug/l	1.0				
1,1,2-Trichloroethane	ND	ug/l	1.5				
2-Chloroethylvinyl ether	ND	ug/l	10.				
Tetrachloroethene	ND	ug/l	1.5				
Chlorobenzene	ND	ug/l	3.5				
Trichlorofluoromethane	ND	ug/l	5.0				
1,2-Dichloroethane	ND	ug/l	1.5				
1,1,1-Trichloroethane	ND	ug/l	2.0				
Bromodichloromethane	ND	ug/l	1.0				
trans-1,3-Dichloropropene	ND	ug/l	1.5				
cis-1,3-Dichloropropene	ND	ug/l	1.5				
Bromoform	ND	ug/l	1.0				
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0				
Benzene	ND	ug/l	1.0				
Toluene	ND	ug/l	1.0				
Ethylbenzene	ND	ug/l	1.0				
Chloromethane	ND	ug/l	10.				
Bromomethane	ND	ug/l	5.0				
Vinyl chloride	ND	ug/l	2.0				
Chloroethane	ND	ug/l	2.0				
1,1-Dichloroethene	ND	ug/l	1.0				
trans-1,2-Dichloroethene	ND	ug/l	1.5				
cis-1,2-Dichloroethene	ND	ug/l	1.0				
Trichloroethene	ND	ug/l	1.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				
p/m-Xylene	ND	ug/l	2.0				
o-xylene	ND	ug/l	1.0				
Xylene (Total)	ND	ug/l	2.0				
Styrene	ND	ug/l	1.0				
Acetone	ND	ug/l	10.				
Carbon disulfide	ND	ug/l	5.0				
2-Butanone	ND	ug/l	10.				
Vinyl acetate	ND	ug/l	20.				
4-Methyl-2-pentanone	ND	ug/l	10.				
2-Hexanone	ND	ug/l	10.				
Acrolein	ND	ug/l	8.0				
Acrylonitrile	ND	ug/l	10.				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0600286

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
Blank Analysis for sample(s) 01 (WG226636-4)						
Volatile Organics by GC/MS 624 cont'd				5 624	0112 08:48 MM	
Surrogate(s)	Recovery		QC Criteria			
Pentafluorobenzene	102.	%	80-120			
Fluorobenzene	103.	%	80-120			
4-Bromofluorobenzene	111.	%	80-120			
Blank Analysis for sample(s) 01 (WG226419-1)						
SVOC's by GC/MS 8270				1 8270C	0111 13:00 0112 18:24 RL	
Acenaphthene	ND	ug/l	5.0			
Benzidine	ND	ug/l	50.			
1,2,4-Trichlorobenzene	ND	ug/l	5.0			
Hexachlorobenzene	ND	ug/l	5.0			
Bis(2-chloroethyl)ether	ND	ug/l	5.0			
1-Chloronaphthalene	ND	ug/l	5.0			
2-Chloronaphthalene	ND	ug/l	6.0			
1,2-Dichlorobenzene	ND	ug/l	5.0			
1,3-Dichlorobenzene	ND	ug/l	5.0			
1,4-Dichlorobenzene	ND	ug/l	5.0			
3,3'-Dichlorobenzidine	ND	ug/l	50.			
2,4-Dinitrotoluene	ND	ug/l	6.0			
2,6-Dinitrotoluene	ND	ug/l	5.0			
Azobenzene	ND	ug/l	5.0			
Fluoranthene	ND	ug/l	5.0			
4-Chlorophenyl phenyl ether	ND	ug/l	5.0			
4-Bromophenyl phenyl ether	ND	ug/l	5.0			
Bis(2-chloroisopropyl)ether	ND	ug/l	5.0			
Bis(2-chloroethoxy)methane	ND	ug/l	5.0			
Hexachlorobutadiene	ND	ug/l	10.			
Hexachlorocyclopentadiene	ND	ug/l	10.			
Hexachloroethane	ND	ug/l	5.0			
Isophorone	ND	ug/l	5.0			
Naphthalene	ND	ug/l	5.0			
Nitrobenzene	ND	ug/l	5.0			
NDPA/DPA	ND	ug/l	15.			
n-Nitrosodi-n-propylamine	ND	ug/l	5.0			
Bis(2-ethylhexyl)phthalate	ND	ug/l	10.			
Butyl benzyl phthalate	ND	ug/l	5.0			
Di-n-butylphthalate	ND	ug/l	5.0			
Di-n-octylphthalate	ND	ug/l	5.0			
Diethyl phthalate	ND	ug/l	5.0			
Dimethyl phthalate	ND	ug/l	5.0			
Benzo(a)anthracene	ND	ug/l	5.0			
Benzo(a)pyrene	ND	ug/l	5.0			
Benzo(b)fluoranthene	ND	ug/l	5.0			
Benzo(k)fluoranthene	ND	ug/l	5.0			
Chrysene	ND	ug/l	5.0			
Acenaphthylene	ND	ug/l	5.0			

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0600286

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG226419-1)							
SVOC's by GC/MS 8270 cont'd				1 8270C	0111 13:00	0112 18:24	RL
Anthracene	ND	ug/l	5.0				
Benzo(ghi)perylene	ND	ug/l	5.0				
Fluorene	ND	ug/l	5.0				
Phenanthrene	ND	ug/l	5.0				
Dibenzo(a,h)anthracene	ND	ug/l	5.0				
Indeno(1,2,3-cd)pyrene	ND	ug/l	7.0				
Pyrene	ND	ug/l	5.0				
Benzo(e)pyrene	ND	ug/l	5.0				
Biphenyl	ND	ug/l	5.0				
Perylene	ND	ug/l	5.0				
Aniline	ND	ug/l	10.				
4-Chloroaniline	ND	ug/l	5.0				
1-Methylnaphthalene	ND	ug/l	5.0				
2-Nitroaniline	ND	ug/l	5.0				
3-Nitroaniline	ND	ug/l	5.0				
4-Nitroaniline	ND	ug/l	7.0				
Dibenzofuran	ND	ug/l	5.0				
a,a-Dimethylphenethylamine	ND	ug/l	50.				
Hexachloropropene	ND	ug/l	10.				
Nitrosodi-n-butylamine	ND	ug/l	10.				
2-Methylnaphthalene	ND	ug/l	5.0				
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.				
Pentachlorobenzene	ND	ug/l	20.				
a-Naphthylamine	ND	ug/l	20.				
b-Naphthylamine	ND	ug/l	20.				
Phenacetin	ND	ug/l	10.				
Dimethoate	ND	ug/l	20.				
4-Aminobiphenyl	ND	ug/l	10.				
Pentachloronitrobenzene	ND	ug/l	10.				
Isodrin	ND	ug/l	10.				
p-Dimethylaminoazobenzene	ND	ug/l	10.				
Chlorobenzilate	ND	ug/l	20.				
3-Methylcholanthrene	ND	ug/l	20.				
Ethyl Methanesulfonate	ND	ug/l	15.				
Acetophenone	ND	ug/l	20.				
Nitrosodipiperidine	ND	ug/l	20.				
7,12-Dimethylbenz(a)anthracene	ND	ug/l	10.				
n-Nitrosodimethylamine	ND	ug/l	50.				
2,4,6-Trichlorophenol	ND	ug/l	5.0				
p-Chloro-m-cresol	ND	ug/l	5.0				
2-Chlorophenol	ND	ug/l	6.0				
2,4-Dichlorophenol	ND	ug/l	10.				
2,4-Dimethylphenol	ND	ug/l	10.				
2-Nitrophenol	ND	ug/l	20.				
4-Nitrophenol	ND	ug/l	10.				
2,4-Dinitrophenol	ND	ug/l	20.				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0600286

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG226419-1)							
SVOC's by GC/MS 8270 cont'd				1 8270C	0111 13:00	0112 18:24	RL
4,6-Dinitro-o-cresol	ND	ug/l	20.				
Pentachlorophenol	ND	ug/l	20.				
Phenol	ND	ug/l	7.0				
2-Methylphenol	ND	ug/l	6.0				
3-Methylphenol/4-Methylphenol	ND	ug/l	6.0				
2,4,5-Trichlorophenol	ND	ug/l	5.0				
2,6-Dichlorophenol	ND	ug/l	10.				
Benzoic Acid	ND	ug/l	50.				
Benzyl Alcohol	ND	ug/l	10.				
Carbazole	ND	ug/l	5.0				
Pyridine	ND	ug/l	50.				
2-Picoline	ND	ug/l	20.				
Pronamide	ND	ug/l	20.				
Methyl methanesulfonate	ND	ug/l	20.				
Surrogate(s)	Recovery		QC Criteria				
2-Fluorophenol	42.0	%	21-120				
Phenol-d6	34.0	%	10-120				
Nitrobenzene-d5	66.0	%	23-120				
2-Fluorobiphenyl	67.0	%	43-120				
2,4,6-Tribromophenol	80.0	%	10-120				
4-Terphenyl-d14	83.0	%	33-120				
Blank Analysis for sample(s) 01 (WG226420-1)							
PAH by GC/MS SIM 8270M				1 8270C-M	0111 13:00	0112 17:00	RL
Acenaphthene	ND	ug/l	0.20				
2-Chloronaphthalene	ND	ug/l	0.20				
Fluoranthene	ND	ug/l	0.20				
Hexachlorobutadiene	ND	ug/l	0.50				
Naphthalene	ND	ug/l	0.20				
Benzo(a)anthracene	ND	ug/l	0.20				
Benzo(a)pyrene	ND	ug/l	0.20				
Benzo(b)fluoranthene	ND	ug/l	0.20				
Benzo(k)fluoranthene	ND	ug/l	0.20				
Chrysene	ND	ug/l	0.20				
Acenaphthylene	ND	ug/l	0.20				
Anthracene	ND	ug/l	0.20				
Benzo(ghi)perylene	ND	ug/l	0.20				
Fluorene	ND	ug/l	0.20				
Phenanthrene	ND	ug/l	0.20				
Dibenzo(a,h)anthracene	ND	ug/l	0.20				
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20				
Pyrene	ND	ug/l	0.20				
1-Methylnaphthalene	ND	ug/l	0.20				
2-Methylnaphthalene	ND	ug/l	0.20				
Pentachlorophenol	ND	ug/l	0.80				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0600286

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG226420-1)							
PAH by GC/MS SIM 8270M cont'd				1 8270C-M	0111 13:00	0112 17:00	RL
Hexachlorobenzene	ND	ug/l	0.80				
Perylene	ND	ug/l	0.20				
Biphenyl	ND	ug/l	0.20				
2,6-Dimethylnaphthalene	ND	ug/l	0.20				
1-Methylphenanthrene	ND	ug/l	0.20				
Benzo(e)Pyrene	ND	ug/l	0.20				
Hexachloroethane	ND	ug/l	0.80				
Surrogate(s)	Recovery		QC Criteria				
2-Fluorophenol	50.0	%	21-120				
Phenol-d6	39.0	%	10-120				
Nitrobenzene-d5	73.0	%	23-120				
2-Fluorobiphenyl	61.0	%	43-120				
2,4,6-Tribromophenol	60.0	%	10-120				
4-Terphenyl-d14	73.0	%	33-120				
Blank Analysis for sample(s) 01 (WG226435-1)							
Polychlorinated Biphenyls				5 608	0111 15:00	0113 01:29	SS
Aroclor 1221	ND	ug/l	0.250				
Aroclor 1232	ND	ug/l	0.250				
Aroclor 1242/1016	ND	ug/l	0.250				
Aroclor 1248	ND	ug/l	0.250				
Aroclor 1254	ND	ug/l	0.250				
Aroclor 1260	ND	ug/l	0.250				
Surrogate(s)	Recovery		QC Criteria				
2,4,5,6-Tetrachloro-m-xylene	78.0	%	30-150				
Decachlorobiphenyl	78.0	%	30-150				

**ALPHA ANALYTICAL LABORATORIES
ADDENDUM I**

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
3. Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
4. Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.
5. Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).
14. Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water. EPA/600/4-88/039, Revised July 1991.
19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
74. Method 1664, Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

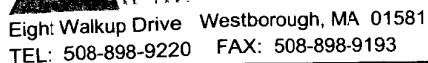
GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.
ND	Not detected in comparison to the reported detection limit.
NI	Not Ignitable.
ug/cart	Micrograms per Cartridge.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.



PAGE 1 OF 1

ALPHA Job #: L0600286

PC NPDES R612

1/17/20

Time:

NPDES RGP

PO #:

Have you met minimum field QC requirements?

(Please specify below)

Sample Specific Comments

100

ANALYSIS	
X	624
X	504
X	TSS
X	TRC / Ac + Cr
X	8470, PAH low
X	TPH - 1664
X	TCN
X	T Phenol
X	PCB-608
X	Metals *

* Metals :

(Sb, As, Cd, Cr, Pb
Hg, Ni, Se, Ag,
Zn, Fe)

Date/Time

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms. See reverse side.

RIZZO
ASSOCIATES

A TETRA TECH COMPANY

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JOB 12700219-004 - NPDES R6P
SHEET NO. 1 OF 2
CALCULATED BY JSC DATE 1/23/06
CHECKED BY _____ DATE _____
SCALE _____

7 Day 10 Year Low Flow
- 7Q10

Estimation Gauging Station: USGS 01097000, Assabet River @ Maynard, MA
- Lat: $42^{\circ}25'55''$, Long $71^{\circ}27'01''$ NAD 83
- Drainage Area = 114 mi^2

Source http://waterdata.usgs.gov/ma/nwis/dv/?site_no=01097000&agency_cd=USGS
- USGS

Low - daily mean value - 64 year record = $46.2 \text{ ft}^3/\text{sec}$ (August 29)
Average of low daily mean (7 days btw Aug ~~26~~ to Sep ~~4~~ ⁰¹)
= $50.3 \text{ ft}^3/\text{sec}$

Since Gauging St. USGS 01097000 is located approx. 8.5 mi downstream from the Site (12 Wheeler Road)

- And Site is located approx 4.2 mi downstream from Source (near Chapinville)

Say actual low-daily mean value averaged over 7 days, Aug 26 - Sep 01
is $12.5 \text{ ft}^3/\text{sec}$ (1/4 of $50 \text{ ft}^3/\text{sec}$.)

Assume 7Q10 is $12.5 \text{ ft}^3/\text{sec}$

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JOB 12700219-004 - APPES R6P

SHEET NO. 2 OF 2

CALCULATED BY ISC DATE 1/23/06

CHECKED BY _____ DATE _____

SCALE _____

Dilution Factor Calc

$$DF = (Q_d + Q_s) / Q_d$$

$$Q_d = 0.67 \text{ ft}^3/\text{sec} \quad \text{design max flow}$$

$$Q_s = 7Q_d = 12.5 \text{ ft}^3/\text{sec}$$

$$DF = (0.67 \text{ ft}^3/\text{sec} + 12.5 \text{ ft}^3/\text{sec}) / 0.67 \text{ ft}^3/\text{sec}$$

$$DF = 19.6 \quad \text{Say } 20$$

$$\text{Dilution Range} = 10-50$$

Total Recoverable Metals Limits @ 10-50 Dilution

Metal	Influent Concentration (ug/L)	Limit @ 0 DF	Limit @ 10-50 DF
As	39	10	100
Cd	0.7	0.2	20
Ch III	10	48.8	489
Cu	60	5.2	52
Pb	106	1.3	13
Zn	220	66.6	666
Fe	13,000	1,000	5,000



ESTIMATED HABITATS OF RARE WILDLIFE AND CERTIFIED VERNAL POOLS

For use with the MA Wetlands Protection Act regulations (310 CMR 10)

Effective October 1, 1999 through December 31, 2001

Produced by the Natural Heritage & Endangered Species Program, MA Division of Fisheries & Wildlife



0.5 0 0.5 1 Miles

See County Index Maps to
locate adjacent quadrangles



HUDSON QUAD

Town	Taxonomic Group	Scientific Name	Common Name	State Rank	Federal Rank	Most Recent Observation
HUDSON	Reptile	Clemmys guttata	Spotted Turtle	SC		1990
HUDSON	Reptile	Terrapene carolina	Eastern Box Turtle	SC		1985
HUDSON	Vascular Plant	Adlumia fungosa	Climbing Fumitory	T		1902

Source: Massachusetts Natural Heritage and Endangered Species Program - Listing by Town