



via email: alvarez.victor@epa.gov

March 9, 2011

United States Environmental Protection Agency
RGP-NOC Processing
One Congress Street
Boston, Massachusetts 02114-2023
Attn: Mr. Victor Alvarez

RE: Remediation General Permit (RGP) Notice of Intent (NOI)
Sutton Center Store
3 Singletary Avenue, Sutton, Massachusetts 01590
MADEP RTN 2-0131
Current RGP Authorization #MAG910434

Dear Mr. Alvarez:

On behalf of JEMS of New England, EnTact Solutions, Inc. (ETS) submits this *Remediation General Permit Notice of Intent* as a continuation of the current RGP Authorization #MAG910434 for the above-referenced location (the "Site"). The purpose of this Permit request is to allow for the discharge of treated groundwater associated with a groundwater recovery and treatment system, currently operating as part of ongoing environmental remediation activities as described in the *Remedy Operation Status Submittal* provided to MADEP in November 2001. An executed Notice of Intent is included as **Attachment A**.

As described in the attached Notice of Intent, groundwater is recovered from two groundwater recovery trenches sloped from a depth of 14 feet to 15 feet below grade, each of which contains an 18-inch corrugated PVC recovery well (RW-1 and RW-2) slotted from 1 to 15 feet below grade and installed at the deepest point of each trench. The recovery trenches and recovery wells are backfilled with ¾- to 1 ½-inch crushed stone to promote groundwater flow into the recovery well.

An 8-foot by 12-foot gable roof remediation shed installed on a concrete pad adjacent to RW-1 houses surface components for the GWPT system and a Grundfos 5E12 ½-horsepower electric submersible pump is installed in RW-1 and RW-2 and piped into the shed. Recovered groundwater is filtered through a Rosedale Model 8 bag filter assembly and treated through two 200-pound and one 300-pound high-pressure granular activated carbon adsorption (GACA) units prior to final discharge into the municipal storm drain network in accordance with the former National Pollution Discharge Elimination System (NPDES) Permit Exclusion (#99-123) for the Site.

The treated discharge is directed to the local storm drain located north of the Site in Singletary Avenue through 1½-inch diameter polyethylene piping, and is then drained to a seasonal wetland area located northwest of the Site. A figure depicting the Site location, the receiving storm drain catch basin and the approximate location of the discharge outfall into the seasonal wetland area is included in **Attachment B**.

Laboratory reports for groundwater samples collected from the influent and effluent points of the groundwater pump and treatment (GWPT) system are included in **Attachment C**, and the USGS StreamStats Streamflow Statistics Report used to derive the low-flow dilution at the outfall is included as **Attachment D**. The applicable endangered species report is included as **Appendix E**, and a Massachusetts DEP Priority Resource Map for the Site and surroundings is included as **Appendix F**.

If you have any questions regarding the contents of this submittal or our request for a Remediation General Permit to continue discharge under the guidelines of the Massachusetts Contingency Plan (MCP), please do not hesitate to contact the undersigned. Thank you for your consideration.

Sincerely,

ETS



Reginald H. Achilles, P.E.
President

cc: JEMS of New England, Inc.

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

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

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

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

IV - Miscellaneous Related Discharges	A. Aquifer Pump Testing to Evaluate Formerly Contaminated Sites ____ B. Well Development/Rehabilitation at Contaminated/Formely Contaminated Sites ____ C. Hydrostatic Testing of Pipelines and Tanks ____ D. Long-Term Remediation of Contaminated Sumps and Dikes ____ E. Short-term Contaminated Dredging Drain Back Waters (if not covered by 401/404 permit) ____
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2. Discharge information. Please provide information about the discharge, (attaching additional sheets as necessary) including:

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

3. Contaminant information.

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

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

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

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

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

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

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

⁴The sum of individual phthalate compounds.

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

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

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

<i>Step 1:</i> Do any of the metals in the influent exceed the effluent limits in Appendix III (i.e., the limits set at zero dilution)? Y____ N____	If yes, which metals?
<i>Step 2:</i> For any metals which exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metal:_____ DF:_____ Metal:_____ DF:_____ Metal:_____ DF:_____ Metal:_____ DF:_____ Etc.	Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the influent have the potential to exceed the corresponding effluent limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y____ N____ If Y, list which metals:

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

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:						
b) Identify each applicable treatment unit (check all that apply):	Frac. tank	Air stripper	Oil/water separator	Equalization tanks	Bag filter	GAC filter
	Chlorination	De-chlorination	Other (please describe):			

c) Proposed **average** and **maximum flow rates** (gallons per minute) for the discharge and the **design flow rate(s)** (gallons per minute) of the treatment system:

Average flow rate of discharge _____ gpm Maximum flow rate of treatment system _____ gpm

Design flow rate of treatment system _____ gpm

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

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

a) Identify the discharge pathway:	Direct to receiving water _____	Within facility (sewer) _____	Storm drain _____	Wetlands _____	Other (describe): _____
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:					
c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water: 1. For multiple discharges, number the discharges sequentially. 2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.					
d) Provide the state water quality classification of the receiving water _____					
e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water _____ cfs Please attach any calculation sheets used to support stream flow and dilution calculations.					
f) Is the receiving water a listed 303(d) water quality impaired or limited water? Y _____ N _____ If yes, for which pollutant(s)? _____					
Is there a final TMDL? Y _____ N _____ If yes, for which pollutant(s)? _____					

6. ESA and NHPA Eligibility.

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

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

7. Supplemental information.

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

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

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

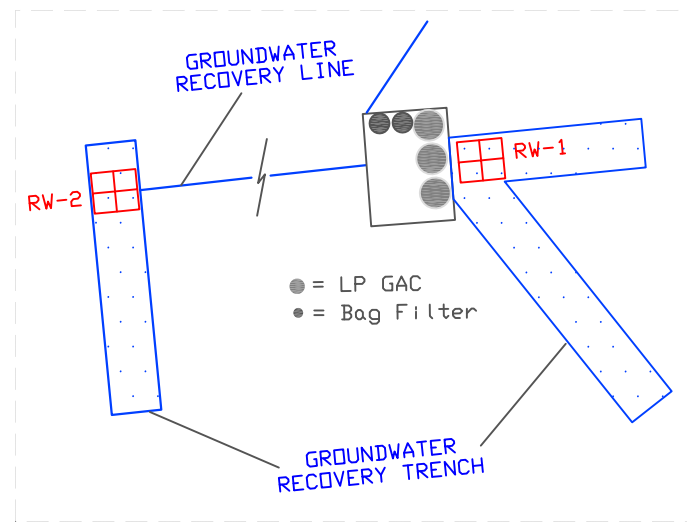
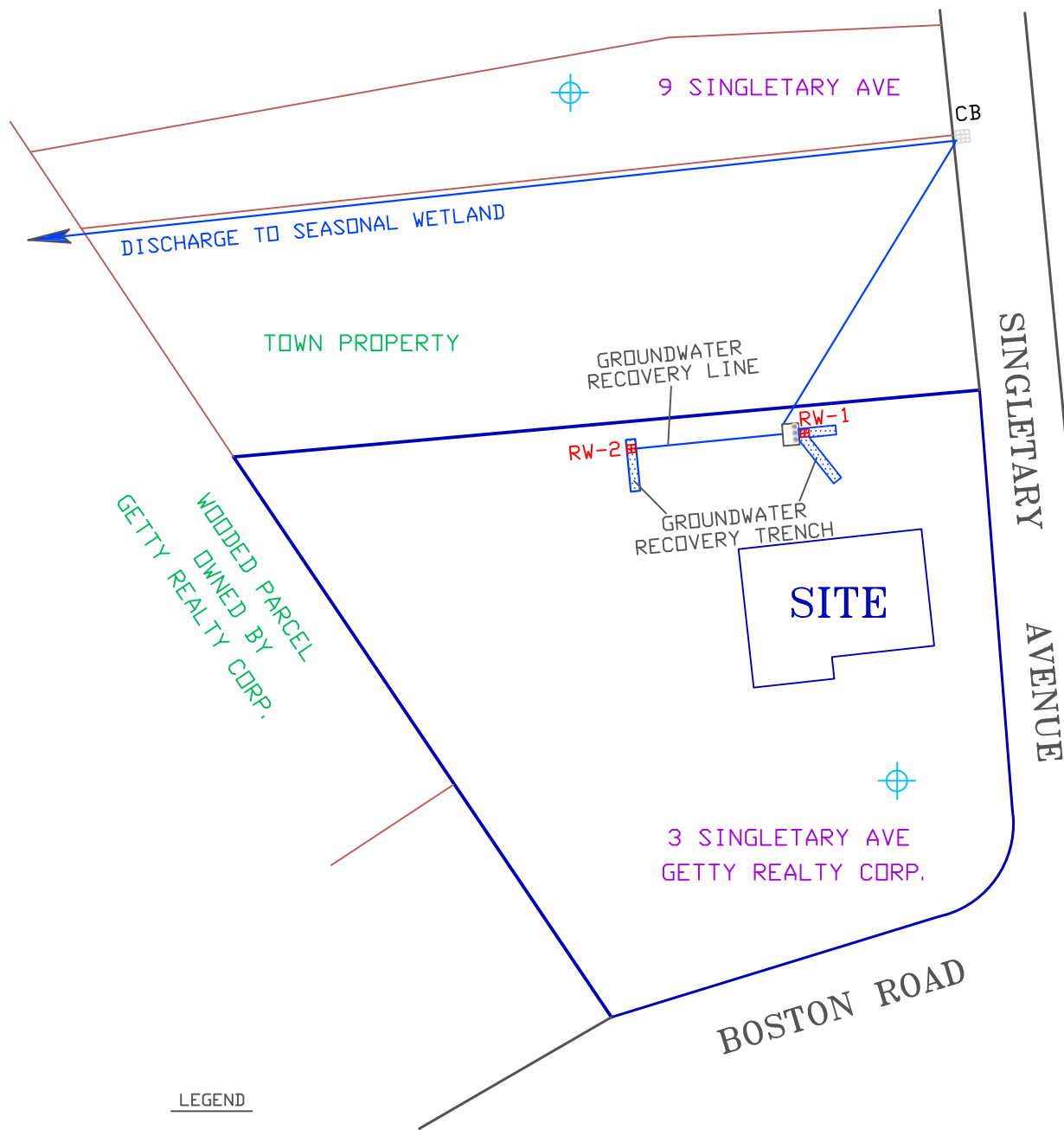
Facility/Site Name:

Operator signature:



Printed Name & Title:

Date:



- LEGEND**
- CATCH BASIN
 - PRIVATE WELL LOCATION
 - PROPERTY BOUNDARY APPROX
 - SITE PROPERTY BOUNDARY APPROX





ETS

ENVIRONMENTAL CONSULTING and MANAGEMENT SERVICES

FIGURE 1

GWPT SYSTEM DISCHARGE MAP

LOCATION	3 SINGLETARY AVENUE SUTTON, MA	
SCALE	AS NOTED	G05-RGP

1.1 Groundwater Pump and Treatment System

In accordance with the Phase IV RIP, a groundwater pump and treatment (GWPT) system and subsequent modifications were installed between December 1998 and March 1999 to maintain hydraulic control and remove dissolved-phase hydrocarbons in groundwater at the Site.

In December 1998, Lincoln Environmental installed a groundwater recovery trench west (downgradient) of the SVE piping at the Site. The trench was excavated and sloped from a depth of 14 feet to 15 feet below grade, and an 18-inch corrugated PVC recovery well (RW-1) slotted from 1 to 15 feet below grade was installed at the deepest point of the trench. The recovery trench and RW-1 were then backfilled with $\frac{3}{4}$ - to 1 $\frac{1}{2}$ -inch crushed stone to promote groundwater flow into the recovery well.

In March 1999, a trench was excavated from the northern boundary of the Site to a catch basin located north of the Site in Singletary Avenue for the installation of a discharge line for treated groundwater. The discharge line, which was constructed of 1 $\frac{1}{2}$ -inch diameter polyethylene piping, was installed a depth of approximately 3 feet below grade for ultimate discharge through the catch basin into the local storm drain collection system.

An 8-foot by 12-foot gable roof remediation shed was installed on a concrete pad adjacent to RW-1 to house surface components for the GPT system, and a Grundfos 5E12 $\frac{1}{2}$ -horsepower electric submersible pump was installed in RW-1 and piped into the shed. Recovered groundwater was filtered through a Rosedale Model 8 bag filter assembly and treated through two 200-pound and one 300-pound high-pressure granular activated carbon adsorption (GACA) units prior to final discharge into the municipal storm drain network in accordance with the National Pollution Discharge Elimination System (NPDES) Permit Exclusion (#99-123) for the Site.

1.2 Groundwater Pump and Treatment System Modifications

In September 2001, EnTact Solutions directed excavation and trenching activities for the installation of a second groundwater recovery trench on the western portion of the Site between MW-22R and MW-26. The purpose of the second groundwater recovery trench was to increase the impact of on-going remediation with supplemental groundwater recovery in downgradient portions of the Site. The trench was excavated and sloped from a depth of approximately 16 feet to 18 feet below grade, and an 18-inch diameter corrugated PVC recovery well (RW-2), slotted from 1 to 18 feet, was installed at the deepest point of the excavation. The recovery trench and RW-2 were backfilled with $\frac{3}{4}$ to 1 $\frac{1}{2}$ -inch crushed stone from 9 to 18 feet below grade, as groundwater was observed at a depth of 11 feet below grade during the excavation. The remaining excavation was backfilled to grade with clean native fill removed during the installation. Groundwater recovery and electrical conduits consisting of 2-inch diameter schedule 40 PVC piping were installed from RW-2 to the existing remediation shed in a trench measuring 3 feet deep by 4 feet wide. An additional Rosedale Model 8 bag filter assembly and flow meter were piped into the existing GPT network located inside the remediation shed to accommodate additional groundwater recovery flow from RW-2.

In October 2001, a second control panel required to operate a Grundfos 5E12 $\frac{1}{2}$ -horsepower submersible pump for RW-2 was installed and wired as necessary, and installation of the submersible pump for RW-2 was completed and tied into the existing GPT system on October 16, 2001.

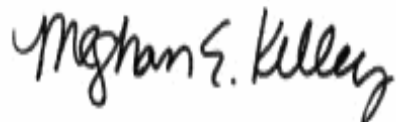
November 24, 2010

Reggie Achilles
Entact Solutions, Inc.
One Dix Street
Worcester, MA 01609

Project Location: 3 Singletary Ave., Sutton, MA
Client Job Number:
Project Number: GET-05
Laboratory Work Order Number: 10K0495

Enclosed are results of analyses for samples received by the laboratory on November 12, 2010. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Meghan E. Kelley
Project Manager

Entact Solutions, Inc.
One Dix Street
Worcester, MA 01609
ATTN: Reggie Achilles

REPORT DATE: 11/24/2010

PURCHASE ORDER NUMBER:

PROJECT NUMBER: GET-05

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 10K0495

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 3 Singletary Ave., Sutton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
System Effluent	10K0495-01	Ground Water		EPA 1664A EPA 504.1 SM18-20 2540D SM18-20 3500 Cr D SW-846 6010B SW-846 8260B SW-846 8270C Tri Chrome Calc.	
System Midfluent	10K0495-02	Ground Water		SW-846 8260B	
System Influent	10K0495-03	Ground Water		EPA 1664A EPA 504.1 SM18-20 2540D SM18-20 3500 Cr D SW-846 6010B SW-846 8260B SW-846 8270C Tri Chrome Calc.	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA 504.1

Qualifications:

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

1,2-Dibromoethane (EDB), 1,2-Dibromoethane (EDB) [2C]

B022293-BS1

SM18-20 3500 Cr D

Qualifications:

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

Hexavalent Chromium

10K0495-01[System Effluent], 10K0495-03[System Influent]

SW-846 8260B

Qualifications:

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy are associated with reported result.

Analyte & Samples(s) Qualified:

tert-Butyl Alcohol (TBA)

10K0495-01[System Effluent], 10K0495-02[System Midfluent], 10K0495-03[System Influent], B022370-BLK1, B022370-BS1, B022370-BSD1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Daren J. Damboragian
Laboratory Manager

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 3 Singletary Ave., Sutton, MA

Sample Description:

Work Order: 10K0495

Date Received: 11/12/2010

Field Sample #: System Effluent

Sampled: 11/11/2010 09:00

Sample ID: 10K0495-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:01	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:01	MFF
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	V-16	SW-846 8260B	11/16/10	11/16/10 19:01	MFF
Benzene	ND	1.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:01	MFF
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:01	MFF
Methyl tert-Butyl Ether (MTBE)	6.9	1.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:01	MFF
Toluene	ND	1.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:01	MFF
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:01	MFF
o-Xylene	ND	1.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:01	MFF
Surrogates	% Recovery	Recovery Limits	Flag						
1,2-Dichloroethane-d4	97.6	70-130							
Toluene-d8	99.6	70-130							
4-Bromofluorobenzene	98.1	70-130							

Project Location: 3 Singletary Ave., Sutton, MA

Sample Description:

Work Order: 10K0495

Date Received: 11/12/2010

Field Sample #: System Effluent

Sampled: 11/11/2010 09:00

Sample ID: 10K0495-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.30	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Acenaphthylene	ND	0.30	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Anthracene	ND	0.20	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Benzo(a)anthracene	ND	0.050	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Benzo(a)pyrene	ND	0.10	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Benzo(b)fluoranthene	ND	0.050	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Benzo(g,h,i)perylene	ND	0.50	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Benzo(k)fluoranthene	ND	0.20	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Chrysene	ND	0.20	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Dibenz(a,h)anthracene	ND	0.20	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Fluoranthene	ND	0.50	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Fluorene	ND	1.0	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
2-Methylnaphthalene	ND	1.0	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Naphthalene	ND	1.0	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Phenanthrene	ND	0.050	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Pyrene	ND	1.0	µg/L	1		SW-846 8270C	11/17/10	11/24/10 10:33	BGL
Surrogates	% Recovery	Recovery Limits	Flag						
Nitrobenzene-d5	68.9	30-130							
2-Fluorobiphenyl	73.4	30-130							
Terphenyl-d14	45.8	30-130							

Project Location: 3 Singletary Ave., Sutton, MA

Sample Description:

Work Order: 10K0495

Date Received: 11/12/2010

Field Sample #: System Effluent

Sampled: 11/11/2010 09:00

Sample ID: 10K0495-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Chromium	ND	0.010	mg/L	1		SW-846 6010B	11/18/10	11/18/10 16:11	OP
Chromium, Trivalent	0.0		mg/L	1		Tri Chrome Calc.	11/18/10	11/18/10 16:11	OP
Iron	0.13	0.050	mg/L	1		SW-846 6010B	11/18/10	11/18/10 16:11	OP
Lead	ND	0.010	mg/L	1		SW-846 6010B	11/18/10	11/18/10 16:11	OP
Nickel	ND	0.010	mg/L	1		SW-846 6010B	11/18/10	11/18/10 16:11	OP
Zinc	0.022	0.020	mg/L	1		SW-846 6010B	11/18/10	11/18/10 16:11	OP

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Project Location: 3 Singletary Ave., Sutton, MA

Sample Description:

Work Order: 10K0495

Date Received: 11/12/2010

Field Sample #: System Effluent

Sampled: 11/11/2010 09:00

Sample ID: 10K0495-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexavalent Chromium	ND	0.0040	mg/L	1	H-03	SM18-20 3500 Cr D	11/13/10	11/13/10 11:45	AED
Total Suspended Solids	ND	5.0	mg/L	1		SM18-20 2540D	11/17/10	11/18/10 10:00	LL
Silica Gel Treated HEM (SGT-HEM)	ND	1.5	mg/L	1		EPA 1664A	11/15/10	11/15/10 13:45	LL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 3 Singletary Ave., Sutton, MA

Sample Description:

Work Order: 10K0495

Date Received: 11/12/2010

Field Sample #: System Effluent

Sampled: 11/11/2010 09:00

Sample ID: 10K0495-01

Sample Matrix: Ground Water

Drinking Water Organics EPA 504.1

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2-Dibromoethane (EDB) (1)	ND	0.020	µg/L	1		EPA 504.1	11/15/10	11/15/10 16:16	JB
Surrogates	% Recovery	Recovery Limits			Flag				
1,3-Dibromopropane (1)	124	70-130						11/15/10 16:16	
1,3-Dibromopropane (2)	123	70-130						11/15/10 16:16	

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Project Location: 3 Singletary Ave., Sutton, MA

Sample Description:

Work Order: 10K0495

Date Received: 11/12/2010

Field Sample #: System Midfluent

Sampled: 11/11/2010 09:15

Sample ID: 10K0495-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:31	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:31	MFF
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	V-16	SW-846 8260B	11/16/10	11/16/10 19:31	MFF
Benzene	ND	1.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:31	MFF
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:31	MFF
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:31	MFF
Toluene	ND	1.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:31	MFF
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:31	MFF
o-Xylene	ND	1.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 19:31	MFF
Surrogates	% Recovery	Recovery Limits	Flag						
1,2-Dichloroethane-d4	100	70-130							
Toluene-d8	99.8	70-130							
4-Bromofluorobenzene	97.8	70-130							

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Project Location: 3 Singletary Ave., Sutton, MA

Sample Description:

Work Order: 10K0495

Date Received: 11/12/2010

Field Sample #: System Influent

Sampled: 11/11/2010 09:30

Sample ID: 10K0495-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260B	11/16/10	11/16/10 20:01	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260B	11/16/10	11/16/10 20:01	MFF
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	V-16	SW-846 8260B	11/16/10	11/16/10 20:01	MFF
Benzene	ND	1.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 20:01	MFF
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 20:01	MFF
Methyl tert-Butyl Ether (MTBE)	1.7	1.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 20:01	MFF
Toluene	ND	1.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 20:01	MFF
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 20:01	MFF
o-Xylene	ND	1.0	µg/L	1		SW-846 8260B	11/16/10	11/16/10 20:01	MFF
Surrogates	% Recovery	Recovery Limits	Flag						
1,2-Dichloroethane-d4	99.1	70-130							
Toluene-d8	98.9	70-130							
4-Bromofluorobenzene	99.2	70-130							

Project Location: 3 Singletary Ave., Sutton, MA

Sample Description:

Work Order: 10K0495

Date Received: 11/12/2010

Field Sample #: System Influent

Sampled: 11/11/2010 09:30

Sample ID: 10K0495-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.30	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Acenaphthylene	ND	0.30	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Anthracene	ND	0.20	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Benzo(a)anthracene	ND	0.050	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Benzo(a)pyrene	ND	0.10	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Benzo(b)fluoranthene	ND	0.050	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Benzo(g,h,i)perylene	ND	0.50	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Benzo(k)fluoranthene	ND	0.20	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Chrysene	ND	0.20	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Dibenz(a,h)anthracene	ND	0.20	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Fluoranthene	ND	0.50	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Fluorene	ND	1.0	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
2-Methylnaphthalene	ND	1.0	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Naphthalene	ND	1.0	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Phenanthrene	ND	0.050	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Pyrene	ND	1.0	µg/L	1		SW-846 8270C	11/17/10	11/24/10 11:09	BGL
Surrogates	% Recovery	Recovery Limits	Flag						
Nitrobenzene-d5	62.0	30-130							
2-Fluorobiphenyl	66.5	30-130							
Terphenyl-d14	55.8	30-130							

Project Location: 3 Singletary Ave., Sutton, MA

Sample Description:

Work Order: 10K0495

Date Received: 11/12/2010

Field Sample #: System Influent

Sampled: 11/11/2010 09:30

Sample ID: 10K0495-03

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Chromium	ND	0.010	mg/L	1		SW-846 6010B	11/18/10	11/18/10 16:17	OP
Chromium, Trivalent	0.0		mg/L	1		Tri Chrome Calc.	11/18/10	11/18/10 16:17	OP
Iron	8.0	0.050	mg/L	1		SW-846 6010B	11/18/10	11/18/10 16:17	OP
Lead	ND	0.010	mg/L	1		SW-846 6010B	11/18/10	11/18/10 16:17	OP
Nickel	ND	0.010	mg/L	1		SW-846 6010B	11/18/10	11/18/10 16:17	OP
Zinc	0.049	0.020	mg/L	1		SW-846 6010B	11/18/10	11/18/10 16:17	OP

Project Location: 3 Singletary Ave., Sutton, MA

Sample Description:

Work Order: 10K0495

Date Received: 11/12/2010

Field Sample #: System Influent

Sampled: 11/11/2010 09:30

Sample ID: 10K0495-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexavalent Chromium	ND	0.0040	mg/L	1	H-03	SM18-20 3500 Cr D	11/13/10	11/13/10 11:45	AED
Total Suspended Solids	10	5.0	mg/L	1		SM18-20 2540D	11/17/10	11/18/10 10:00	LL
Silica Gel Treated HEM (SGT-HEM)	1.7	1.6	mg/L	1		EPA 1664A	11/15/10	11/15/10 13:45	LL

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Project Location: 3 Singletary Ave., Sutton, MA

Sample Description:

Work Order: 10K0495

Date Received: 11/12/2010

Field Sample #: System Influent

Sampled: 11/11/2010 09:30

Sample ID: 10K0495-03

Sample Matrix: Ground Water

Drinking Water Organics EPA 504.1

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2-Dibromoethane (EDB) (1)	ND	0.020	µg/L	1		EPA 504.1	11/15/10	11/15/10 16:43	JB
Surrogates	% Recovery	Recovery Limits			Flag				
1,3-Dibromopropane (1)	71.1	70-130						11/15/10 16:43	
1,3-Dibromopropane (2)	72.6	70-130						11/15/10 16:43	

Sample Extraction Data**EPA 1664A**

Lab Number [Field ID]	Batch	Initial [mL]	Date	
10K0495-01 [System Effluent]	B022315	950	11/15/10	
10K0495-03 [System Influent]	B022315	900	11/15/10	

Prep Method: EPA 504 water-EPA 504.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
10K0495-01 [System Effluent]	B022293	35.0	35.0	11/15/10
10K0495-03 [System Influent]	B022293	35.0	35.0	11/15/10

SM18-20 2540D

Lab Number [Field ID]	Batch	Initial [mL]	Date	
10K0495-01 [System Effluent]	B022436	100	11/17/10	
10K0495-03 [System Influent]	B022436	100	11/17/10	

SM18-20 3500 Cr D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
10K0495-01 [System Effluent]	B022242	50.0	50.0	11/13/10
10K0495-03 [System Influent]	B022242	50.0	50.0	11/13/10

Prep Method: SW-846 3005A-SW-846 6010B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
10K0495-01 [System Effluent]	B022488	50.0	50.0	11/18/10
10K0495-03 [System Influent]	B022488	50.0	50.0	11/18/10

Prep Method: SW-846 5030B-SW-846 8260B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
10K0495-01 [System Effluent]	B022370	5	5.00	11/16/10
10K0495-02 [System Midfluent]	B022370	5	5.00	11/16/10
10K0495-03 [System Influent]	B022370	5	5.00	11/16/10

Prep Method: SW-846 3510C-SW-846 8270C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
10K0495-01 [System Effluent]	B022417	1000	1.00	11/17/10
10K0495-03 [System Influent]	B022417	1000	1.00	11/17/10

Prep Method: SW-846 3005A-Tri Chrome Calc.

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
10K0495-01 [System Effluent]	B022489	1.00	1.00	11/18/10
10K0495-03 [System Influent]	B022489	1.00	1.00	11/18/10

QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B022370 - SW-846 5030B										
Blank (B022370-BLK1)										
Prepared & Analyzed: 11/16/10										
Acetone	ND	50	µg/L				70-160		25	
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L				70-130		25	
tert-Butyl Alcohol (TBA)	ND	20	µg/L				70-130		25	V-16
Benzene	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Toluene	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	24.5		µg/L	25.0		98.1	70-130			
Surrogate: Toluene-d8	24.8		µg/L	25.0		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	24.9		µg/L	25.0		99.6	70-130			
LCS (B022370-BS1)										
Prepared & Analyzed: 11/16/10										
Acetone	138	50	µg/L	100		138	70-160		25	
tert-Amyl Methyl Ether (TAME)	9.18	0.50	µg/L	10.0		91.8	70-130		25	
tert-Butyl Alcohol (TBA)	99.6	20	µg/L	100		99.6	70-130		25	V-16
Benzene	9.33	1.0	µg/L	10.0		93.3	70-130			
Ethylbenzene	9.53	1.0	µg/L	10.0		95.3	70-130			
Methyl tert-Butyl Ether (MTBE)	9.86	1.0	µg/L	10.0		98.6	70-130			
Toluene	9.43	1.0	µg/L	10.0		94.3	70-130			
m+p Xylene	19.5	2.0	µg/L	20.0		97.4	70-130			
o-Xylene	9.73	1.0	µg/L	10.0		97.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	24.7		µg/L	25.0		98.9	70-130			
Surrogate: Toluene-d8	24.6		µg/L	25.0		98.4	70-130			
Surrogate: 4-Bromofluorobenzene	25.2		µg/L	25.0		101	70-130			
LCS Dup (B022370-BSD1)										
Prepared & Analyzed: 11/16/10										
Acetone	126	50	µg/L	100		126	70-160	9.12	25	
tert-Amyl Methyl Ether (TAME)	8.73	0.50	µg/L	10.0		87.3	70-130	5.03	25	
tert-Butyl Alcohol (TBA)	85.6	20	µg/L	100		85.6	70-130	15.1	25	V-16
Benzene	8.87	1.0	µg/L	10.0		88.7	70-130	5.05	25	
Ethylbenzene	8.95	1.0	µg/L	10.0		89.5	70-130	6.28	25	
Methyl tert-Butyl Ether (MTBE)	9.43	1.0	µg/L	10.0		94.3	70-130	4.46	25	
Toluene	8.84	1.0	µg/L	10.0		88.4	70-130	6.46	25	
m+p Xylene	18.2	2.0	µg/L	20.0		90.8	70-130	7.02	25	
o-Xylene	9.06	1.0	µg/L	10.0		90.6	70-130	7.13	25	
Surrogate: 1,2-Dichloroethane-d4	24.2		µg/L	25.0		97.0	70-130			
Surrogate: Toluene-d8	24.9		µg/L	25.0		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	24.9		µg/L	25.0		99.6	70-130			

QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B022417 - SW-846 3510C
Blank (B022417-BLK1)

Prepared: 11/17/10 Analyzed: 11/18/10

Acenaphthene	ND	0.30	µg/L							
Acenaphthylene	ND	0.30	µg/L							
Anthracene	ND	0.20	µg/L							
Benzo(a)anthracene	ND	0.050	µg/L							
Benzo(a)pyrene	ND	0.10	µg/L							
Benzo(b)fluoranthene	ND	0.050	µg/L							
Benzo(g,h,i)perylene	ND	0.50	µg/L							
Benzo(k)fluoranthene	ND	0.20	µg/L							
Chrysene	ND	0.20	µg/L							
Dibenz(a,h)anthracene	ND	0.20	µg/L							
Fluoranthene	ND	0.50	µg/L							
Fluorene	ND	1.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L							
2-Methylnaphthalene	ND	1.0	µg/L							
Naphthalene	ND	1.0	µg/L							
Phenanthrene	ND	0.050	µg/L							
Pyrene	ND	1.0	µg/L							
Surrogate: Nitrobenzene-d5	91.1		µg/L	100		91.1	30-130			
Surrogate: 2-Fluorobiphenyl	98.6		µg/L	100		98.6	30-130			
Surrogate: Terphenyl-d14	102		µg/L	100		102	30-130			

LCS (B022417-BS1)

Prepared: 11/17/10 Analyzed: 11/18/10

Acenaphthene	89.5	0.30	µg/L	100		89.5	40-140			
Acenaphthylene	84.5	0.30	µg/L	100		84.5	40-140			
Anthracene	92.3	0.20	µg/L	100		92.3	40-140			
Benzo(a)anthracene	89.6	0.050	µg/L	100		89.6	40-140			
Benzo(a)pyrene	86.0	0.10	µg/L	100		86.0	40-140			
Benzo(b)fluoranthene	85.1	0.050	µg/L	100		85.1	40-140			
Benzo(g,h,i)perylene	124	0.50	µg/L	100		124	40-140			
Benzo(k)fluoranthene	77.8	0.20	µg/L	100		77.8	40-140			
Chrysene	84.8	0.20	µg/L	100		84.8	40-140			
Dibenz(a,h)anthracene	123	0.20	µg/L	100		123	40-140			
Fluoranthene	86.3	0.50	µg/L	100		86.3	40-140			
Fluorene	93.2	1.0	µg/L	100		93.2	40-140			
Indeno(1,2,3-cd)pyrene	137	0.20	µg/L	100		137	40-140			
2-Methylnaphthalene	92.4	1.0	µg/L	100		92.4	40-140			
Naphthalene	83.8	1.0	µg/L	100		83.8	40-140			
Phenanthrene	91.2	0.050	µg/L	100		91.2	40-140			
Pyrene	84.0	1.0	µg/L	100		84.0	40-140			
Surrogate: Nitrobenzene-d5	91.4		µg/L	100		91.4	30-130			
Surrogate: 2-Fluorobiphenyl	98.6		µg/L	100		98.6	30-130			
Surrogate: Terphenyl-d14	100		µg/L	100		100	30-130			

QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B022417 - SW-846 3510C										
LCS Dup (B022417-BSD1)					Prepared: 11/17/10 Analyzed: 11/18/10					
Acenaphthene	86.8	0.30	µg/L	100		86.8	40-140	3.11	20	
Acenaphthylene	81.6	0.30	µg/L	100		81.6	40-140	3.58	20	
Anthracene	90.3	0.20	µg/L	100		90.3	40-140	2.13	20	
Benzo(a)anthracene	87.6	0.050	µg/L	100		87.6	40-140	2.18	50	
Benzo(a)pyrene	86.0	0.10	µg/L	100		86.0	40-140	0.0698	20	
Benzo(b)fluoranthene	89.2	0.050	µg/L	100		89.2	40-140	4.76	20	
Benzo(g,h,i)perylene	119	0.50	µg/L	100		119	40-140	4.12	20	
Benzo(k)fluoranthene	73.8	0.20	µg/L	100		73.8	40-140	5.16	20	
Chrysene	84.3	0.20	µg/L	100		84.3	40-140	0.603	20	
Dibenz(a,h)anthracene	120	0.20	µg/L	100		120	40-140	2.47	20	
Fluoranthene	86.7	0.50	µg/L	100		86.7	40-140	0.520	20	
Fluorene	92.3	1.0	µg/L	100		92.3	40-140	1.02	20	
Indeno(1,2,3-cd)pyrene	134	0.20	µg/L	100		134	40-140	2.21	50	‡
2-Methylnaphthalene	89.5	1.0	µg/L	100		89.5	40-140	3.16	20	
Naphthalene	82.1	1.0	µg/L	100		82.1	40-140	2.09	20	
Phenanthrene	89.1	0.050	µg/L	100		89.1	40-140	2.35	20	
Pyrene	82.1	1.0	µg/L	100		82.1	40-140	2.28	20	
Surrogate: Nitrobenzene-d5	89.9		µg/L	100		89.9	30-130			
Surrogate: 2-Fluorobiphenyl	99.0		µg/L	100		99.0	30-130			
Surrogate: Terphenyl-d14	99.8		µg/L	100		99.8	30-130			

QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B022488 - SW-846 3005A
Blank (B022488-BLK1)

Prepared & Analyzed: 11/18/10

Chromium	ND	0.010	mg/L							
Iron	ND	0.050	mg/L							
Lead	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
Zinc	ND	0.020	mg/L							

LCS (B022488-BS1)

Prepared & Analyzed: 11/18/10

Chromium	0.500	0.010	mg/L	0.500		100	80-120			
Iron	0.497	0.050	mg/L	0.500		99.3	80-120			
Lead	0.499	0.010	mg/L	0.500		99.7	80-120			
Nickel	0.505	0.010	mg/L	0.500		101	90-120			
Zinc	0.507	0.020	mg/L	0.500		101	80-120			

LCS Dup (B022488-BSD1)

Prepared & Analyzed: 11/18/10

Chromium	0.510	0.010	mg/L	0.500		102	80-120	2.03	20	
Iron	0.427	0.050	mg/L	0.500		85.5	80-120	15.0	20	
Lead	0.514	0.010	mg/L	0.500		103	80-120	3.02	20	
Nickel	0.514	0.010	mg/L	0.500		103	90-120	1.78	20	
Zinc	0.548	0.020	mg/L	0.500		110	80-120	7.78	20	

Batch B022489 - SW-846 3005A
Blank (B022489-BLK1)

Prepared & Analyzed: 11/18/10

Chromium, Trivalent	0.0		mg/L							
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QUALITY CONTROL
Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B022242 - SM18-20 3500 Cr D										
Blank (B022242-BLK1)				Prepared & Analyzed: 11/13/10						
Hexavalent Chromium	ND	0.0040	mg/L							
LCS (B022242-BS1)				Prepared & Analyzed: 11/13/10						
Hexavalent Chromium	0.098	0.0040	mg/L	0.100		97.9	80-120			
LCS Dup (B022242-BSD1)				Prepared & Analyzed: 11/13/10						
Hexavalent Chromium	0.095	0.0040	mg/L	0.100		95.2	80-120	2.77		
Batch B022315 - EPA 1664A										
Blank (B022315-BLK1)				Prepared & Analyzed: 11/15/10						
Silica Gel Treated HEM (SGT-HEM)	ND	1.4	mg/L							
LCS (B022315-BS1)				Prepared & Analyzed: 11/15/10						
Silica Gel Treated HEM (SGT-HEM)	18		mg/L	20.0		91.0	64-132			
LCS Dup (B022315-BSD1)				Prepared & Analyzed: 11/15/10						
Silica Gel Treated HEM (SGT-HEM)	19		mg/L	20.0		93.5	64-132	2.71		
Batch B022436 - SM18-20 2540D										
Blank (B022436-BLK1)				Prepared: 11/17/10 Analyzed: 11/18/10						
Total Suspended Solids	ND	2.5	mg/L							
Blank (B022436-BLK2)				Prepared: 11/17/10 Analyzed: 11/18/10						
Total Suspended Solids	ND	2.5	mg/L							
LCS (B022436-BS1)				Prepared: 11/17/10 Analyzed: 11/18/10						
Total Suspended Solids	185	5.0	mg/L	200		92.5	85.9-106			
LCS Dup (B022436-BSD1)				Prepared: 11/17/10 Analyzed: 11/18/10						
Total Suspended Solids	189	5.0	mg/L	200		94.5	85.9-106	2.14		

QUALITY CONTROL
Drinking Water Organics EPA 504.1 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B022293 - EPA 504 water
Blank (B022293-BLK1)

Prepared & Analyzed: 11/15/10

1,2-Dibromoethane (EDB)	ND	0.020	µg/L							
1,2-Dibromoethane (EDB) [2C]	ND	0.020	µg/L							
Surrogate: 1,3-Dibromopropane	0.959		µg/L	1.00		95.9	70-130			
Surrogate: 1,3-Dibromopropane [2C]	0.974		µg/L	1.00		97.4	70-130			

LCS (B022293-BS1)

Prepared & Analyzed: 11/15/10

1,2-Dibromoethane (EDB)	0.0770	0.020	µg/L	0.175		44.0 *	70-130			L-07
1,2-Dibromoethane (EDB) [2C]	0.0760	0.020	µg/L	0.175		43.4 *	70-130			L-07
Surrogate: 1,3-Dibromopropane	0.977		µg/L	1.00		97.7	70-130			
Surrogate: 1,3-Dibromopropane [2C]	1.00		µg/L	1.00		100	70-130			

LCS Dup (B022293-BS1)

Prepared & Analyzed: 11/15/10

1,2-Dibromoethane (EDB)	0.178	0.020	µg/L	0.175		102	70-130	79.2		
1,2-Dibromoethane (EDB) [2C]	0.201	0.020	µg/L	0.175		115	70-130	90.3		
Surrogate: 1,3-Dibromopropane	0.869		µg/L	1.00		86.9	70-130			
Surrogate: 1,3-Dibromopropane [2C]	0.894		µg/L	1.00		89.4	70-130			

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
H-03	Sample received after recommended holding time was exceeded.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy are associated with reported result.

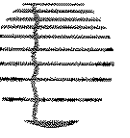
CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SM18-20 2540D in Water	
Total Suspended Solids	CT,MA,NH,NY,RI,NC
SM18-20 3500 Cr D in Water	
Hexavalent Chromium	NY,CT,NH,RI
SW-846 6010B in Water	
Chromium	CT,NH,NY,RI
Iron	CT,NH,NY,RI
Lead	CT,NH,NY,RI
Nickel	CT,NH,NY,RI
Zinc	CT,NH,NY,RI
SW-846 8260B in Water	
Benzene	CT,NH,NY,RI,NC
Ethylbenzene	CT,NH,NY,RI,NC
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY,NC
Naphthalene	NH,NY,NC
Toluene	CT,NH,NY,RI,NC
m+p Xylene	CT,NH,NY,RI,NC
o-Xylene	CT,NH,NY,RI,NC
SW-846 8270C in Water	
Acenaphthene	NY,CT,NH
Acenaphthylene	NY,CT,NH
Anthracene	NY,CT,NH
Benzo(a)anthracene	NY,CT,NH
Benzo(a)pyrene	NY,CT,NH
Benzo(b)fluoranthene	NY,CT,NH
Benzo(g,h,i)perylene	NY,CT,NH
Benzo(k)fluoranthene	NY,CT,NH
Chrysene	NY,CT,NH
Dibenz(a,h)anthracene	NY,CT,NH
Fluoranthene	NY,CT,NH
Fluorene	NY,CT,NH
Indeno(1,2,3-cd)pyrene	NY,CT,NH
Naphthalene	NY,CT,NH
Phenanthrene	NY,CT,NH
Pyrene	NY,CT,NH

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	American Industrial Hygiene Association	100033	01/1/2012
MA	Massachusetts DEP	M-MA100	06/30/2011
CT	Connecticut Department of Public Health	PH-0567	09/30/2011
NY	New York State Department of Health	10899 NELAP	04/1/2011
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2011
RI	Rhode Island Department of Health	LAO00112	12/30/2010
NC	North Carolina Div. of Water Quality	652	12/31/2010
NJ	New Jersey DEP	MA007 NELAP	06/30/2011
FL	Florida Department of Health	E871027 NELAP	06/30/2011
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2011
WA	State of Washington Department of Ecology	C2065	02/23/2011



con-test
ANALYTICAL LABORATORY

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Company Name: ETS

Address: 1-DIX ST.

WORCESTER, MA 01609

Attention: RMA

Project Location: 35 WILKINSON AVE, SUTTON, MA

Sampled By: B. LOTT

Project Proposal Provided? (for billing purposes)
☐ Yes ☐ No

Telephone: 508-298-8884

Project # 6-05

Client PO#

DATA DELIVERY (check all that apply)
☐ FAX ☒ EMAIL ☐ WEBSITE

Fax #

Email:

Format:

☐ PDF ☐ EXCEL ☐ OGIS
☐ OTHER

Collection

☐ "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)

Client Sample ID / Description

Beginning Date/Time

Ending Date/Time

Composite

Grab

Matrix Date

Date

Time

Time

Time

Time

Time

01 SYSTEM EFFLUENT

9:00 11-11-10

X

X

X

X

X

X

X

X

X

X

X

02 SYSTEM EFFLUENT

9:15 11-11-10

X

X

X

X

X

X

X

X

X

X

X

03 SYSTEM EFFLUENT

9:30 11-11-10

X

X

X

X

X

X

X

X

X

X

X

Comments:

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:

H - High, M - Medium, L - Low, C - Clean, U - Unknown

Relinquished by (signature) FRID

Date/Time: 11-11-10 17:00

Turnaround ^{††}

☒ 7-Day

☐ 10-Day

☐ Other

RUSH [†]

☐ 12-Hr

☐ 148-Hr

☐ 12-Hr

☐ 14-Day

Require lab approval

Other

Received by (signature) FRID

Date/Time: 11/11/10 17:00

Relinquished by (signature) FRID

Date/Time: 11/11/10 17:35

Received by (signature) FRID

Date/Time: 11/12/10 17:35

Relinquished by (signature) FRID

Date/Time: 11/12/10 17:35

Relinquished by (signature) FRID

Date/Time: 11-11-10 17:00

Relinquished by (signature) FRID

Date/Time: 11/11/10 17:35

Received by (signature) FRID

Date/Time: 11/12/10 17:35

Relinquished by (signature) FRID

Date/Time: 11/12/10 17:35

Relinquished by (signature) FRID

Date/Time: 11-11-10 17:00

Relinquished by (signature) FRID

Date/Time: 11/11/10 17:35

Received by (signature) FRID

Date/Time: 11/12/10 17:35

Relinquished by (signature) FRID

Date/Time: 11/12/10 17:35

TURNAROUND TIME (business days) STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED.



Sample Receipt Checklist

CLIENT NAME: ETSRECEIVED BY: TECDATE: 11/12/10

1) Was the chain(s) of custody relinquished and signed?

Yes No

2) Does the chain agree with the samples?

Yes No

If not, explain:

3) Are all the samples in good condition?

Yes No

If not, explain:

4) How were the samples received:

On Ice ☒Direct from Sampling ☐Ambient ☐In Cooler(s) ☒

Were the samples received in Temperature Compliance of (2-6°C)?

Yes No

N/A

Temperature °C by Temp blank

Temperature °C by Temp gun

5.5°C

5) Are there Dissolved samples for the lab to filter?

Yes No

Who was notified _____ Date _____ Time _____

6) Are there any samples "On Hold"?

Yes No

Stored where:

7) Are there any RUSH or SHORT HOLDING TIME samples?

Yes No

Who was notified _____ Date _____ Time _____

8) Location where samples are stored:

19
 Permission to subcontract samples? Yes No
 (Walk-in clients only) if not already approved
 Client Signature: _____

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber	<u>4</u>	8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Other glass jar	
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic	<u>4</u>	Air Cassette	
40 mL Vial - type listed below	<u>15</u>	SOC Kit	
Colisure / bacteria bottle		Tubes	
Dissolved Oxygen bottle		Non-ConTest Container	
Flashpoint bottle		Other	
Encore		PM 2.5 / PM 10	
Perchlorate Kit		PUF Cartridge	

Laboratory Comments:

 40 mL vials: # HCl 9 # Methanol _____
 # Bisulfate _____ # DI Water _____
 # Thiosulfate 6 Unpreserved _____

Time and Date Frozen:

Do all samples have the proper Acid pH: Yes No N/A

Do all samples have the proper Base pH: Yes No N/A



Massachusetts StreamStats

Streamstats Ungaged Site Report

Date: Fri Jan 28 2011 12:24:07 Mountain Standard Time

Site Location: Massachusetts

NAD27 Latitude: 42.1511 (42 09 04)

NAD27 Longitude: -71.7678 (-71 46 04)

NAD83 Latitude: 42.1512 (42 09 04)

NAD83 Longitude: -71.7673 (-71 46 02)

ReachCode: 01090003006563

Measure: 50.42

Drainage Area: 0.052 mi2

Low Flows Basin Characteristics			
100 % Statewide Low Flow (0.052 mi2)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	0.052 (below min value 1.61)	1.61	149
Mean Basin Slope from 250K DEM (percent)	4.52	0.32	24.6
Stratified Drift per Stream Length (square mile per mile)	0	0	1.29
Massachusetts Region (dimensionless)	0	0	1

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Probability of Perennial Flow Basin Characteristics			
100 % Perennial Flow Probability (0.052 mi2)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	0.052	0.01	1.99
Percent Underlain By Sand And Gravel (percent)	0.00	0	100
Percent Forest (percent)	61.59	0	100
Massachusetts Region (dimensionless)	0	0	1

Low Flows Streamflow Statistics					
Statistic	Flow (ft ³ /s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
				Minimum	Maximum
D50	0.0468				
D60	0.0258				
D70	0.0113				
D75	0.00773				
D80	0.00597				
D85	0.00395				
D90	0.00254				
D95	0.00125				
D98	0.000714				
D99	0.000451				
M7D2Y	0.00128				
AUGD50	0.00402				
M7D10Y	0.000361				

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

$$Q_d = 0.0056$$

$$Q_s = 0.000361$$

$$[(0.0056 + 0.000361) / 0.0056 = 1.064]$$

$$DF = 1.064$$

The equation for estimating the probability of perennial flow is applicable for most areas of Massachusetts except eastern Buzzards Bay, Cape Cod, and the Island regions. The estimate obtained from the equation assumes natural flow conditions at the site. The equation also is best used for sites with drainage areas between 0.01 to 1.99 mi2, as errors beyond for basins beyond these bounds are unknown.

Probability of Perennial Flow Statistics		
Statistic	Value	Standard Error (percent)
PROBPEN	0.18	0.4

Group	Name	Population	Status	Lead Office	Recovery Plan Name	Recovery Plan Stage
Birds	Arctic peregrine Falcon (Falco		Recovery	Fairbanks Fish And Wildlife		
Flowering Plants	Small whorled pogonia (Isotria		Threatened	New England Ecological	Small Whorled Pogonia	Final Revision 1
Flowering Plants	Sandplain gerardia (Agalinis		Endangered	Long Island Ecological Services	Sandplain Gerardia	Final

