UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
BOSTON, MA 02109-3912

CERTIFIED MAIL RETURN RECEIPT REQUESTED

APR 2 9 2013

Rick Mandile, Principal
SAGE Environmental, Inc.
172 Armistice Boulevard
Pawtucket, RI 02860

Re: Authorization to discharge under the Remediation General Permit (RGP) – MAG910000. Former Kilburn Glass/ Isotronics site located at 111 South Worcester Street, Norton, MA 02766, County; Authorization # 010573

Dear Mr. Mandile:

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

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

Please note EPA is requiring monitoring of all the pollutants established in the NOI classification selected [Sub-category A - Volatile Organic Compound (VOC) Only Sites] due to the history of contamination at the site. This permit authorization for the discharge of effluent from the site is contingent upon certification by the owner or operator that the receiving water is to an uncontaminated body of water such is the fire pond adjacent to the site designated to be the receiving water body.

Also, please note that the metal included on the checklist is a dilution dependent pollutant and subject to limitations based on a dilution factor range (DFR). With the absence of dilution to ponds, EPA determined that the DFR for each parameter is in the one and five (1-5) range. (See the RGP Appendix IV for Massachusetts facilities) Therefore, the limit for iron of 1,000 ug/L, is required to achieve permit compliance at your site.

Finally, please note the checklist of pollutants attached to this authorization is subject to a recertification if the operations at the site result in a discharge lasting longer than six months. A recertification can be submitted to EPA within six (6) to twelve (12) months of operations in accordance with the 2010 RGP regulations.

This general permit and authorization to discharge will expire on September 9, 2015. You have reported that this project will terminate on an unknown date in the future. If for any reason the discharge terminates sooner you are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within 30 days of project completion.

Thank you in advance for your cooperation in this matter. Please contact Victor Alvarez at 617-918-1572 or Alvarez.Victor@epa.gov, if you have any questions.

Sincerely,

Thelma Murphy

Thelma Murphy, Manager
Storm Water and Construction
Permits Section

Enclosure

cc: Robert Kubit, MassDEP
Jennifer Carlino, C.C.

2010 Remediation General Permit
Summary of Monitoring Parameters[1]

NPDES Authorization Number:	**MAG910573**
Authorization Issued:	April, 2013
Facility/Site Name:	Former Kilburn Glass / Isotronics
Facility/Site Address:	111 South Worcester Street, Norton, MA 02766, Middlesex County
	Email address of owner: jmb@imblawoffices.com
Legal Name of Operator:	SAGE Environmental, Inc.
Operator contact name, title, and Address:	172 Armistice Boulevard, Pawtucket, RI 02860
	Email: rmandile@sageenvironmental.com
Estimated Site Completion Date:	Unknown
Category and Sub-Category:	Non Petroleum Related Contamination. Subcategory A. Volatile Organic Site Contamination only
RGP Termination Date:	September 10, 2015
Receiving Water:	Unnamed Fire Pond at the site

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

	Parameter	**Effluent Limit/Method#/ML** (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
√	1. Total Suspended Solids (TSS)	30 milligrams/liter (mg/L) **, 50 mg/L for hydrostatic testing **, Me#60.2/ML5ug/L
	2. Total Residual Chlorine (TRC) [1]	Freshwater = 11 ug/L ** Saltwater = 7.5 ug/L **/ Me#330.5/ML 20ug/L
√	3. Total Petroleum Hydrocarbons (TPH)	5.0 mg/L/ Me# 1664A/ML 5.0mg/L
	4. Cyanide (CN) [2, 3]	Freshwater = 5.2 ug/l ** Saltwater = 1.0 ug/L **/ Me#335.4/ML 10ug/L
	5. Benzene (B)	5ug/L /50.0 ug/L for hydrostatic testing only/ Me#8260C/ML 2 ug/L
	6. Toluene (T)	(limited as ug/L total BTEX)/ Me#8260C/ ML 2ug/L
	7. Ethylbenzene (E)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
	8. (m,p,o) Xylenes (X)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
√	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) [4]	100 ug/L/ Me#8260C/ ML 2ug/L

	Parameter	**Effluent Limit/Method#/ML** (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
	11. Methyl-tert-Butyl Ether (MtBE)	70.0 ug/l/Me#8260C/ML 10ug/L
	12.tert-Butyl Alcohol (TBA) (TertiaryButanol)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
	13. tert-Amyl Methyl Ether (TAME)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
	14. Naphthalene [5]	20 ug/L /Me#8260C/ML 2ug/L
√	15. Carbon Tetrachloride	4.4 ug/L /Me#8260C/ ML 5ug/L
√	16. 1,2 Dichlorobenzene (o-DCB)	600 ug/L /Me#8260C/ ML 5ug/L
√	17. 1,3 Dichlorobenzene (m-DCB)	320 ug/L /Me#8260C/ ML 5ug/L
√	18. 1,4 Dichlorobenzene (p-DCB)	5.0 ug/L /Me#8260C/ ML 5ug/L
	18a. Total dichlorobenzene	763 ug/L - NH only /Me#8260C/ ML 5ug/L
√	19. 1,1 Dichloroethane (DCA)	70 ug/L /Me#8260C/ ML 5ug/L
√	20. 1,2 Dichloroethane (DCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
√	21. 1,1 Dichloroethene (DCE)	3.2 ug/L/Me#8260C/ ML 5ug/L
√	22. cis-1,2 Dichloroethene (DCE)	70 ug/L/Me#8260C/ ML 5ug/L
√	23. Methylene Chloride	4.6 ug/L/Me#8260C/ ML 5ug/L
√	24. Tetrachloroethene (PCE)	5.0 ug/L/Me#8260C/ ML 5ug/L
√	25. 1,1,1 Trichloro-ethane (TCA)	200 ug/L/Me#8260C/ ML 5ug/L
√	26. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
√	27. Trichloroethene (TCE)	5.0 ug/L /Me#8260C/ ML 5ug/L
√	28. Vinyl Chloride (Chloroethene)	2.0 ug/L /Me#8260C/ ML 5ug/L
√	29. Acetone	Monitor Only(ug/L)/Me#8260C/ML 50ug/L
√	30. 1,4 Dioxane	Monitor Only /Me#1624C/ML 50ug/L
√	31. Total Phenols	300 ug/L Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML 50ug/L
√	32. Pentachlorophenol (PCP)	1.0 ug/L /Me#8270D/ML 5ug/L,Me#604 &625/ML 10ug/L
√	33. Total Phthalates (Phthalate esters) [6]	3.0 ug/L ** /Me#8270D/ML 5ug/L, Me#606/ML 10ug/L& Me#625/ML 5ug/L
√	34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	6.0 ug/L /Me#8270D/ML 5ug/L,Me#606/ML 10ug/L & Me#625/ML 5ug/L
	35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/L
	a. Benzo(a) Anthracene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L

	Parameter	Effluent Limit/Method#/ML (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
	b. Benzo(a) Pyrene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	c. Benzo(b)Fluoranthene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	d. Benzo(k)Fluoranthene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	e. Chrysene [7]	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	f. Dibenzo(a,h)anthracene [7]	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
	g. Indeno(1,2,3-cd) Pyrene [7]	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML5ug/L
	36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	100 ug/L
	h. Acenaphthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	i. Acenaphthylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	j. Anthracene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	k. Benzo(ghi) Perylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	l. Fluoranthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	m. Fluorene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	n. Naphthalene [5]	20 ug/l / Me#8270/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
	o. Phenanthrene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	p. Pyrene	X/Me#8270D/ML5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	37. Total Polychlorinated Biphenyls (PCBs) [8, 9]	0.000064 ug/L/Me# 608/ ML 0.5 ug/L
√	38. Chloride	Monitor only/Me# 300.0/ ML 0.1ug/L

	Metal parameter	Total Recoverable Metal Limit @ H [10]= 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) [11/12]		Minimum level=ML	
		Freshwater	Saltwater		
	39. Antimony	5.6/ML 10			
	40. Arsenic **	10/ML20	36/ML 20		

	Metal parameter	Total Recoverable Metal Limit @ H [10]= 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) [11/12]		Minimum level=ML	
		Freshwater	Saltwater		
	41. Cadmium **	0.2/ML10	8.9/ML 10		
	42. Chromium III (trivalent) **	48.8/ML15	100/ML 15		
	43. Chromium VI (hexavalent) **	11.4/ML10	50.3/ML 10		
	44. Copper **	5.2/ML15	3.7/ML 15		
	45. Lead **	1.3/ML20	8.5/ML 20		
	46. Mercury **	0.9/ML0.2	1.1/ML 0.2		
	47. Nickel **	29/ML20	8.2/ML 20		
	48. Selenium **	5/ML20	71/ML 20		
	49. Silver	1.2/ML10	2.2/ML 10		
	50. Zinc **	66.6/ML15	85.6/ML 15		
√	51. Iron	1,000/ML 20			

	Other Parameters	Limit
√	52. Instantaneous Flow	Site specific in CFS
√	53. Total Flow	Site specific in CFS
√	54. pH Range for Class A & Class B Waters in MA	6.5-8.3; 1/Month/Grab[13]
	55. pH Range for Class SA & Class SB Waters in MA	6.5-8.3; 1/Month/Grab[13]
	56. pH Range for Class B Waters in NH	6.5-8; 1/Month/Grab[13]
	57. Daily maximum temperature - Warm water fisheries	83°F; 1/Month/Grab[14]
	58. Daily maximum temperature - Cold water fisheries	68°F; 1/Month/Grab[14]
	59. Maximum Change in Temperature in MA - Any Class A water body	1.5°F; 1/Month/Grab[14]
	60. Maximum Change in Temperature in MA - Any Class B water body- Warm Water	5°F; 1/Month/Grab[14]
	61. Maximum Change in Temperature in MA – Any Class B water body - Cold water and Lakes/Ponds	3°F; 1/Month/Grab[14]
	62. Maximum Change in Temperature in MA – Any Class SA water body - Coastal	1.5°F; 1/Month/Grab[14]
	63. Maximum Change in Temperature in MA – Any Class SB water body - July to September	1.5°F; 1/Month/Grab[14]
	64. Maximum Change in Temperature in MA –Any Class SB water body - October to June	4°F; 1/Month/Grab[14]

Footnotes:

[1] Although the maximum values for TRC are 11ug/l and 7.5 ug/l for freshwater, and saltwater respectively, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., Method 330.5, 20 ug/l).
[2] Limits for cyanide are based on EPA's water quality criteria expressed as micrograms per liter. There is currently no EPA approved test method for free cyanide. Therefore, total cyanide must be reported.
[3] Although the maximum values for cyanide are 5.2 ug/l and 1.0 ug/l for freshwater and saltwater, respectively, the compliance limits are equal to the minimum level (ML) of the Method 335.4 as listed in Appendix VI (i.e., 10 ug/l).
[4] BTEX = sum of Benzene, Toluene, Ethylbenzene, and total Xylenes.
[5] Naphthalene can be reported as both a purgeable (VOC) and extractable (SVOC) organic compound. If both VOC and SVOC are analyzed, the highest value must be used unless the QC criteria for one of the analyses is not met. In such cases, the value from the analysis meeting the QC criteria must be used.
[6] The sum of individual phthalate compounds(not including the #34, Bis (2-Ethylhexyl) Phthalate . The compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.
Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measurement of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.
[7] Although the maximum value for the individual PAH compounds is 0.0038 ug/l, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.
[8] In the November 2002 WQC, EPA has revised the definition of Total PCBs for aquatic life as total PCBs is the sum of all homologue, all isomer, all congener, or all "Oroclor analyses."Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measure of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.
[9]Although the maximum value for total PCBs is 0.000064 ug/l, the compliance limit is equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., 0.5 ug/l for Method 608 or 0.00005 ug/l when Method 1668a is approved).
[10] Hardness. Cadmium, Chromium III, Copper, Lead, Nickel, Silver, and Zinc are Hardness Dependent.
[11] For a Dilution Factor (DF) from 1 to 5, metals limits are calculated using DF times the base limit for the metal. See Appendix IV. For example, iron limits are calculated using DF x 1,000ug/L (the iron base limit). Therefore DF is 1.5, the iron limit will be 1,500 ug/L; DF 2, then iron limit =1,000 x 2 =2,000 ug/L., etc. not to exceed the DF=5.
[12] Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratory-determined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B).
[13] pH sampling for compliance with permit limits may be performed using field methods as provided for i11123n EPA test Method 150.1.
[14] Temperature samp4ling per Method 170.1

April 9, 2013

SAGE
ENVIRONMENTAL

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

RE: Remediation General Permit Submittal
Former Kilburn Glass
111 South Worcester Street
Norton, MA
SAGE Project #R054

Dear Sir/Madam:

SAGE Environmental, Inc. (*SAGE*) is submitting this Notice of Intent for a Remediation General Permit on behalf of our client.

As noted in attachment 2, the property was previously covered by RGP # MAG910000 to Kilburn Isotronics: authorized on #MAG910018 between September 2005 through September 9, 2010.

Releases of chlorinated compounds have contaminated portions of the subject property's soils and groundwater. The property has had a groundwater pumping and treatment remedial system in operation for many years (i.e. since the early 1990's). MADEP representatives have indicated that the remedial system may not be providing significant benefit and may need to be augmented via the introduction of remedial additives into subsurface soils and groundwater. The system was shut down in February 2011 to evaluate new treatment technologies. *SAGE* collected a groundwater sample from RW-4 on April 4, 2013 as required by the RGP (see attached).

Should you have any questions, please do not hesitate to contact me.

Sincerely,
SAGE Environmental, Inc.

Rick Mandile
Principal

RJM/dds

Attachment

172 Armistice Blvd.
Pawtucket, Rhode Island 02860
401-723-9900
FAX 401-723-9973
www.sageenvironmental.net

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:** Former Kilburn Glass Site		**Facility/site** mailing address:		
Location of **facility/site:** longitude: 71 deg. 12' 52.53" latitude: 41 deg. 56' 50.70"	Facility SIC code(s): 3260	Street: 111 South Worcester Street		
b) Name of **facility/site owner:**		Town: Norton		
Email address of facility/site owner: jmb@jmblawoffices.com		State: MA	Zip: 02766	County:
Telephone no. of facility/site **owner:** 401-595-5995				
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):		Gifford Investments, Inc.		
Street: 250 Rumstick Road				
Town: Barrington	State: RI	Zip: 02806	County:	
c) Legal name of **operator:**	**Operator** telephone no: 401-723-9900			
SAGE Environmental, Inc.	**Operator** fax no.: 401-723-9973	**Operator** email: rmandile@sageenvironmental		
Operator contact name and title: Rick Mandile, Principal				
Address of **operator** (if different from owner):	Street: 172 Armistice Boulevard			
Town: Pawtucket	State: RI	Zip: 02860	County: Providence	

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: not available
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge?
Y ◉ N ○, if Y, date and tracking #: 9/26/2005 #MAG910018
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.

Activity Category	**Activity Sub-Category**
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/Formerly Contaminated Sites ☐ C. Hydrostatic Testing of Pipelines and Tanks ☐ D. Long-Term Remediation of Contaminated Sumps and Dikes ☐ E. Short-term Contaminated Dredging Drain Back Waters (if not covered by 401/404 permit) ☐

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

a) Describe the discharge activities for which the owner/applicant is seeking coverage:

Discharge of remedial wastewater - pretreated with carbon filtration

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, ft^3/s)?
Max. flow 25-30 gpm Is maximum flow a **design value**? Y ◉ N ○
Average flow (include units) 1.5 gpm Is average flow a design value or estimate? estimate

3) Latitude and longitude of each discharge within 100 feet:

pt.1: lat	41 deg 56' 51.00" N	long	71 deg 12' 55.46" W	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): N/A

5) Is the discharge intermittent ____ or seasonal____?
Is discharge ongoing? Y ◉ N ○

c) Expected dates of discharge (mm/dd/yy): start April 1 end TBD

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): water from well RW-4 will pump through carbon filtered treatment system and discharge to man-made fire pond. See attached path on Site Sketch (Figure tab).

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.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (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)
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.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (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)
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	☒	☐								

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (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)
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)		☒	☐								

[4] The sum of individual phthalate compounds.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (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)
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):		☒	☐								

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (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)
		☐	☐								
		☐	☐								

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

Step 1: 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? N/A
Step 2: 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: N/A 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: N/A

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:

Please see Attachment 1

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 1 gpm Maximum flow rate of treatment system 10 gpm
Design flow rate of treatment system 30 gpm

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

N/A

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): man-made fire pond

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:
Please see Attachment 1

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 Class B per DEP

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water N/A 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.

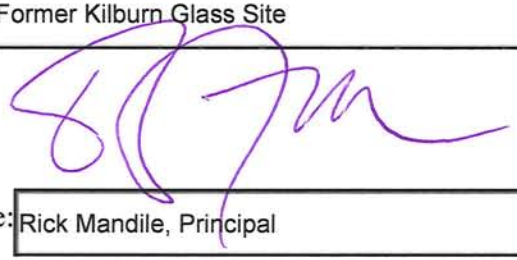
7. Supplemental information.

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

The site is a well known disposal site in the MCP. A previous RGP authorization was granted in 2005 for the existing system. Please see attached authorization. Although the site is technically a new discharger due to the permit coverage termination in 2010, the site conditions have remained relatively the same. The application purpose is to recommence treatment of pumped groundwater at the site. Historic data tables are attached in Tables tab for reference.

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:	Former Kilburn Glass Site
Operator signature:	
Printed Name &Title:	Rick Mandile, Principal
Date:	4/9/2013

Sample / Date / Analyte	Concentration	MADEP Method 1 Standard			MADEP Method 3 Groundwater UCL
	RW-4	GW-1 Groundwater	GW-2 Groundwater	GW-3 Groundwater	
	4/4/2013				
TPH by 1664A (mg/l):					
Total Petroleum Hydrocarbons	<2	0.2	5	5	50
Semivolatile Organic Compounds by 8270D (ug/l):					
Di-n-octyl phthalate	<2	NE	NE	NE	NE
Dimethyl phthalate	<2	30000	50000	50000	100000
Diethyl phthalate	<2	2000	50000	9000	100000
Pentachlorophenol	<5 tj	1	NE	200	2000
Di-n-butylphthalate	<3	NE	NE	NE	NE
Butyl benzyl phthalate	<2	NE	NE	NE	NE
bis(2-Ethylhexyl)phthalate	<3	6	NE	50000	100000
Total Phthalates (Phthalates Esthers)	<2	NE	NE	NE	NE
PCBs by 8082A (ug/l):					
Aroclor-1016	<0.2	—	—	—	—
Aroclor-1221	<0.2	—	—	—	—
Aroclor-1232	<0.2	—	—	—	—
Aroclor-1242	<0.2	—	—	—	—
Aroclor-1248	<0.2	—	—	—	—
Aroclor-1254	<0.2	—	—	—	—
Aroclor-1260	<0.2	—	—	—	—
Aroclor-1262	<0.2	—	—	—	—
Aroclor-1268	<0.2	—	—	—	—
Total PCB	<0.2	0.5	5	10	100
Volatile Organic Compounds by 8260B (ug/l):					
1,2-Dichlorobenzene	<2	600	2000	2000	20000
1,3-Dichlorobenzene	<2	40	2000	50000	100000
Carbon Tetrachloride	<2	5	2	5000	50000
1,4-Dichlorobenzene	<2	5	200	8000	80000
Total Dichlorobenzene	<2	NE	NE	NE	100
1,1-Dichloroethane	<2	70	1000	20000	100000
1,2-Dichloroethane	<2	5	5	20000	100000
1,1-Dichloroethene	**16**[a]	7	80	30000	100000
cis-1,2-Dichloroethene	**7700**[ab]	70	100	50000	100000
Methylene Chloride	<2	5	10000	50000	100000
Trichloroethene	**42000**[abc]	5	30	5000	50000
Tetrachloroethene	**19000**[ab]	5	50	30000	100000
1,1,1-Trichloroethane	25	200	4000	20000	100000
1,1,2-Trichloroethane	<2	5	9000	50000	100000
Vinyl Chloride	**400**[ab]	2	2	50000	100000
Acetone	<10	6300	50000	50000	100000
Benzene	<2	5	2000	10000	100000
Toluene	<2	1000	50000	40000	100000
Ethylbenzene	<2	700	20000	5000	100000
m&p-Xylene	<4	10000	9000	5000	100000
Total Xylenes	<2	10000	9000	5000	100000
1,4-Dioxane	<500	3	6000	50000	100000
Total Metals by 200.7 (mg/l):					
Iron	1.87	NE	NE	NE	20000
Manganese	1.05	NE	NE	NE	100000
Total Phenols by 420.1 (ug/l):					
Phenols	<0.05	NE	NE	NE	20000
Total Suspended Solids by 2540D (mg/l):					
Total Suspended Solids	<1	NE	NE	NE	20000
Total Cyanide by 4500CN-C-E (mg/l):					
Cyanide	<1	200	NE	30	20000

Where necessary, the MADEP standards have been converted from ppm to ppb, or vice-versa, to match the laboratory reporting method.

NE: No standard is established for the substance

<x: Indicates analyte concentration not detected at or above specified laboratory quantitation limit (x)

Sample Results:

a-c: Analyte concentration in this sample exceeds the MADEP standard for:

a: GW1 type groundwater

b: GW2 type groundwater

c: GW3 type groundwater

j: Although the analyte was not detected, the laboratory quantitation limit for this sample exceeds the MADEP standard for GW1 type groundwater

t: Although the analyte was not detected, the laboratory quantitation limit for the sample exceeds a MADEP Reportable Concentration

REPORT OF ANALYTICAL RESULTS

NETLAB Case Number Z0404-30

Sage Project #R054

Prepared for:

Sage Environmental
172 Armistice Boulevard
Pawtucket, RI 02860

Report Date: April 5, 2013

Reviewed By:

Richard Warila
Laboratory Director

Lab # RI010

NEW ENGLAND TESTING LABORATORY, INC.
1254 Douglas Avenue, North Providence, RI 02904
(401) 353-3420

Total # of Pages: 23

SAMPLES SUBMITTED and REQUEST FOR ANALYSIS:

The samples listed in Table I were submitted to New England Testing Laboratory on April 4, 2013. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the samples provided to us by the client which are indicated on the custody record. The case number for this sample submission is Z0404-30.

Custody records are included in this report.

Site: R054 Norton

TABLE I, Samples Submitted

Sample ID	Date Sampled	Matrix	Analysis Requested
RW-4	4/4/13	Water	Table II

TABLE II, Analysis and Methods

ANALYSIS	DETERMINATIVE METHOD
Volatile Organic Compounds	8260B
TPH	1664A
Total Phenols	420.1
PCBs	8082A
Total Iron	200.7
Total Manganese	200.7
Semi-Volatile Organics	8270D

These methods are documented in:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, USEPA/OSW.

Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, APHA, AWWA-WPCF.

40 CFR 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act*, Office of Federal Register National Archives and Records Administration.

CASE NARRATIVE:

Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

Metals

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.

PCBs

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

Semi-volatile Compounds

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria

Volatile Organic Compounds

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

Wet Chemistry

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures.

RW-4

Parameter	Result, mg/l	Reporting Limit	Date Analyzed
TPH	ND	2	4/5/13
Total Phenols	ND	0.05	4/5/13

ND= Not Detected

METALS RESULTS

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Metals Analysis Department certifies that the results included in this section have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

METALS RESULTS

Case Number: Z0404-30
Sample ID: RW-4
Date collected: 04/04/13
Matrix WATER
Sample Type: Total

Analyst JC/RS

Parameter	CAS Number	Preparative Method	Analytical Method	Result	Reporting Limit	Units	Date of Preparation	Date Analyzed
Iron	7439-89-6	NA	200.7	1.87	0.05	mg/l	4/5/13	4/5/13
Manganese	7439-96-5	NA	200.7	1.05	0.005	mg/l	4/5/13	4/5/13

ND indicates Not Detected.

METALS RESULTS

Sample ID: METHOD BLANK
Matrix WATER
Sample Type: Preparation Blank

Analyst JC/RS

Parameter	CAS Number	Preparative Method	Analytical Method	Result	Reporting Limit	Units	Date of Preparation	Date Analyzed
Iron	7439-89-6	NA	200.7	ND	0.05	mg/l	4/5/13	4/5/13
Manganese	7439-96-5	NA	200.7	ND	0.005	mg/l	4/5/13	4/5/13

ND indicates Not Detected.

LABORATORY CONTROL SAMPLE RECOVERY

Parameter	True Value	Result	Units	Recovery, %	Internal LCL, %	Internal UCL, %	Date Analyzed
Iron	10.00	10.17	mg/l	102	80	120	4/5/13
Manganese	1.00	0.98	mg/l	98	80	107	4/5/13

RESULTS: PCBs

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

Sample: RW-4		Analyst's Initials: BJ
Case No. Z0404-30		
Date Collected: 4/4/13		
Sample Matrix: Water		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3510C	4/5/13	4/5/13
Analytical Method: EPA 8082A		
Compound	Concentration ug/l (ppb)	Reporting Limit ug/l (ppb)
Aroclor-1016	N.D.	0.2
Aroclor-1221	N.D.	0.2
Aroclor-1232	N.D.	0.2
Aroclor-1242	N.D.	0.2
Aroclor-1248	N.D.	0.2
Aroclor-1254	N.D.	0.2
Aroclor-1260	N.D.	0.2
Aroclor-1262	N.D.	0.2
Aroclor-1268	N.D.	0.2
Surrogates:		
Compound	% Recovery	Limits
TCMX	65	30-110
DCBP	77	30-122

N.D. = Not Detected

Sample: Method Blank		Analyst's Initials: BJ
Case No. Z0404-30		
Date Collected: NA		
Sample Matrix: Water		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3510C	4/5/13	4/5/13
Analytical Method: EPA 8082A		
Compound	Concentration ug/l (ppb)	Reporting Limit ug/l (ppb)
Aroclor-1016	N.D.	0.2
Aroclor-1221	N.D.	0.2
Aroclor-1232	N.D.	0.2
Aroclor-1242	N.D.	0.2
Aroclor-1248	N.D.	0.2
Aroclor-1254	N.D.	0.2
Aroclor-1260	N.D.	0.2
Aroclor-1262	N.D.	0.2
Aroclor-1268	N.D.	0.2
Surrogates:		
Compound	% Recovery	Limits
TCMX	64	30-110
DCBP	88	30-122

N.D. = Not Detected

PCB Laboratory Control Spike

Sample Matrix: Water				
Subject: PCB	Date Extracted			Date Analyzed
Prep Method: EPA 3510C	4/5/13			4/5/13
Analytical Method: EPA 8082A				
Compound	Amount Spiked mg/kg	Result mg/kg	Recovery %	Recovery Limits
Aroclor 1016	0.500	0.292	58	40-132
Aroclor 1260	0.500	0.334	67	40-127
Surrogates:				
Compound	% Recovery	Limits		
TCMX	75	30-110		
DCBP	87	30-122		

RESULTS: SEMIVOLATILE ORGANIC COMPOUNDS

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

1B

NETLLAB

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: Z0404-30
Method: 8270
Matrix: (soil/water/air) WATER
Sample wt/vol: 1000 (g/ml) ML
Level: (low/med) LOW
% Moisture:
Concentrated Extract Volume: 1000 (uL)
Injection Volume: 1.0 (uL)
Analyst's Initials: JD

Client Name: Sage Environmental
Lab Sample ID: RW-4
Lab File ID: B040505.D
Date Sampled: 4/4/2013
Date Extracted: 4/5/2013
Date Analyzed: 4/5/2013
Dilution Factor: 1.0

CAS NO.	COMPOUND	UNITS: UG/L	Q
11-78-40	Di-n-octyl phthalate	2.0	U
131-11-3	Dimethyl phthalate	2.0	U
84-66-2	Diethyl phthalate	2.0	U
87-86-5	Pentachlorophenol	5.0	U
84-74-2	Di-n-butylphthalate	3.0	U
85-68-7	Butyl benzyl phthalate	2.0	U
117-81-7	bis(2-Ethylhexyl)phthalate	3.0	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

NETLLAB

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: Z0404-30
Client Name: Sage Environmental
Method: 8270
Lab Sample ID: BSW040513
Matrix: (soil/water/air) WATER
Lab File ID: B040503.D
Sample wt/vol: 1000 (g/ml) ML
Date Sampled: 4/4/2013
Level: (low/med) LOW
Date Extracted: 4/5/2013
% Moisture:
Date Analyzed: 4/5/2013
Concentrated Extract Volume: 1000 (uL)
Dilution Factor: 1.0
Injection Volume: 1.0 (uL)
Analyst's Initials: JD

CAS NO.	COMPOUND	UNITS: UG/L	Q
11-78-40	Di-n-octyl phthalate	2.0	U
131-11-3	Dimethyl phthalate	2.0	U
84-66-2	Diethyl phthalate	2.0	U
87-86-5	Pentachlorophenol	5.0	U
84-74-2	Di-n-butylphthalate	3.0	U
85-68-7	Butyl benzyl phthalate	2.0	U
117-81-7	bis(2-Ethylhexyl)phthalate	3.0	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: New England Testing Laboratory Case No.: Z0404-30

Lab Code: RI010 Client Name: Sage Environmental

	Sample ID	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
01	BSW040513	22	13	104	99	102	98	0
02	LSW040513	27	16	115	109	116	105	0
03	RW-4	19	12	108	112	104	102	0

QC LIMITS

S1	=	2-Fluorophenol	(10-81)
S2	=	Phenol-d6	(10-83)
S3	=	Nitrobenzene-d5	(10-120)
S4	=	2-Fluorobiphenyl	(17-133)
S5	=	2,4,6-Tribromophenol	(23-144)
S6	=	Terphenyl-d14	(49-107)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

NELAC LAB

Semivolatile Water Laboratory Control Spike

Date Extracted: 4/5/2013
Date Analyzed: 4/5/2013

	Amount Spiked ug/L	Result, ug/L	Recovery %	Lower Recovery Limit	Upper Recovery Limit
Dimethyl phthalate	50.0	42.08	84	40	119
Diethyl phthalate	50.0	44.4	89	39	121
Pentachlorophenol	50.0	51.06	102	54	127
Di-n-butylphthalate	50.0	44.76	90	38	130
Butyl benzyl phthalate	50.0	54.82	110	34	130
bis(2-Ethylhexyl)phthalate	50.0	53.98	108	33	130
Di-n-octyl phthalate	50.0	49.49	99	16	130

RESULTS: VOLATILE ORGANIC COMPOUNDS

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

NELLAB

VOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: Z0404-30
Method: 8260
Matrix: (soil/water) WATER
Sample wt/vol: 5.0 (g/ml) ML
% Moisture
Soil Extract Volume: (uL)
Analyst's Initials: AM

Client Name: Sage Environmental
Lab Sample ID: RW-4
Lab File ID: C040511.D
Date Sampled: 4/4/2013
Date Analyzed: 4/5/2013
Dilution Factor: 2,250
Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	UNITS: ug/L	Q
75-01-4	Vinyl Chloride	400	
67-64-1	Acetone	10	U
75-35-4	1,1-Dichloroethene	16	
75-09-2	Methylene Chloride	2.0	U
75-34-3	1,1-Dichloroethane	2.0	U
156-59-2	cis-1,2-Dichloroethene	7700	
71-55-6	1,1,1-Trichloroethane	25	
56-23-5	Carbon Tetrachloride	2.0	U
71-43-2	Benzene	2.0	U
107-06-2	1,2-Dichloroethane	2.0	U
79-01-6	Trichloroethene	42000	
108-88-3	Toluene	2.0	U
79-00-5	1,1,2-Trichloroethane	2.0	U
127-18-4	Tetrachloroethene	19000	
100-41-4	Ethylbenzene	2.0	U
1330-20-7	m & p-Xylene	4.0	U
95-47-6	o-Xylene	2.0	U
541-73-1	1,3-Dichlorobenzene	2.0	U
106-46-7	1,4-Dichlorobenzene	2.0	U
95-50-1	1,2-Dichlorobenzene	2.0	U
123-91-1	1,4-Dioxane	500	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

NETLLAB

VOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: Z0404-30
Method: 8260
Matrix: (soil/water) WATER
Sample wt/vol: 5.0 (g/ml) ML
% Moisture
Soil Extract Volume: (uL)
Analyst's Initials: AM

Client Name: Sage Environmental
Lab Sample ID: VBLK040513
Lab File ID: C040506.D
Date Sampled: 4/4/2013
Date Analyzed: 4/5/2013
Dilution Factor: 1.0
Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	UNITS: ug/L	Q
75-01-4	Vinyl Chloride	1.0	U
67-64-1	Acetone	5.0	U
75-35-4	1,1-Dichloroethene	1.0	U
75-09-2	Methylene Chloride	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
108-88-3	Toluene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	m & p-Xylene	2.0	U
95-47-6	o-Xylene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
123-91-1	1,4-Dioxane	250	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

New England Testing Laboratory, Inc.

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: New England Testing Laboratory Contract: R054- Norton

Lab Code: RI010 Case No.: Z0404-30 SAS No.: Sage E SDG No.: Sage Envi

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
01	VLCS040513	95	95	96	0
02	VBLK040513	87	93	98	0
03	RW-4	93	90	94	0

QC LIMITS

SMC1	=	4-Bromofluorobenzene	(70-130)
SMC2	=	Toluene-D8	(70-130)
SMC3	=	1,2-Dichloroethane-D4	(70-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

Volatile Organics Laboratory Control Spike

Date Analyzed: 04/05/2013 **Sample ID: VLCS040513**

Compound	Spike Added	Spike Result	Recovery, %	Lower Control Limit, %	Upper Control Limit, %
1,1-Dichloroethene	50.0	53.1	106	70	129
Benzene	50.0	43.4	87	73	129
Trichloroethene	50.0	53.5	107	77	122
Toluene	50.0	45.7	91	75	123
Chlorobenzene	50.0	50.2	100	73	125

NEW ENGLAND TESTING LABORATORY, INC.
1254 Douglas Avenue
North Providence, RI 02904
1-888-863-8522

Z0404-30

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME/LOCATION
R054	R054 Norton

CLIENT: SLR GE Environmental, Inc.
REPORT TO: sage@sageenvironmental.net
INVOICE TO:

DATE	TIME	COMP	GRAB	SAMPLE I.D.	AQUEOUS	SOIL	OTHER	NO. OF CONTAINERS	PRESERVATIVE	TESTS**	REMARKS
4/4/13	1330		X	RW-4	X			4 Liter	H2SO4	TPH via 1664A	
								2 40 ml	HCl	VOCs (see attached)	
								4 Liter	Non	Total Phenols via 420.1	
								1 1602.	HNO3	RCRA via 6010	
										Iron via 200.7	
										Manganese via 200.7	
										PCP, Total Phthalates + Bis (2-Ethylhexyl) phthalate [Di-(Ethylhexyl) Phthalate] by 8270D	

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
	4-4-13 1430		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Cathy A Raine	4/4/13 15:40		4/4/13 15:40
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time
	4/4/13 16:10	M Yong	4/4/13 16:10

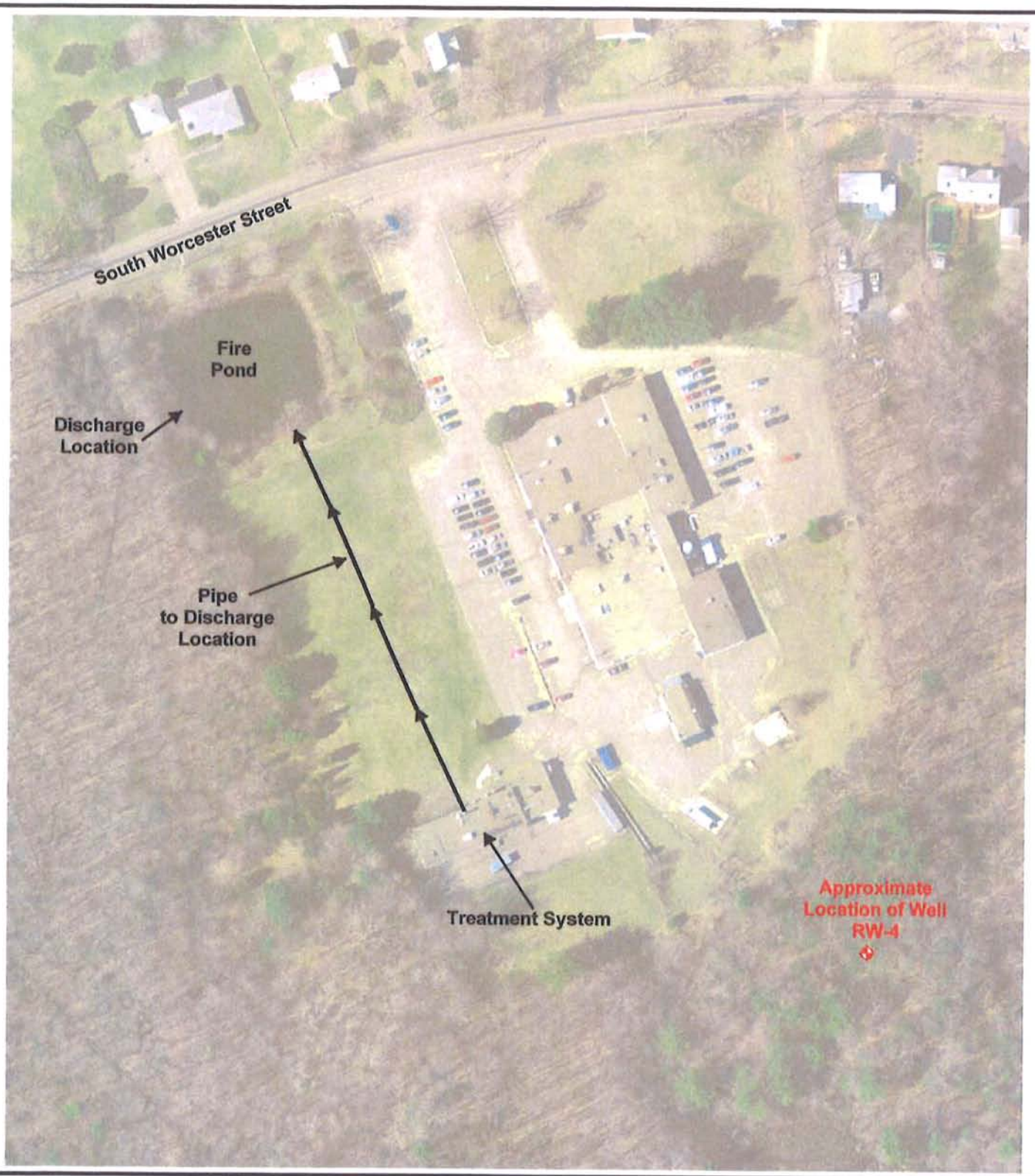
Laboratory Remarks:
Temp. received: 4C
Cooled ☐

Special Instructions:
List Specific Detection Limit Requirements:

Turnaround (Business Days) 24 hr.

**Netlab subcontracts the following tests: Radiologicals, Radon, Asbestos, UCMRs, Perchlorate, Bromate, Bromide, Sieve, Salmonella, Carbamates

FIGURES



SAGEEnvironmental, Inc

Figure

N
W E
S

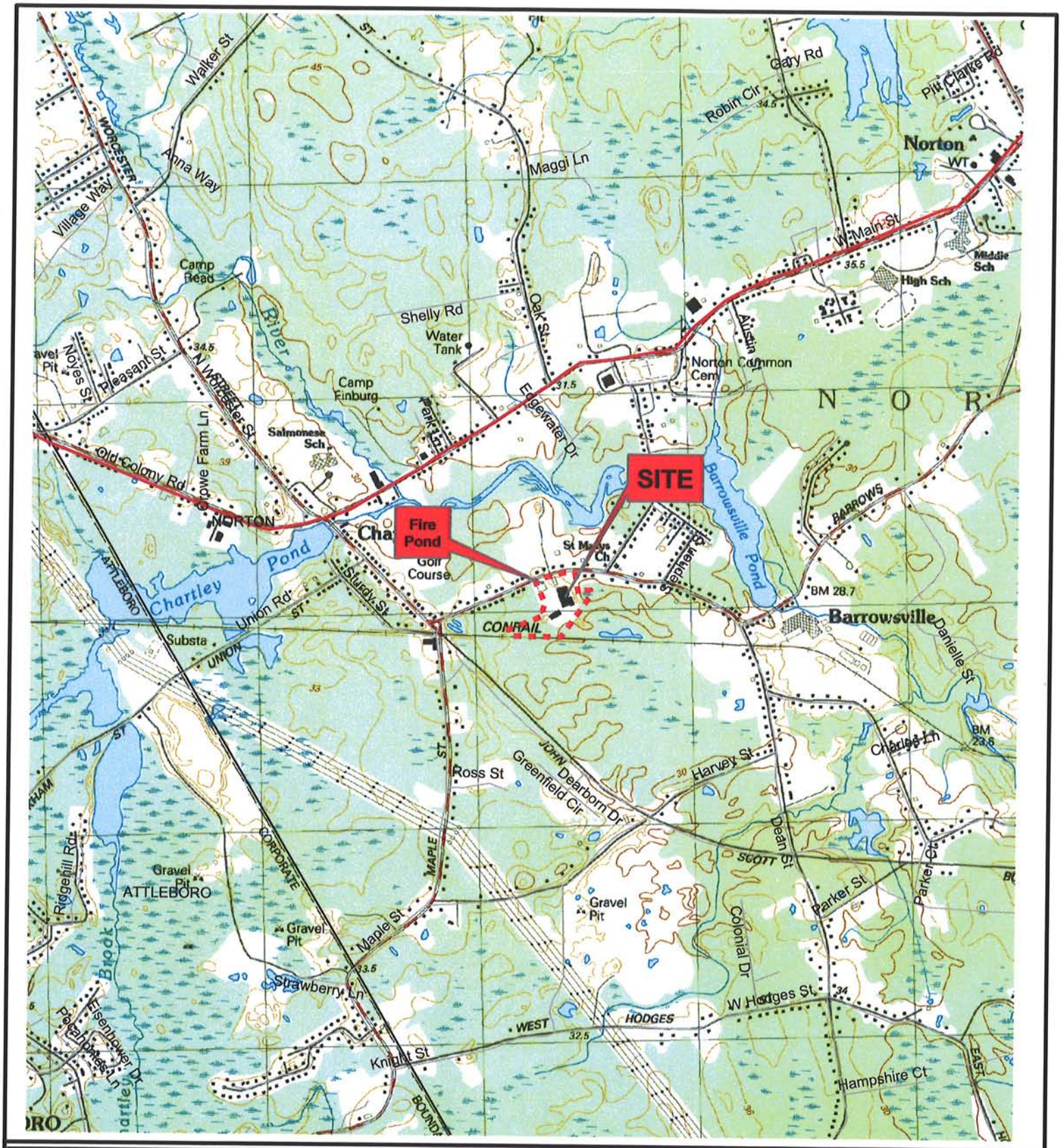
Site Location

SITE SKETCH

111 South Worcester Street
Norton, Massachusetts

DATE:	04/02/13	JOB #:	R054
CREATED BY:	DAK	DRAWING:	sitesketch.mxd

Note: Orthophotography courtesy of MASSGIS



SAGE Environmental, Inc

Figure 1

USGS Quadrangle Site Location Map

111 South Worcester Street
Norton, Massachusetts

DATE: 03/25/13 JOB #: R054
CREATED BY: DAK DRAWING: usgs.mxd

N W E S

★ Site Location

USGS QUADRANGLE
NORTON, MASSACHUSETTS

SAGE Environmental, Inc

Figure 2

N
W E
S

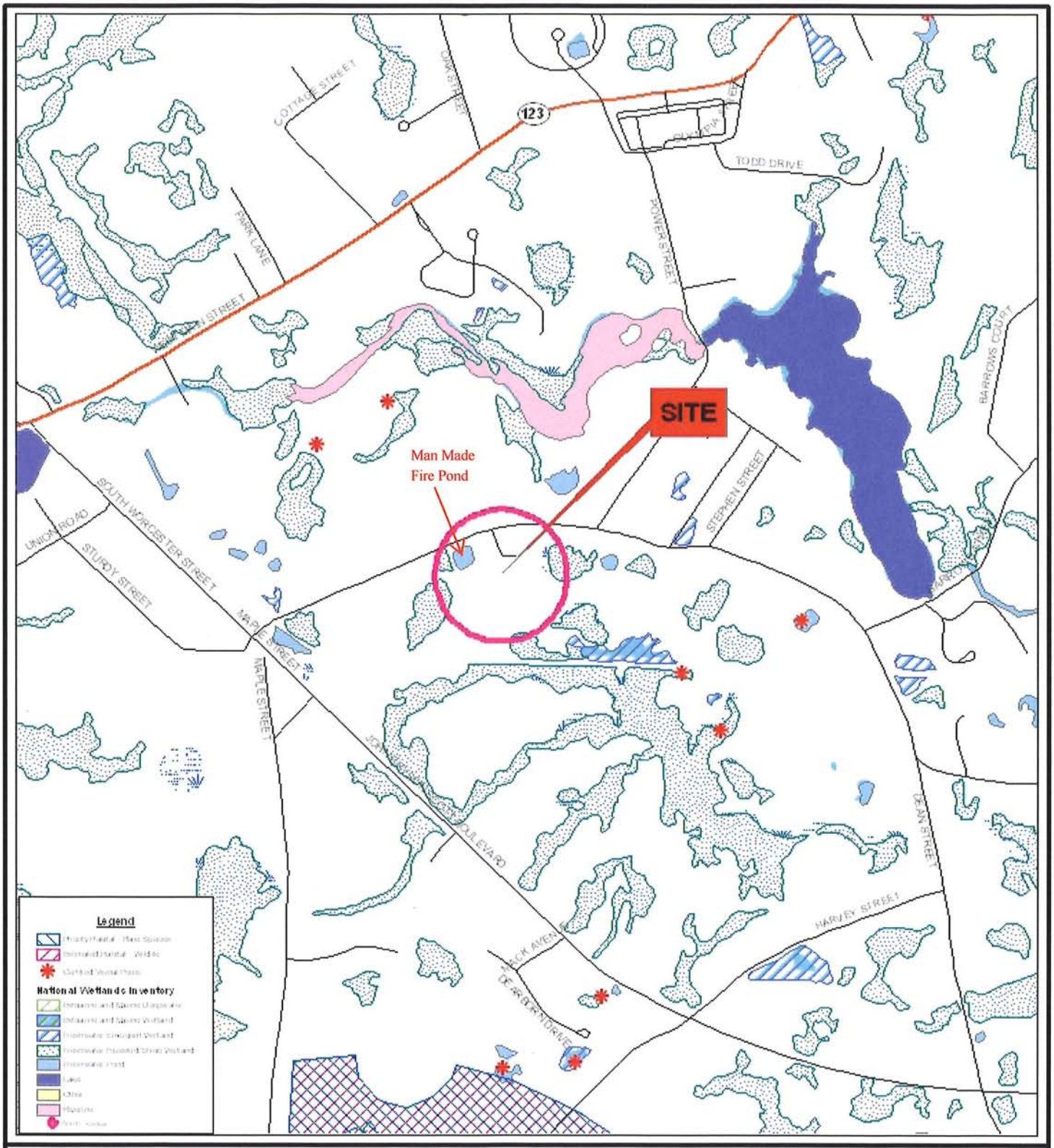
★ Site Location

ORTHOPHOTOGRAPHY - 2009

111 South Worcester Street
Norton, Massachusetts

DATE:	03/25/13	JOB #:	R054
CREATED BY:	DAK	DRAWING:	ortho2009.mxd

Note: Orthophotography courtesy of MASSGIS



SAGE Environmental, Inc

Figure 4

Wetlands & Rare and Endangered Species

111 South Worcester Street
Norton, Massachusetts

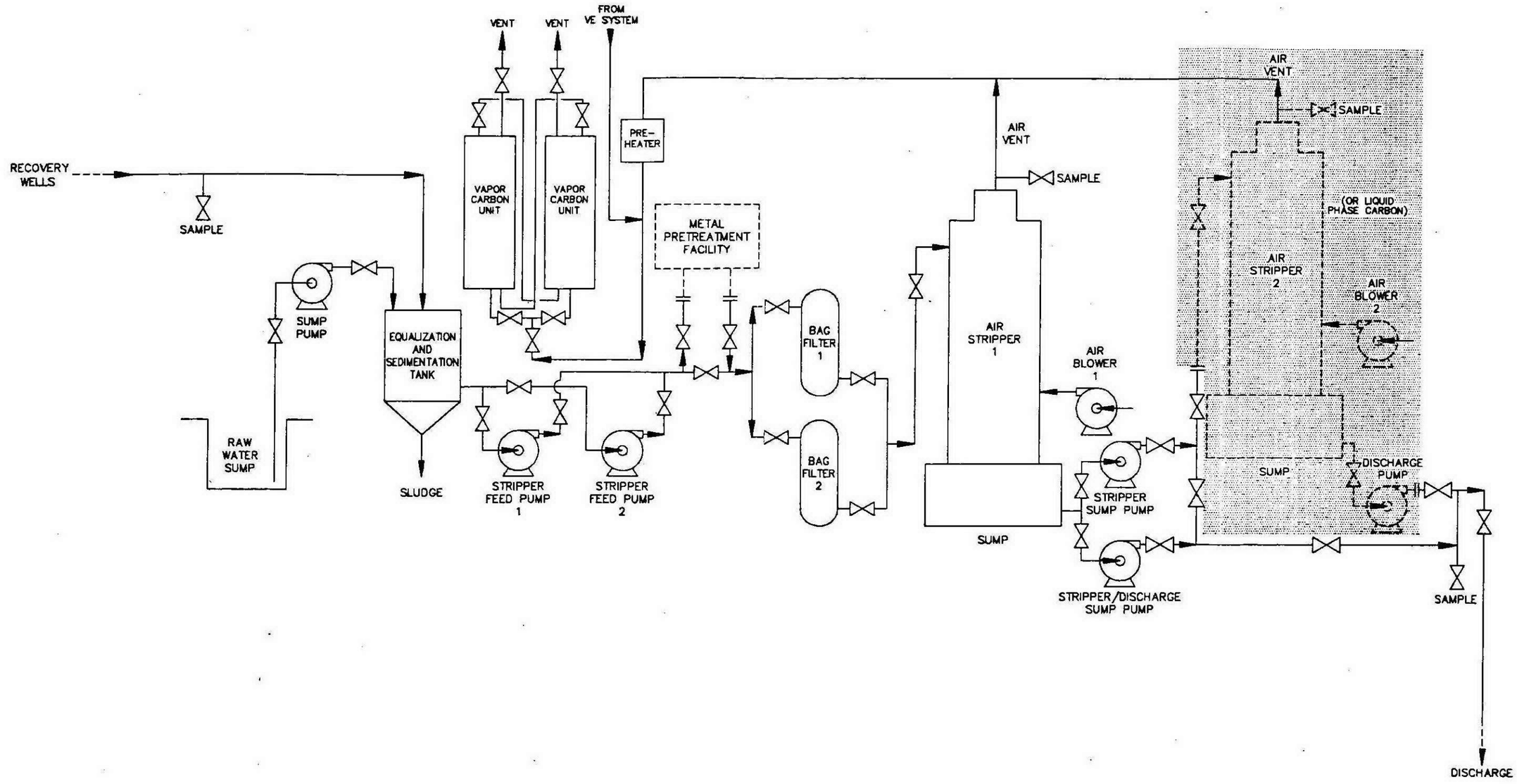
DATE:	04/01/13	JOB #:	R054
CREATED BY:	DAK	DRAWING:	wetlandspec.mxd

★ Site Location

Note: Datalayers courtesy of MASSGIS
Wetlands datalayer courtesy of NWI

0.1 0.05 0 0.1 0.2 0.3 0.4 0.5 Miles

Not to Scale



LEGEND

OPTIONAL FINAL POLISHING UNIT

TITLE	GROUNDWATER TREATMENT SYSTEM-PROCESS FLOW DIAGRAM		
PROJECT	KILBURN GLASS		
	Dames & Moore WILLOW GROVE, PENNSYLVANIA		
SCALE N.T.S.	DWN. BY EM^2	JOB NO.	
DATE 12/10/92	APPR. BY R.Z.	FIG. NO. 3	

MassDEP - Bureau of Waste Site Cleanup

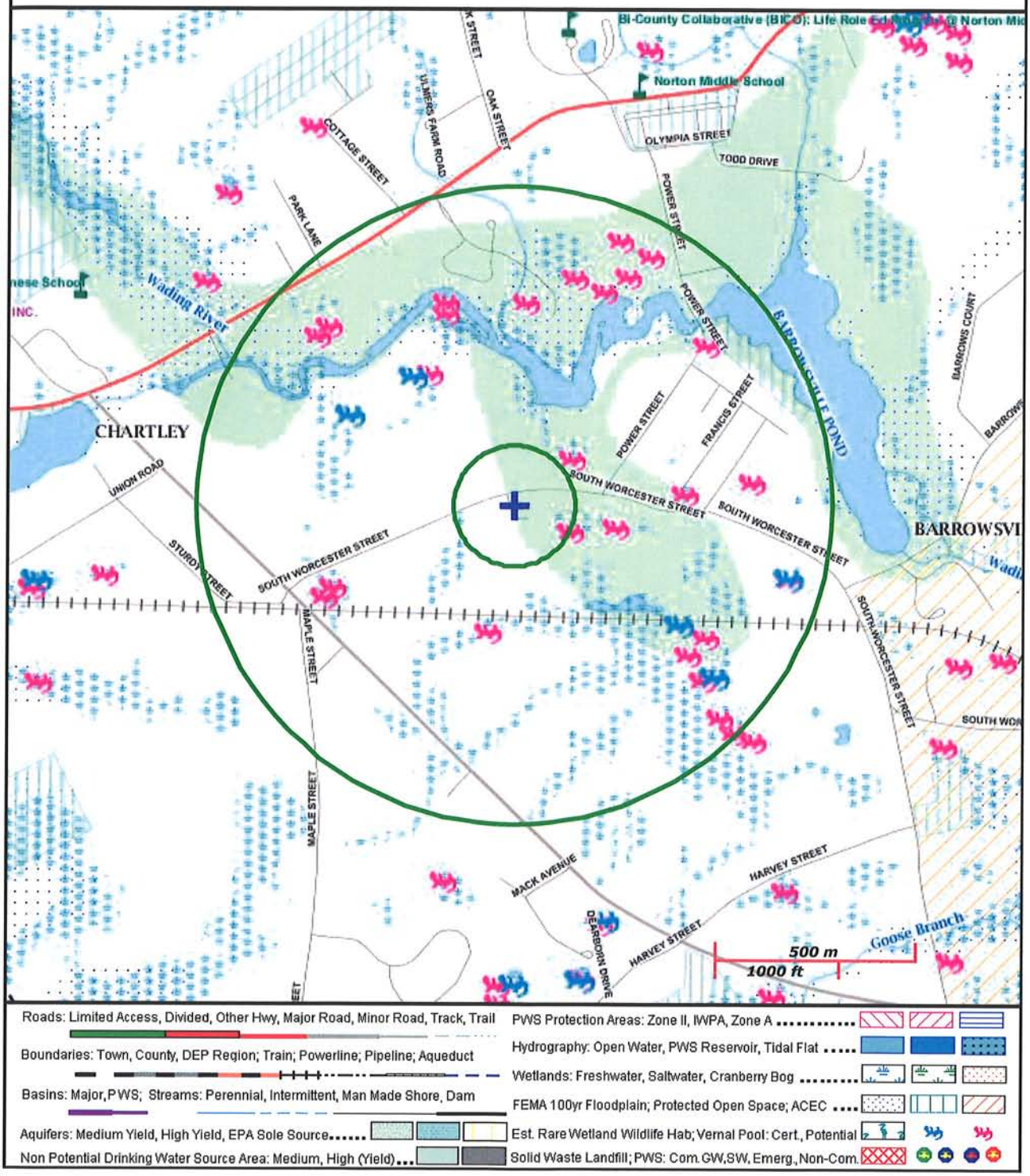
Site Information: MCP Numerical Ranking System Map: 500 feet & 0.5 Mile Radii

111 SOUTH WORCESTER STREET NORTON, MA

NAD83 UTM Meters:
4646365mN , 316448mE (Zone: 19)
March 27, 2013

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

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



TABLES

HISTORICAL TABLE ONE

Summary of Historic Results for PCE in Groundwater (ug/l)

January 2004 - April 2012

Sample	Sampling Date 1/13/04	4/2/04	6/28/04	10/18/04	10/20/04	10/21/04	1/21/05	4/11/05	4/12/05	7/15/05	8/23/05	10/24/05	11/3/05	11/4/05	Cleanup Standards GW-2	GW-3
CF-1/FP			27	86			460			<5	<10		<25		**50**	**30,000**
Effluent	<1	<1	1	<1			19		<1	6	3	1	<0.5		**50**	**30,000**
Fire Pond														<0.5	**50**	**30,000**
Influent	2,400	2,000	3,000	3,100			2,700		2,300	2,400	3,100		3,100		**50**	**30,000**
Intermediate Carbon															**50**	**30,000**
MW-1-1		2				330			67						**50**	**30,000**
MW-7															**50**	**30,000**
MW-7A															**50**	**30,000**
MW-8															**50**	**30,000**
MW-9															**50**	**30,000**
MW-10															**50**	**30,000**
MW-11															**50**	**30,000**
MW-12		950				1,100		280						490	**50**	**30,000**
MW-15															**50**	**30,000**
MW-15A															**50**	**30,000**
MW-19		340		1,200				22							**50**	**30,000**
MW-19A		220		340				140							**50**	**30,000**
MW-19B		24		100				26							**50**	**30,000**
MW-1B		16,000			14,000				8,100					3,600	**50**	**30,000**
MW-1D		750			850				7,800					4,300	**50**	**30,000**
MW-1DB															**50**	**30,000**
MW-1S		130			140				210					160	**50**	**30,000**
MW-25		5,900		5,400				6,400							**50**	**30,000**
MW-25A		940		1,300				1,200							**50**	**30,000**
MW-25B		1,600		1,800				270							**50**	**30,000**
MW-27A		340		450				38						200	**50**	**30,000**
MW-27B															**50**	**30,000**
MW-28I		89				150		20							**50**	**30,000**
MW-29															**50**	**30,000**
MW-29A															**50**	**30,000**
MW-29B															**50**	**30,000**
OW-1		4,000		4,900				6,000						3,700	**50**	**30,000**
OW-1A		910		1,200				510						1,000	**50**	**30,000**
OW-1S		360		<200				<200						90	**50**	**30,000**
RW-1		76				1,400							4,400		**50**	**30,000**
RW-2		2,500		3,400									4,500		**50**	**30,000**
RW-3		1,000		1,300									2,300		**50**	**30,000**
RW-4															**50**	**30,000**
Trip Blank	<1	<1	<0.5	<1		<1	<1	<1		<0.5	<0.5		<0.5		**50**	**30,000**

HISTORICAL TABLE ONE (Cont'd)

Summary of Historic Results for PCE in Groundwater (ug/l)

January 2004 - April 2012

	Sampling Date														Cleanup Standards	
Sample	*11/7/05*	*2/9/06*	*5/22/06*	*8/9/06*	*11/15/06*	*1/8/07*	*6/11/07*	*9/4/07*	*11/30/07*	*2/29/08*	*5/22/08*	*8/5/08*	*11/11/08*	*2/2/09*	***GW-2***	***GW-3***
CF-1/FP		130	380	570		<25	120	63	1						**50**	**30,000**
Effluent		<0.5	<2.5	<10		<0.5	<10	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**50**	**30,000**
Fire Pond		<0.5	<0.5	<1	<0.5	<0.5	<0.5	<2.5	<0.5						**50**	**30,000**
Influent		4,200	2,900	2,800		3,600	2,500	3,800	2,000	4,500	5,200	4,900	3,900	3,200	**50**	**30,000**
Intermediate Carbon											<0.5	<0.5	<3	<5	**50**	**30,000**
MW-1-1	1,300		850		2,300		4,000		2,900						**50**	**30,000**
MW-7															**50**	**30,000**
MW-7A															**50**	**30,000**
MW-8															**50**	**30,000**
MW-9															**50**	**30,000**
MW-10															**50**	**30,000**
MW-11															**50**	**30,000**
MW-12			760		1,100		1,100								**50**	**30,000**
MW-15													<0.5		**50**	**30,000**
MW-15A													<0.5		**50**	**30,000**
MW-19	40		20		49		48								**50**	**30,000**
MW-19A	180		180		210		170								**50**	**30,000**
MW-19B	23		34		14		<2.5								**50**	**30,000**
MW-1B			13,000		6,500		17,000		24,000		11,000		13,000		**50**	**30,000**
MW-1D			1,300		1,200		2,600		1,900		4,200		9,900		**50**	**30,000**
MW-1DB											15,000		3,400		**50**	**30,000**
MW-1S			800		72		1,600		290		1,100		1,300		**50**	**30,000**
MW-25	11,000		11,000		12,000		10,000		9,500						**50**	**30,000**
MW-25A	2,300		1,700		2,600		1,700		950		1,400		1,400		**50**	**30,000**
MW-25B	480		69		270		62		1,300		93		2,100		**50**	**30,000**
MW-27A			38		450		81				93		320		**50**	**30,000**
MW-27B															**50**	**30,000**
MW-28I	45		67		79		44								**50**	**30,000**
MW-29															**50**	**30,000**
MW-29A															**50**	**30,000**
MW-29B															**50**	**30,000**
OW-1			69		1,900		4,600		4,300		2,300		3,300		**50**	**30,000**
OW-1A			160		810		670				3,600		480		**50**	**30,000**
OW-1S			2,600		110		56								**50**	**30,000**
RW-1			4,500		1,500		10,000		6,600						**50**	**30,000**
RW-2			3,700		2,300		4,900		4,800						**50**	**30,000**
RW-3			1,600		970		1,600		840						**50**	**30,000**
RW-4															**50**	**30,000**
Trip Blank		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	**50**	**30,000**

HISTORICAL TABLE ONE (Cont'd)

Summary of Historic Results for PCE in Groundwater (ug/l)

January 2004 - April 2012

	Sampling Date									***Cleanup Standards***	
Sample	*5/14/09*	*10/27/09*	*6/29-30/10*	*10/22/10*	*10/26/10*	*1/3/11*	*5/2/11*	*9/27/11*	*4/3/12*	***GW-2***	***GW-3***
CF-1/FP										**50**	**30,000**
Effluent	<0.5		<5		<10	<5				**50**	**30,000**
Fire Pond										**50**	**30,000**
Influent	3,200	4,800	3,500		7,100	5,800				**50**	**30,000**
Intermediate Carbon	<10		700		950	840				**50**	**30,000**
MW-1-1										**50**	**30,000**
MW-7					47					**50**	**30,000**
MW-7A					<0.5					**50**	**30,000**
MW-8								6.9		**50**	**30,000**
MW-9									<1.0	**50**	**30,000**
MW-10									5.2	**50**	**30,000**
MW-11								5,200		**50**	**30,000**
MW-12								1,400		**50**	**30,000**
MW-15	<0.5	<0.5			<0.5		<0.5			**50**	**30,000**
MW-15A	<3	<3			<0.5		<0.5			**50**	**30,000**
MW-19										**50**	**30,000**
MW-19A										**50**	**30,000**
MW-19B										**50**	**30,000**
MW-1B		20,000	13,000		22,000		15,000	26,000		**50**	**30,000**
MW-1D										**50**	**30,000**
MW-1DB		5,000	3,800							**50**	**30,000**
MW-1S										**50**	**30,000**
MW-25	7,300	8,300	5,100		13,000		8,700	9,100		**50**	**30,000**
MW-25A	1,900	1,400	660		2,000		2,700			**50**	**30,000**
MW-25B	430	1,100	950		3,400		59			**50**	**30,000**
MW-27A	42	110	40		130		91	150		**50**	**30,000**
MW-27B	100	96	67		79		39	150		**50**	**30,000**
MW-28I										**50**	**30,000**
MW-29	<0.5	<0.5	<0.5							**50**	**30,000**
MW-29A	<0.5	<0.5	<0.5							**50**	**30,000**
MW-29B	<0.5	<3	<0.5							**50**	**30,000**
OW-1								3,700		**50**	**30,000**
OW-1A								14,000		**50**	**30,000**
OW-1S										**50**	**30,000**
RW-1										**50**	**30,000**
RW-2										**50**	**30,000**
RW-3										**50**	**30,000**
RW-4				10,000						**50**	**30,000**
Trip Blank										**50**	**30,000**

HISTORICAL TABLE TWO

Summary of Historic Results for TCE in Groundwater (ug/l)

January 2004 - April 2012

	Sampling Date														***Cleanup Standards***	
Sample	*1/13/04*	*4/2/04*	*6/28/04*	*10/18/04*	*10/20/04*	*10/21/04*	*1/21/05*	*4/11/05*	*4/12/05*	*7/15/05*	*8/23/05*	*10/24/05*	*11/3/05*	*11/4/05*	***GW-2***	***GW-3***
CF-1/FP			170	550			1,700			170	740		1,700		**30**	**5,000**
Effluent	<1	<1	1	<1			170		3	37	22	1	<0.5		**30**	**5,000**
Fire Pond														<0.5	**30**	**5,000**
Influent	2,400	1,400	1,900	1,400			3,700		2,200	2,900	2,600		3,800		**30**	**5,000**
Intermediate Carbon															**30**	**5,000**
MW-1-1		<1				360			100						**30**	**5,000**
MW-7															**30**	**5,000**
MW-7A															**30**	**5,000**
MW-8															**30**	**5,000**
MW-9															**30**	**5,000**
MW-10															**30**	**5,000**
MW-11															**30**	**5,000**
MW-12		310				470		400						270	**30**	**5,000**
MW-15															**30**	**5,000**
MW-15A															**30**	**5,000**
MW-19		1,800		750				240							**30**	**5,000**
MW-19A		1,100		1,000				650							**30**	**5,000**
MW-19B		91		44				57							**30**	**5,000**
MW-1B		**110,000**			**110,000**				**100,000**					**44,000**	**30**	**5,000**
MW-1D		980			2,600				**29,000**					**28,000**	**30**	**5,000**
MW-1DB															**30**	**5,000**
MW-1S		220			90				600					630	**30**	**5,000**
MW-25		**10,000**		**10,000**				**11,000**							**30**	**5,000**
MW-25A		1,300		1,600				2,000							**30**	**5,000**
MW-25B		470		760				120							**30**	**5,000**
MW-27A		400		410				33						200	**30**	**5,000**
MW-27B															**30**	**5,000**
MW-28I		79				120		14							**30**	**5,000**
MW-29															**30**	**5,000**
MW-29A															**30**	**5,000**
MW-29B															**30**	**5,000**
OW-1		**32,000**		**35,000**				**23,000**						**21,000**	**30**	**5,000**
OW-1A		4,700		4,600				610						1,400	**30**	**5,000**
OW-1S		2,000		1,800				340						730	**30**	**5,000**
RW-1		22				2,600							**8,000**		**30**	**5,000**
RW-2		1,600		1,500									1,300		**30**	**5,000**
RW-3		1,100		1,100									2,000		**30**	**5,000**
RW-4															**30**	**5,000**
Trip Blank	<1	<1	<0.5	<1		<1	<1	<1		<0.5	<0.5		<0.5		**30**	**5,000**

HISTORICAL TABLE TWO (Cont'd)

Summary of Historic Results for TCE in Groundwater (ug/l)

January 2004 - April 2012

	Sampling Date														Cleanup Standards	
Sample	*11/7/05*	*2/9/06*	*5/22/06*	*8/9/06*	*11/15/06*	*1/8/07*	*6/11/07*	*9/4/07*	*11/30/07*	*2/29/08*	*5/22/08*	*8/5/08*	*11/11/08*	*2/2/09*	***GW-2***	***GW-3***
CF-1/FP		2,900	3,200	2,900		1,800	4,000	3,500	34						**30**	**5,000**
Effluent		<0.5	150	360		<0.5	59	2,700	5	15	5	5	2	2	**30**	**5,000**
Fire Pond		<0.5	15	25	<0.5	<0.5	1	120	1						**30**	**5,000**
Influent		**5,100**	3,800	3,000		3,600	2,300	2,400	2,900	4,100	5,700	3,100	**5,300**	3,500	**30**	**5,000**
Intermediate Carbon											7	3	6	650	**30**	**5,000**
MW-1-1	99		740		1,000		3,900		3,500						**30**	**5,000**
MW-7															**30**	**5,000**
MW-7A															**30**	**5,000**
MW-8															**30**	**5,000**
MW-9															**30**	**5,000**
MW-10															**30**	**5,000**
MW-11															**30**	**5,000**
MW-12			580		420		1,100								**30**	**5,000**
MW-15													<0.5		**30**	**5,000**
MW-15A													<0.5		**30**	**5,000**
MW-19	430		250		340		320								**30**	**5,000**
MW-19A	750		920		980		690								**30**	**5,000**
MW-19B	70		73		43		8								**30**	**5,000**
MW-1B			**130,000**		**44,000**		**140,000**		**93,000**		**70,000**		**88,000**		**30**	**5,000**
MW-1D			**5,700**		**7,400**		**22,000**		**18,000**		4,800		**58,000**		**30**	**5,000**
MW-1DB											**130,000**		3,400		**30**	**5,000**
MW-1S			2,500		1,000		**50,000**		4,300		**8,200**		**15,000**		**30**	**5,000**
MW-25	**16,000**		**18,000**		**16,000**		**14,000**		**16,000**						**30**	**5,000**
MW-25A	2,900		2,800		4,100		2,200		1,400		2,300		1,900		**30**	**5,000**
MW-25B	150		88		260		82		380		390		1,000		**30**	**5,000**
MW-27A			32		490		65				220		340		**30**	**5,000**
MW-27B															**30**	**5,000**
MW-28I	50		59		68		35								**30**	**5,000**
MW-29															**30**	**5,000**
MW-29A															**30**	**5,000**
MW-29B															**30**	**5,000**
OW-1			170		**10,000**		**21,000**		**23,000**		**16,000**		**19,000**		**30**	**5,000**
OW-1A			200		2,500		680				**8,200**		790		**30**	**5,000**
OW-1S			**15,000**		240		77								**30**	**5,000**
RW-1			**7,600**		**5,000**		**12,000**		**12,000**						**30**	**5,000**
RW-2			1,900		920		2,900		1,700						**30**	**5,000**
RW-3			1,700		1,200		1,600		840						**30**	**5,000**
RW-4															**30**	**5,000**
Trip Blank		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	**30**	**5,000**

HISTORICAL TABLE TWO (Cont'd)

Summary of Historic Results for TCE in Groundwater (ug/l)

January 2004 - April 2012

Sample	*5/14/09*	*10/27/09*	*2/5/10*	*6/29-30/10*	*10/22/10*	*10/26/10*	*1/3/11*	*5/2/11*	*9/27/11*	*4/3/12*	***Cleanup Standards*** ***GW-2***	***GW-3***
CF-1/FP											**30**	**5,000**
Effluent	3		530	1,200		900	920				**30**	**5,000**
Fire Pond											**30**	**5,000**
Influent	2,800	3,600	3,400	4,800		3,800	1,500				**30**	**5,000**
Intermediate Carbon	1,900		1,700	3,000		2,300	1,900				**30**	**5,000**
MW-1-1											**30**	**5,000**
MW-7						3					**30**	**5,000**
MW-7A						0.8					**30**	**5,000**
MW-8									10		**30**	**5,000**
MW-9										<1.0	**30**	**5,000**
MW-10										11	**30**	**5,000**
MW-11									**20,000**		**30**	**5,000**
MW-12									1,000		**30**	**5,000**
MW-15	<0.5	<0.5				<0.5		<0.5			**30**	**5,000**
MW-15A	<3	<3				<0.5		<0.5			**30**	**5,000**
MW-19											**30**	**5,000**
MW-19A											**30**	**5,000**
MW-19B											**30**	**5,000**
MW-1B		**130,000**		**100,000**		**150,000**		**130,000**	**140,000**		**30**	**5,000**
MW-1D											**30**	**5,000**
MW-1DB		1,600		1,300							**30**	**5,000**
MW-1S											**30**	**5,000**
MW-25	**14,000**	**13,000**		**10,000**		**15,000**		**14,000**	**14,000**		**30**	**5,000**
MW-25A	3,800	2,000		1,400		3,000		**5,000**			**30**	**5,000**
MW-25B	88	340		180		840		21			**30**	**5,000**
MW-27A	36	74		29		97		630	1,100		**30**	**5,000**
MW-27B	230	290		350		380		28	160		**30**	**5,000**
MW-28I											**30**	**5,000**
MW-29	<0.5	<0.5		<0.5							**30**	**5,000**
MW-29A	<0.5	<0.5		0.6							**30**	**5,000**
MW-29B	<0.5	<3		<0.5							**30**	**5,000**
OW-1									**16,000**		**30**	**5,000**
OW-1A									**26,000**		**30**	**5,000**
OW-1S											**30**	**5,000**
RW-1											**30**	**5,000**
RW-2											**30**	**5,000**
RW-3											**30**	**5,000**
RW-4					18,000						**30**	**5,000**
Trip Blank											**30**	**5,000**

HISTORICAL TABLE THREE

Summary of Historic Results for cis-1,2-DCE in Groundwater (ug/l)

January 2004 - April 2012

Sample	Sampling Date 1/13/04	4/2/04	6/28/04	10/18/04	10/20/04	10/21/04	1/21/05	4/11/05	4/12/05	7/15/05	8/23/05	10/24/05	11/3/05	11/4/05	11/7/05	Cleanup Standards GW-2	GW-3
CF-1/FP			39	33			400			270	230		190			**100**	**50,000**
Effluent	<1	<1	<0.5	<1			79		42	6	3	<0.5	<0.5			**100**	**50,000**
Fire Pond														<0.5		**100**	**50,000**
Influent	170	67	59	<50			590		260	230	160		300			**100**	**50,000**
Intermediate Carbor																**100**	**50,000**
MW-1-1		<1				<5			<2						<25	**100**	**50,000**
MW-7																**100**	**50,000**
MW-7A																**100**	**50,000**
MW-8																**100**	**50,000**
MW-9																**100**	**50,000**
MW-10																**100**	**50,000**
MW-11																**100**	**50,000**
MW-12		<20				<25		8						<10		**100**	**50,000**
MW-15																**100**	**50,000**
MW-15A																**100**	**50,000**
MW-19		390		360				270							290	**100**	**50,000**
MW-19A		190		190				150							160	**100**	**50,000**
MW-19B		52		130				140							190	**100**	**50,000**
MW-1B		2,700			4,500				3,500					1,800		**100**	**50,000**
MW-1D		75			180				1,800					2,800		**100**	**50,000**
MW-1DB																**100**	**50,000**
MW-1S		510			55				850					1,200		**100**	**50,000**
MW-25		1,000		2,700				1,100							1,000	**100**	**50,000**
MW-25A		240		280				410							410	**100**	**50,000**
MW-25B		50		1,500				12							41	**100**	**50,000**
MW-27A		48		20				3						10		**100**	**50,000**
MW-27B																**100**	**50,000**
MW-28I		14				15		3							7	**100**	**50,000**
MW-29																**100**	**50,000**
MW-29A																**100**	**50,000**
MW-29B																**100**	**50,000**
OW-1		3,700		7,800				1,200						1,200		**100**	**50,000**
OW-1A		3,300		610				290						260		**100**	**50,000**
OW-1S		16,000		20,000				9,400						3,700		**100**	**50,000**
RW-1		9				130							710			**100**	**50,000**
RW-2		<50		<50									<50			**100**	**50,000**
RW-3		130		83									130			**100**	**50,000**
RW-4																**100**	**50,000**
Trip Blank	<1	<1	<0.5	<1		<1	<1	<1		<0.5	<0.5		<0.5			**100**	**50,000**

HISTORICAL TABLE THREE (Cont'd)

Summary of Historic Results for cis-1,2-DCE in Groundwater (ug/l)

January 2004 - April 2012

Sample	*2/9/06*	*5/22/06*	*8/9/06*	*11/15/06*	*1/8/07*	*6/11/07*	*9/4/07*	*11/30/07*	*2/29/08*	*5/22/08*	*8/5/08*	*11/11/08*	*2/2/09*	***Cleanup Standards GW-2***	***GW-3***
	Sampling Date														
CF-1/FP	350	290	350		670	450	170	2						**100**	**50,000**
Effluent	4	220	590		<0.5	380	330	1	2	1	1	<0.5	<0.5	**100**	**50,000**
Fire Pond	1	18	48	<0.5	<0.5	7	30	<0.5						**100**	**50,000**
Influent	470	320	350		350	340	190	650	510	710	230	750	390	**100**	**50,000**
Intermediate Carbon										1	27	220	610	**100**	**50,000**
MW-1-1		<25		<25		<50		970						**100**	**50,000**
MW-7														**100**	**50,000**
MW-7A														**100**	**50,000**
MW-8														**100**	**50,000**
MW-9														**100**	**50,000**
MW-10														**100**	**50,000**
MW-11														**100**	**50,000**
MW-12		<10		<10		<25								**100**	**50,000**
MW-15												<0.5		**100**	**50,000**
MW-15A												<0.5		**100**	**50,000**
MW-19		260		290		320								**100**	**50,000**
MW-19A		180		200		160								**100**	**50,000**
MW-19B		190		160		100								**100**	**50,000**
MW-1B		6,200		3,100		6,900		6,400		4,600		3,700		**100**	**50,000**
MW-1D		780		680		2,900		3,300		390		5,400		**100**	**50,000**
MW-1DB										8,800		210		**100**	**50,000**
MW-1S		4,400		2,400		14,000		3,900		3,600		6,200		**100**	**50,000**
MW-25		1,200		880		1,500		1,100						**100**	**50,000**
MW-25A		460		740		380		270		350		360		**100**	**50,000**
MW-25B		6		22		13		150		16		230		**100**	**50,000**
MW-27A		2		24		<2.5				15		23		**100**	**50,000**
MW-27B														**100**	**50,000**
MW-28I		9		11		6								**100**	**50,000**
MW-29														**100**	**50,000**
MW-29A														**100**	**50,000**
MW-29B														**100**	**50,000**
OW-1		910		14,000		2,600		4,000		1,900		1,500		**100**	**50,000**
OW-1A		59		280		110				1,400		380		**100**	**50,000**
OW-1S		700		930		720								**100**	**50,000**
RW-1		670		1,600		1,100		1,300						**100**	**50,000**
RW-2		180		98		570		100						**100**	**50,000**
RW-3		140		260		190		130						**100**	**50,000**
RW-4														**100**	**50,000**
Trip Blank	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	**100**	**50,000**

HISTORICAL TABLE THREE (Cont'd)

Summary of Historic Results for cis-1,2-DCE in Groundwater (ug/l)

January 2004 - April 2012

	Sampling Date									***Cleanup Standards***	
Sample	*5/14/09*	*10/27/09*	*6/29-30/10*	*10/22/10*	*10/26/10*	*1/3/11*	*5/2/11*	*9/27/11*	*4/3/12*	***GW-2***	***GW-3***
CF-1/FP										**100**	**50,000**
Effluent	81		410		240	260				**100**	**50,000**
Fire Pond										**100**	**50,000**
Influent	160	380	320		290	<50				**100**	**50,000**
Intermediate Carbon	530		270		220	190				**100**	**50,000**
MW-1-1										**100**	**50,000**
MW-7					1					**100**	**50,000**
MW-7A					0.6					**100**	**50,000**
MW-8								<1.0		**100**	**50,000**
MW-9									<1.0	**100**	**50,000**
MW-10									<1.0	**100**	**50,000**
MW-11								940		**100**	**50,000**
MW-12								26		**100**	**50,000**
MW-15	<0.5	<0.5			<0.5		<0.5			**100**	**50,000**
MW-15A	<3	<3			<0.5		<0.5			**100**	**50,000**
MW-19										**100**	**50,000**
MW-19A										**100**	**50,000**
MW-19B										**100**	**50,000**
MW-1B		4,300	6,500		5,100		4,300	3,700		**100**	**50,000**
MW-1D										**100**	**50,000**
MW-1DB		61	<25							**100**	**50,000**
MW-1S										**100**	**50,000**
MW-25	870	1,300	740		920		820			**100**	**50,000**
MW-25A	640	370	260		560		680	1,500		**100**	**50,000**
MW-25B	14	160	44		210		9			**100**	**50,000**
MW-27A	2	4	2		4		150	180		**100**	**50,000**
MW-27B	59	92	110		110		1.4	150		**100**	**50,000**
MW-28I										**100**	**50,000**
MW-29	<0.5	<0.5	<0.5							**100**	**50,000**
MW-29A	<0.5	<0.5	<0.5							**100**	**50,000**
MW-29B	<0.5	<3	<0.5							**100**	**50,000**
OW-1								2,900		**100**	**50,000**
OW-1A								3,100		**100**	**50,000**
OW-1S										**100**	**50,000**
RW-1										**100**	**50,000**
RW-2										**100**	**50,000**
RW-3										**100**	**50,000**
RW-4				1,600						**100**	**50,000**
Trip Blank										**100**	**50,000**

HISTORICAL TABLE FOUR

Summary of Historic Results for 1,1-DCE in Groundwater (ug/l)

January 2004 - April 2012

	Sampling Date														***Cleanup Standards***	
Sample	*1/13/04*	*4/2/04*	*6/28/04*	*10/18/04*	*10/20/04*	*10/21/04*	*1/21/05*	*4/11/05*	*4/12/05*	*7/15/05*	*8/23/05*	*10/24/05*	*11/3/05*	*11/4/05*	***GW-2***	***GW-3***
CF-1/FP			<2.5	<5			<25			<5	<10		<25		**80**	**30,000**
Effluent	<1	<1	<0.5	<1			<2		<1	<0.5	<0.5	<0.5	<0.5		**80**	**30,000**
Fire Pond														<0.5	**80**	**30,000**
Influent	<50	<25	<50	<50			<50		<50	<50	<50		<50		**80**	**30,000**
Intermediate Carbon															**80**	**30,000**
MW-1-1		<1				<5			<2						**80**	**30,000**
MW-7															**80**	**30,000**
MW-7A															**80**	**30,000**
MW-8															**80**	**30,000**
MW-9															**80**	**30,000**
MW-10															**80**	**30,000**
MW-11															**80**	**30,000**
MW-12		<20				<25		<5						<10	**80**	**30,000**
MW-15															**80**	**30,000**
MW-15A															**80**	**30,000**
MW-19		<20		<25				10							**80**	**30,000**
MW-19A		<20		<10				<10							**80**	**30,000**
MW-19B		<1		<2				<2							**80**	**30,000**
MW-1B		<2,000			<2,000				<1,000					<500	**80**	**30,000**
MW-1D		<20			<50				<500					<500	**80**	**30,000**
MW-1DB															**80**	**30,000**
MW-1S		<5			<2				<10					<25	**80**	**30,000**
MW-25		<200		<100				<200							**80**	**30,000**
MW-25A		<20		<25				<50							**80**	**30,000**
MW-25B		<20		<25				<5							**80**	**30,000**
MW-27A		<5		<5				<1						<2.5	**80**	**30,000**
MW-27B															**80**	**30,000**
MW-28I		<1				<2		<1							**80**	**30,000**
MW-29															**80**	**30,000**
MW-29A															**80**	**30,000**
MW-29B															**80**	**30,000**
OW-1		<500		<500				<500						<250	**80**	**30,000**
OW-1A		<100		<50				<10						<25	**80**	**30,000**
OW-1S		<200		<200				<200						<50	**80**	**30,000**
RW-1		<1				<10							<100		**80**	**30,000**
RW-2		<50		<50									<50		**80**	**30,000**
RW-3		<20		<25									<25		**80**	**30,000**
RW-4															**80**	**30,000**
Trip Blank	<1	<1	<0.5	<1		<1	<1	<1		<0.5	<0.5		<0.5		**80**	**30,000**

HISTORICAL TABLE FOUR (Cont'd)

Summary of Historic Results for 1,1-DCE in Groundwater (ug/l)

January 2004 - April 2012

Sample	*11/7/05*	*2/9/06*	*5/22/06*	*8/9/06*	*11/15/06*	*1/8/07*	*6/11/07*	*9/4/07*	*11/30/07*	*2/29/08*	*5/22/08*	*8/5/08*	*11/11/08*	*2/2/09*	***Cleanup Standards*** ***GW-2***	***GW-3***
						Sampling Date										
CF-1/FP		<50	<50	<50		<25	<50	<50	<0.5						**80**	**30,000**
Effluent		<0.5	<2.5	<10		<0.5	<10	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**80**	**30,000**
Fire Pond		<0.5	<0.5	<1	<0.5	<0.5	<0.5	<2.5	<0.5						**80**	**30,000**
Influent		<100	<50	<50		<50	<50	<50	<50	<10	<25	<25	<25	<25	**80**	**30,000**
Intermediate Carbon											<0.5	<0.5	<3	<5	**80**	**30,000**
MW-1-1	<25		<25		<25		<50		<50						**80**	**30,000**
MW-7															**80**	**30,000**
MW-7A															**80**	**30,000**
MW-8															**80**	**30,000**
MW-9															**80**	**30,000**
MW-10															**80**	**30,000**
MW-11															**80**	**30,000**
MW-12			<10		<10		<25								**80**	**30,000**
MW-15													<0.5		**80**	**30,000**
MW-15A													<0.5		**80**	**30,000**
MW-19	9		<5		8		6								**80**	**30,000**
MW-19A	<10		<10		<10		<10								**80**	**30,000**
MW-19B	<2.5		<2.5		<2.5		<2.5								**80**	**30,000**
MW-1B			<2,500		<500		<2,500		<1,000		<500		<500		**80**	**30,000**
MW-1D			<100		<100		<500		<250		<25		<25		**80**	**30,000**
MW-1DB											<1,000		<500		**80**	**30,000**
MW-1S			<50		<50		<1,000		<50		4		<100		**80**	**30,000**
MW-25	<250		<250		<250		<250		<250						**80**	**30,000**
MW-25A	<50		<50		<50		<25		<25		<25		<10		**80**	**30,000**
MW-25B	<5		<1		<5		<1		<25		<5		<10		**80**	**30,000**
MW-27A			<1		<5		<2.5				<3		<3		**80**	**30,000**
MW-27B															**80**	**30,000**
MW-28I	<0.5		<1		<1		<0.5								**80**	**30,000**
MW-29															**80**	**30,000**
MW-29A															**80**	**30,000**
MW-29B															**80**	**30,000**
OW-1			<25		<250		<500		<250		14		<100		**80**	**30,000**
OW-1A			<2.5		<25		<10				<3		<5		**80**	**30,000**
OW-1S			<250		<10		<10								**80**	**30,000**
RW-1			<100		<50		<250		<100						**80**	**30,000**
RW-2			<50		<25		<50		<50						**80**	**30,000**
RW-3			<25		<10		<25		<25						**80**	**30,000**
RW-4															**80**	**30,000**
Trip Blank		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	**80**	**30,000**

HISTORICAL TABLE FOUR (Cont'd)

Summary of Historic Results for 1,1-DCE in Groundwater (ug/l)

January 2004 - April 2012

	Sampling Date									***Cleanup Standards***	
Sample	*5/14/09*	*10/27/09*	*6/29-30/10*	*10/22/10*	*10/26/10*	*1/3/11*	*5/2/11*	*9/27/11*	*4/3/12*	***GW-2***	***GW-3***
CF-1/FP										**80**	**30,000**
Effluent	<0.5		<5		<10	<5				**80**	**30,000**
Fire Pond										**80**	**30,000**
Influent	<25	<25	<25		50	<50				**80**	**30,000**
Intermediate Carbon	<10		<25		<25	<25				**80**	**30,000**
MW-1-1										**80**	**30,000**
MW-7					<0.5					**80**	**30,000**
MW-7A					<0.5					**80**	**30,000**
MW-8								<1.0		**80**	**30,000**
MW-9									<1.0	**80**	**30,000**
MW-10									<1.0	**80**	**30,000**
MW-11								16		**80**	**30,000**
MW-12								<1.0		**80**	**30,000**
MW-15	<0.5	<0.5			<0.5		<0.5			**80**	**30,000**
MW-15A	<3	<3			<0.5		<0.5			**80**	**30,000**
MW-19										**80**	**30,000**
MW-19A										**80**	**30,000**
MW-19B										**80**	**30,000**
MW-1B		<1,000	<1,000		<1,000		<1,000	15		**80**	**30,000**
MW-1D										**80**	**30,000**
MW-1DB		<50	<25							**80**	**30,000**
MW-1S										**80**	**30,000**
MW-25	200	<100	<100		<100		<100	90		**80**	**30,000**
MW-25A	53	10	<25		<100		<50			**80**	**30,000**
MW-25B	<3	<3	<10		<25		<0.5			**80**	**30,000**
MW-27A	<0.5	<1	<0.5		<1		25	30		**80**	**30,000**
MW-27B	11	17	19		20		<0.5	<1.0		**80**	**30,000**
MW-28I										**80**	**30,000**
MW-29	<0.5	<0.5	<0.5							**80**	**30,000**
MW-29A	<0.5	<0.5	<0.5							**80**	**30,000**
MW-29B	<0.5	<3	<0.5							**80**	**30,000**
OW-1								30		**80**	**30,000**
OW-1A								12		**80**	**30,000**
OW-1S										**80**	**30,000**
RW-1										**80**	**30,000**
RW-2										**80**	**30,000**
RW-3										**80**	**30,000**
RW-4				<100						**80**	**30,000**
Trip Blank										**80**	**30,000**

HISTORICAL TABLE FIVE

Summary of Historic Results for trans-1,2-DCE in Groundwater (ug/l)

January 2004 - April 2012

	Sampling Date														***Cleanup Standards***	
Sample	*1/13/04*	*4/2/04*	*6/28/04*	*10/18/04*	*10/20/04*	*10/21/04*	*1/21/05*	*4/11/05*	*4/12/05*	*7/15/05*	*8/23/05*	*10/24/05*	*11/3/05*	*11/4/05*	***GW-2***	***GW-3***
CF-1/FP			<2.5	<5			<25			<5	<10		<25		**90**	**50,000**
Effluent	<1	<1	<0.5	<1			<2		<1	<0.5	<0.5	<0.5	<0.5		**90**	**50,000**
Fire Pond														<0.5	**90**	**50,000**
Influent	<50	<25	<50	<50			<50		<50	<50	<50		<50		**90**	**50,000**
Intermediate Carbon															**90**	**50,000**
MW-1-1		<1				<5			<2						**90**	**50,000**
MW-7															**90**	**50,000**
MW-7A															**90**	**50,000**
MW-8															**90**	**50,000**
MW-9															**90**	**50,000**
MW-10															**90**	**50,000**
MW-11															**90**	**50,000**
MW-12		<20				<25		<5						<10	**90**	**50,000**
MW-15															**90**	**50,000**
MW-15A															**90**	**50,000**
MW-19		<20		<25				<5							**90**	**50,000**
MW-19A		<20		<10				<10							**90**	**50,000**
MW-19B		<1		<2				<2							**90**	**50,000**
MW-1B		<2,000			<2,000				<1,000					<500	**90**	**50,000**
MW-1D		<20			<50				<500					<500	**90**	**50,000**
MW-1DB															**90**	**50,000**
MW-1S		<5			<2				<10					<25	**90**	**50,000**
MW-25		<200		<100				<200							**90**	**50,000**
MW-25A		<20		<25				<50							**90**	**50,000**
MW-25B		<20		<25				<5							**90**	**50,000**
MW-27A		<5		<5				<1						<2.5	**90**	**50,000**
MW-27B															**90**	**50,000**
MW-28I		<1				<2		<1							**90**	**50,000**
MW-29															**90**	**50,000**
MW-29A															**90**	**50,000**
MW-29B															**90**	**50,000**
OW-1		<500		<500				<500						<250	**90**	**50,000**
OW-1A		<100		<50				<10						<25	**90**	**50,000**
OW-1S		<200		<200				<200						<50	**90**	**50,000**
RW-1		<1				<10							<100		**90**	**50,000**
RW-2		<50		<50									<50		**90**	**50,000**
RW-3		<20		<25									<25		**90**	**50,000**
RW-4															**90**	**50,000**
Trip Blank	<1	<1	<0.5	<1		<1	<1	<1		<0.5	<0.5		<0.5		**90**	**50,000**

HISTORICAL TABLE FIVE (Cont'd)

Summary of Historic Results for trans-1,2-DCE in Groundwater (ug/l)

January 2004 - April 2012

Sample	*11/7/05*	*2/9/06*	*5/22/06*	*8/9/06*	*11/15/06*	*1/8/07*	*6/11/07*	*9/4/07*	*11/30/07*	*2/29/08*	*5/22/08*	*8/5/08*	*11/11/08*	*2/2/09*	***Cleanup Standards*** ***GW-2***	***GW-3***
						Sampling Date										
CF-1/FP		<50	<50	<50		<25	<50	<50	<0.5						**90**	**50,000**
Effluent		<0.5	<2.5	<10		<0.5	<10	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**90**	**50,000**
Fire Pond		<0.5	<0.5	<1	<0.5	<0.5	<0.5	<2.5	<0.5						**90**	**50,000**
Influent		<100	<50	<50		<50	<50	<50	<50	<10	<25	<25	<25	<25	**90**	**50,000**
Intermediate Carbon											<0.5	<0.5	<3	<5	**90**	**50,000**
MW-1-1	<25		<25		<25		<50		<50						**90**	**50,000**
MW-7															**90**	**50,000**
MW-7A															**90**	**50,000**
MW-8															**90**	**50,000**
MW-9															**90**	**50,000**
MW-10															**90**	**50,000**
MW-11															**90**	**50,000**
MW-12			<10		<10		<25								**90**	**50,000**
MW-15													<0.5		**90**	**50,000**
MW-15A													<0.5		**90**	**50,000**
MW-19	<5		<5		<5		<5								**90**	**50,000**
MW-19A	<10		<10		<10		<10								**90**	**50,000**
MW-19B	<2.5		<2.5		<2.5		<2.5								**90**	**50,000**
MW-1B			<2,500		<500		<2,500		<1,000		<500		<500		**90**	**50,000**
MW-1D			<100		<100		<500		<250		<25		<25		**90**	**50,000**
MW-1DB											<1,000		<500		**90**	**50,000**
MW-1S			<50		<50		<1,000		<50		24		<100		**90**	**50,000**
MW-25	<250		<250		<250		<250		<250						**90**	**50,000**
MW-25A	<50		<50		<50		<25		<25		<25		<10		**90**	**50,000**
MW-25B	<5		<1		<5		<1		<25		<5		<10		**90**	**50,000**
MW-27A			<1		<5		<2.5				<3		<3		**90**	**50,000**
MW-27B															**90**	**50,000**
MW-28I	<0.5		<1		<1		<0.5								**90**	**50,000**
MW-29															**90**	**50,000**
MW-29A															**90**	**50,000**
MW-29B															**90**	**50,000**
OW-1			<25		<250		<500		<250		<10		<100		**90**	**50,000**
OW-1A			<2.5		<25		<10				12		<5		**90**	**50,000**
OW-1S			<250		<10		<10								**90**	**50,000**
RW-1			<100		<50		<250		<100						**90**	**50,000**
RW-2			<50		<25		<50		<50						**90**	**50,000**
RW-3			<25		<10		<25		<25						**90**	**50,000**
RW-4															**90**	**50,000**
Trip Blank		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	**90**	**50,000**

HISTORICAL TABLE FIVE (Cont'd)

Summary of Historic Results for trans-1,2-DCE in Groundwater (ug/l)

January 2004 - April 12, 2012

	Sampling Date									***Cleanup Standards***	
Sample	*5/14/09*	*10/27/09*	*6/29-30/10*	*10/22/10*	*10/26/10*	*1/3/11*	*5/2/11*	*9/27/11*	*4/3/12*	***GW-2***	***GW-3***
CF-1/FP										**90**	**50,000**
Effluent	<0.5		<5		<10	<5				**90**	**50,000**
Fire Pond										**90**	**50,000**
Influent	<25	<25	<25		50	<50				**90**	**50,000**
Intermediate Carbon	<10		<25		<25	<25				**90**	**50,000**
MW-1-1										**90**	**50,000**
MW-7					<0.5					**90**	**50,000**
MW-7A					<0.5					**90**	**50,000**
MW-8								<1.0		**90**	**50,000**
MW-9									<1.0	**90**	**50,000**
MW-10									<1.0	**90**	**50,000**
MW-11								6.5		**90**	**50,000**
MW-12								<1.0		**90**	**50,000**
MW-15	<0.5	<0.5			<0.5		<0.5			**90**	**50,000**
MW-15A	<3	<3			<0.5		<0.5			**90**	**50,000**
MW-19										**90**	**50,000**
MW-19A										**90**	**50,000**
MW-19B										**90**	**50,000**
MW-1B		<1,000	<1,000		<1,000		<1,000	75		**90**	**50,000**
MW-1D										**90**	**50,000**
MW-1DB		<50	<25							**90**	**50,000**
MW-1S										**90**	**50,000**
MW-25	<100	<100	<100		<100		<100	39		**90**	**50,000**
MW-25A	<25	<10	<25		<100		<50			**90**	**50,000**
MW-25B	<3	<3	<10		<25		<0.5			**90**	**50,000**
MW-27A	<0.5	<1	<0.5		<1		410	340		**90**	**50,000**
MW-27B	110	250	290		310		<0.5	1.8		**90**	**50,000**
MW-28I										**90**	**50,000**
MW-29	<0.5	<0.5	<0.5							**90**	**50,000**
MW-29A	<0.5	<0.5	<0.5							**90**	**50,000**
MW-29B	<0.5	<3	<0.5							**90**	**50,000**
OW-1								25		**90**	**50,000**
OW-1A								48		**90**	**50,000**
OW-1S										**90**	**50,000**
RW-1										**90**	**50,000**
RW-2										**90**	**50,000**
RW-3										**90**	**50,000**
RW-4				<100						**90**	**50,000**
Trip Blank										**90**	**50,000**

HISTORICAL TABLE SIX

Summary of Historic Results for Vinyl Chloride in Groundwater (ug/l)

January 2004 - April 2012

	Sampling Date														***Cleanup Standards***	
Sample	*1/13/04*	*4/2/04*	*6/28/04*	*10/18/04*	*10/20/04*	*10/21/04*	*1/21/05*	*4/11/05*	*4/12/05*	*7/15/05*	*8/23/05*	*10/24/05*	*11/3/05*	*11/4/05*	***GW-2***	***GW-3***
CF-1/FP			<2.5	<10			<50			<5	<10		<25		**2**	**50,000**
Effluent	<2	<2	<0.5	<2			<4		2	<0.5	<0.5	<0.5	<0.5		**2**	**50,000**
Fire Pond														<0.5	**2**	**50,000**
Influent	<100	<50	<50	<100			<100		<100	<50	<50		<50		**2**	**50,000**
Intermediate Carbon															**2**	**50,000**
MW-1-1		<2				<10			<4						**2**	**50,000**
MW-7															**2**	**50,000**
MW-7A															**2**	**50,000**
MW-8															**2**	**50,000**
MW-9															**2**	**50,000**
MW-10															**2**	**50,000**
MW-11															**2**	**50,000**
MW-12		<40				<50		<10						<10	**2**	**50,000**
MW-15															**2**	**50,000**
MW-15A															**2**	**50,000**
MW-19		66		<50				100							**2**	**50,000**
MW-19A		<40		<20				<20							**2**	**50,000**
MW-19B		2		6				7							**2**	**50,000**
MW-1B		<4,000			<4,000				<2,000					<500	**2**	**50,000**
MW-1D		<40			<100				<1,000					<500	**2**	**50,000**
MW-1DB															**2**	**50,000**
MW-1S		57			<4				40					110	**2**	**50,000**
MW-25		<400		<200				<400							**2**	**50,000**
MW-25A		<40		<50				<100							**2**	**50,000**
MW-25B		<40		63				<10							**2**	**50,000**
MW-27A		<10		<10				<2						<2.5	**2**	**50,000**
MW-27B															**2**	**50,000**
MW-28I		<2				<4		<2							**2**	**50,000**
MW-29															**2**	**50,000**
MW-29A															**2**	**50,000**
MW-29B															**2**	**50,000**
OW-1		<1,000		<1,000				<1,000						<250	**2**	**50,000**
OW-1A		<200		<100				<20						<25	**2**	**50,000**
OW-1S		3,500		6,200				<400						280	**2**	**50,000**
RW-1		<2				<20							<100		**2**	**50,000**
RW-2		<100		<100									<50		**2**	**50,000**
RW-3		<40		<50									<25		**2**	**50,000**
RW-4															**2**	**50,000**
Trip Blank	<2	<2	<0.5	<2		<2	<2	<2		<0.5	<0.5		<0.5		**2**	**50,000**

HISTORICAL TABLE SIX (Cont'd)

Summary of Historic Results for Vinyl Chloride in Groundwater (ug/l)

January 2004 - April 2012

	Sampling Date														Cleanup Standards	
Sample	*11/7/05*	*2/9/06*	*5/22/06*	*8/9/06*	*11/15/06*	*1/8/07*	*6/11/07*	*9/4/07*	*11/30/07*	*2/29/08*	*5/22/08*	*8/5/08*	*11/11/08*	*2/2/09*	***GW-2***	***GW-3***
CF-1/FP		<50	<50	<50		<25	<50	<50	<0.5						**2**	**50,000**
Effluent		3	<2.5	<10		<0.5	<10	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**2**	**50,000**
Fire Pond		<0.5	<0.5	<1	<0.5	<0.5	<0.5	<2.5	<0.5						**2**	**50,000**
Influent		<100	<50	<50		<50	<50	<50	<50	11	<25	<25	<25	<25	**2**	**50,000**
Intermediate Carbon											<0.5	<0.5	<3	<5	**2**	**50,000**
MW-1-1	<25		<25		<25		<50		<50						**2**	**50,000**
MW-7															**2**	**50,000**
MW-7A															**2**	**50,000**
MW-8															**2**	**50,000**
MW-9															**2**	**50,000**
MW-10															**2**	**50,000**
MW-11															**2**	**50,000**
MW-12			<10		<10		<25								**2**	**50,000**
MW-15													<0.5		**2**	**50,000**
MW-15A													<0.5		**2**	**50,000**
MW-19	41		140		84		59								**2**	**50,000**
MW-19A	13		<10		<10		<10								**2**	**50,000**
MW-19B	10		8		8		3								**2**	**50,000**
MW-1B			<2500		<500		<2,500		<1,000		<500		<500		**2**	**50,000**
MW-1D			<100		<100		<500		<250		<25		<25		**2**	**50,000**
MW-1DB											<1,000		<500		**2**	**50,000**
MW-1S			160		300		<1,000		110		13		<100		**2**	**50,000**
MW-25	<250		<250		<250		<250		<250						**2**	**50,000**
MW-25A	56		<50		<50		37		<25		<25		31		**2**	**50,000**
MW-25B	<5		<1		<5		<1		<25		<5		41		**2**	**50,000**
MW-27A			<1		<5		<2.5				<3		<3		**2**	**50,000**
MW-27B															**2**	**50,000**
MW-28I	<0.5		<1		<1		<0.5								**2**	**50,000**
MW-29															**2**	**50,000**
MW-29A															**2**	**50,000**
MW-29B															**2**	**50,000**
OW-1			100		<250		<500		<250		<10		<100		**2**	**50,000**
OW-1A			<2.5		<25		<10				16		<5		**2**	**50,000**
OW-1S			<250		290		27								**2**	**50,000**
RW-1			<100		<50		<250		<100						**2**	**50,000**
RW-2			<50		<25		<50		<50						**2**	**50,000**
RW-3			<25		<10		<25		<25						**2**	**50,000**
RW-4															**2**	**50,000**
Trip Blank		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	**2**	**50,000**

HISTORICAL TABLE SIX (Cont'd)

Summary of Historic Results for Vinyl Chloride in Groundwater (ug/l)

January 2004 - April 2012

	Sampling Date									***Cleanup Standards***	
Sample	*5/14/09*	*10/27/09*	*6/29-30/10*	*10/22/10*	*10/26/10*	*1/3/11*	*5/2/11*	*9/27/11*	*4/3/12*	***GW-2***	***GW-3***
CF-1/FP										**2**	**50,000**
Effluent	<0.5		<5		<10	<5				**2**	**50,000**
Fire Pond										**2**	**50,000**
Influent	<25	<25	<25		<50	<50				**2**	**50,000**
Intermediate Carbon	<10		<25		<25	<25				**2**	**50,000**
MW-1-1										**2**	**50,000**
MW-7					<0.5					**2**	**50,000**
MW-7A					<0.5					**2**	**50,000**
MW-8								<1.0		**2**	**50,000**
MW-9									<1.0	**2**	**50,000**
MW-10									<1.0	**2**	**50,000**
MW-11								23		**2**	**50,000**
MW-12								<1.0		**2**	**50,000**
MW-15	<0.5	<0.5			<0.5		<0.5			**2**	**50,000**
MW-15A	<3	<3			<0.5		<0.5			**2**	**50,000**
MW-19										**2**	**50,000**
MW-19A										**2**	**50,000**
MW-19B										**2**	**50,000**
MW-1B		<1,000	<1,000		<1,000		<1,000	12		**2**	**50,000**
MW-1D										**2**	**50,000**
MW-1DB		<50	<25							**2**	**50,000**
MW-1S										**2**	**50,000**
MW-25	<100	120	<100		<100		<100	180		**2**	**50,000**
MW-25A	50	30	<25		30		67			**2**	**50,000**
MW-25B	<3	7	<10		33		<0.5			**2**	**50,000**
MW-27A	<0.5	<1	<0.5		<1		240	210		**2**	**50,000**
MW-27B	110	200	360		210		<0.5	<1.0		**2**	**50,000**
MW-28I										**2**	**50,000**
MW-29	<0.5	<0.5	<0.5							**2**	**50,000**
MW-29A	<0.5	<0.5	<0.5							**2**	**50,000**
MW-29B	<0.5	<3	<0.5							**2**	**50,000**
OW-1								490		**2**	**50,000**
OW-1A								130		**2**	**50,000**
OW-1S										**2**	**50,000**
RW-1										**2**	**50,000**
RW-2										**2**	**50,000**
RW-3										**2**	**50,000**
RW-4				<100						**2**	**50,000**
Trip Blank										**2**	**50,000**

ATTACHMENT 1

4a. Description of the Treatment System

Groundwater will be pumped from the four recovery wells through buried pipelines, and will enter the treatment building. The groundwater will flow to an equalization/sedimentation tank, where the water will be retained to allow solids to settle out, and to equalize flow. A pump will be utilized to transfer water from the tank flowing to a dual bag filter unit. Effluent will flow from the bag filter units to dual air stripping towers. The water flows through a dual (1,000 lb. each), stream regenerative liquid phase carbon unit to be discharged to the fire pond on the northwest corner of the site. The system will be designed to operate unmanned and, under normal operations, will operate automatically. The system control panel will monitor the pressure and water levels through the system and will automatically shut down if operating parameters are outside normal ranges. Routine maintenance and sampling will be scheduled to evaluate system operation and compliance with discharge limitations.

The groundwater treatment system will be capable of treating groundwater at the specified flow rate and the specified contaminant concentrations as determined.

5b. Narrative Description of the Discharge Pathway

The groundwater pump and treat system discharges to man-made fire pond. The pond has an overflow pipe that discharges to an adjacent wetland when overflows. A review of USGS map did not identify any perennial or intermittent streams within the wetland area. The operation of the system is not anticipated to cause the system to overflow.

ATTACHMENT 2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

September 26, 2005

Donald A. Roach, Chairman
Kilburn Isotronics
111 S. Worcester St.
Chartley, MA 02712

Re: Authorization to Discharge Under the Remediation General Permit (RGP) - MAG910000 to **Kilborn Isotronics:** Authorization #MAG910018

Dear Mr. Roach,

The US Environmental Protection Agency (EPA) is notifying you that on September 9, 2005, EPA published a notice in the Federal Register (see enclosed) announcing the availability of the Remediation General Permit (RGP). You are receiving this letter because you own or operate a site or facility in Massachusetts (MA) and you previously submitted a National Pollution Discharge Elimination System (NPDES) permit application (Forms 1 & 2C). Our records also indicate that your site or facility has been covered previously under an EPA temporary permit exclusion letter.

Effective 30 days after receipt of this letter and authorization, this letter and authorization terminate any and all exclusion letters that EPA issued for your site or facility prior to this date and close out any and all NPDES applications submitted to EPA prior to this date for an individual permit for this discharge.

Based on the information contained in our files, EPA is authorizing you to discharge under the provisions of the Remediation General Permit (RGP) at this site, effective 30 days after receipt of this letter. Your authorization number is listed above. The RGP, Fact Sheet, response to public comments, suggested forms, and additional information can be found at: http://www.epa.gov/region1/npdes/mass.html#dgp (for discharges in MA) and http://www.epa.gov/region1/npdes/newhampshire.html#dgp (for discharges in NH), or at: EPA-NE, One Congress Street, Suite 1100 (CIP), Boston, MA 02114.

The enclosed checklist designates the monitoring parameters applicable to your discharge. However, note that the checklist does not represent the complete requirements of the RGP. Operators must comply with all of the applicable requirements of the general permit, including influent monitoring, narrative water quality standards, sampling, record keeping, and reporting requirements, found in Part I, Part II, and Appendices I – VIII, of the RGP.

If you believe that the discharge at your site or facility should not be covered by the RGP or this authorization, ***you must stop discharging within 30 days of receipt of this letter*** and submit to EPA (at the address above), **by October 10, 2005,** one of the following:

(1) a Notice of Termination or other correspondence indicating that you are no longer discharging;

(2) an updated NPDES permit application (Forms 1 & 2C) re-initiating the process for coverage under an individual NPDES permit; or

(3) a Notice of Intent or other correspondence indicating current conditions and discharge characteristics.

Please note that if you apply for an individual NPDES permit, you must stop discharging within 30 days and submit an NPDES application to EPA a minimum of 180 days prior to discharge.

Notice of this authorization, effective in 30 days, will be posted on EPA's website at: http://www.epa.gov/region1/npdes/rgp.html. This general permit authorization will expire on September 9, 2010.

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

Sincerely,

David M. Webster

David M. Webster, Chief
Industrial Permits Branch

Enclosures

Cc: Paul Hogan, MA DEP

Summary of applicable monitoring parameters[1] under the Remediation General Permit (RGP)

Facility/Site Name: KILBURN ISOTRONICS **Facility/Site Address:** CHARTLEY, MA

MAG910018 9/23/05

If checked, monitor the parameter	Parameter to be monitored (see Parts I.C. and I.D. and Appendix III of the RGP for specific limits and requirements)	If checked, monitor the parameter	Parameter to be monitored (see Parts I.C. and I.D. and Appendix III of the RGP for specific limits and requirements)
	1. Total Suspended Solids (TSS)	✓	28. Trichloroethylene (TCE)
	2. Total Residual Chlorine (TRC)		29. Vinyl Chloride (Chloroethene)
	3. Total Petroleum Hydrocarbons (TPH)		30. Acetone
	4. Cyanide (CN)[2]		31. 1,4 Dioxane
	5. Benzene (B)		32. Total Phenols
	6. Toluene (T)		33. Pentachlorophenol (PCP)
	7. Ethylbenzene (E)		34. Total Phthalates
	8. (m,p,o) Xylenes (X)		35. Bis (2-Ethylhexyl) Phthalate
	9. Total BTEX[3]		36. Total Group I Polycyclic Aromatic Hydrocarbons
	10. Ethylene Dibromide (EDB)		a. Benzo(a) Anthracene
	11. Methyl-tert-Butyl Ether (MtBE)		b. Benzo(a) Pyrene
	12. tert-Butyl Alcohol (TBA)		c. Benzo(b)Fluoranthene
	13. tert-Amyl Methyl Ether (TAME)		d. Benzo(k)Fluoranthene
	14. Naphthalene		e. Chrysene
	15. Carbon Tetrachloride		f. Dibenzo(a,h)anthracene
	16. 1,4 Dichlorobenzene (p-DCB)		g. Indeno(1,2,3-cd) Pyrene
	17. 1,2 Dichlorobenzene (o-DCB)		37. Total Group II Polycyclic Aromatic Hydrocarbons
	18. 1,3 Dichlorobenzene (m-DCB)		h. Acenaphthene
	19. Total dichlorobenzene		i. Acenaphthylene
	20. 1,1 Dichloroethane (DCA)		j. Anthracene
	21. 1,2 Dichloroethane (DCA)		k. Benzo(ghi) Perylene
	22. 1,1 Dichloroethylene (DCE)		l. Fluoranthene
✓	23. cis-1,2 Dichloro-ethylene (DCE)		m. Fluorene
	24. Dichloromethane (Methylene Chloride)		n. Naphthalene
✓	25. Tetrachloroethylene (PCE)		o. Phenanthrene
	26. 1,1,1 Trichloro-ethane (TCA)		p. Pyrene
	27. 1,1,2 Trichloro-ethane (TCA)		38. Total Polychlorinated Biphenyls (PCBs)[4]

If checked, monitor the parameter	Parameter to be monitored (see Parts I.C. and I.D. and Appendix III of the RGP for specific limits and requirements)	If checked, monitor the parameter	Parameter to be monitored (see Parts I.C. and I.D. and Appendix III of the RGP for specific limits and requirements)
	39. Antimony	✓	53. Total Flow
	40. Arsenic	✓	54. pH Range for Class A & Class B Waters in MA
	41. Cadmium		55. pH Range for Class SA & Class SB Waters in MA
	42. Chromium III (trivalent)		56. pH Range for Class B Waters in NH
	43. Chromium VI (hexavalent)		57. Daily maximum temperature - Warm water fisheries
	44. Copper		58. Daily maximum temperature - Cold water fisheries
	45. Lead		59. Maximum Change in Temperature in MA - Any Class A water body
	46. Mercury		60. Maximum Change in Temperature in MA - Warm Water
	47. Nickel		61. Maximum Change in Temperature in MA - Cold Water and Lakes/Ponds
	48. Selenium		62. Maximum Change in Temperature in MA -Coastal
	49. Silver		63. Maximum Change in Temperature in MA - July to September
	50. Zinc		64. Maximum Change in Temperature in MA - October to June
	51. Iron		*Other parameters (as indicated on NOI):*
✓	52. Instantaneous Flow		

Footnotes:

1. This checklist does not represent the complete requirements of the RGP. Operators must comply with all of the applicable requirements of the remediation general permit (RGP), including influent monitoring, narrative water quality standards, etc. Operators must follow the RGP, including Parts I, II, and Appendices I - VIII in order to comply with the specific applicable requirements.

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

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

4. In the November 2002 WQC, EPA has revised the definition of Total PCBs for aquatic life as *"total PCBs is the sum of all homologue, all isomer, all congener, or all Aroclor analyses."*