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

CERTIFIED MAIL RETURN RECEIPT REQUESTED

JAN 15 2015

Lance Bennett
Project Manager
Pro Con, Inc.
1359 Hooksett Road
Hooksett, NH 03106

Re: Authorization to discharge under the Remediation General Permit (RGP) – MAG910000. Hotel Development site located at 85 Station Landing. Lot 44-5B, Medford, MA 02155, Middlesex County; Authorization # MAG910652

Dear Mr. Bennett:

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

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

Please note the enclosed checklist includes parameters that exceeded Appendix III limits. The checklist also includes other parameters for which your laboratory reports indicated there was insufficient sensitivity to detect these parameters at the minimum levels established in Appendix VI of the RGP.

Also, please note that the metals included on the checklist are dilution dependent pollutants and subject to limitations based on selected dilution ranges and technology-based ceiling limitations. For each parameter the dilution factor 25.4 for this site is within a dilution range greater than ten to fifty (>10 to 50), established in the RGP. (See the RGP Appendix IV for Massachusetts facilities). Therefore, the limits for antimony of 60

ug/L, arsenic of 100 ug/L, cadmium of 2 ug/L, chromium of 489 ug/L, copper of 52 ug/L, lead of 13 ug/L, nickel of 290 ug/L, selenium of 50 ug/L, silver of 12 ug/L, zinc of 666 ug/L and iron of 5,000 ug/L, are 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 March 30, 2015. 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, Chief
Storm Water and Construction
Permits Section

Enclosure

cc: Robert Kubit, MassDEP
Paul Gere, Medford PWD
Brian J. Miller, CWD Consultants, Inc.

2010 Remediation General Permit
Summary of Monitoring Parameters[1]

NPDES Authorization Number:	**MAG910652**
Authorization Issued:	January, 2015
Facility/Site Name:	Hotel Development
Facility/Site Address:	85 Station Landing. Lot 44-5B, Medford, MA 02155, Middlesex County
	Email address of owner: lbennett@proconinc.com
Legal Name of Operator:	Pro Con, Inc.
Operator contact name, title, and Address:	Lance Bennett, Project Manager, 1359 Hooksett Road, Hooksett, NH, 03106
	Email: same as the owners
Estimated date of the site's Completion:	March 30, 2015
Category and Sub-Category:	Category III- Contaminated Construction Dewatering. Sub-category A. General Urban Fill Sites
RGP Termination Date:	September 10, 2015
Receiving Water:	Mystic River

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#160.2/ML5ug/L
	2. Total Residual Chlorine (TRC) [1]	Freshwater = 11 ug/L ** Saltwater = 7.5 ug/L **/ Me#330.5/ML 20ug/L
√	3. Total Petroleum Hydrocarbons (TPH)	5.0 mg/L/ Me# 1664A/ML 5.0mg/L
	4. Cyanide (CN) [2, 3]	Freshwater = 5.2 ug/l ** Saltwater = 1.0 ug/L **/ Me#335.4/ML 10ug/L
	5. Benzene (B)	5ug/L /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

	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)
	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) [4]	100 ug/L/ Me#8260C/ ML 2ug/L
	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

	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)
	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
√	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 100 ug/L

	Metal parameter	Total Recoverable MA/Metal Limit H [10] = 50 mg/l CaCO3, Units = ug/l [(11/12)] Freshwater Limits		Minimum level=ML	
√	39. Antimony	5.6		ML	10
√	40. Arsenic **	10		ML	20
√	41. Cadmium **	0.2		ML	10
√	42. Chromium III (trivalent) **	48.8		ML	15
	43. Chromium VI (hexavalent) **	11.4		ML	10
√	44. Copper **	5.2		ML	15
√	45. Lead **	1.3		ML	20
√	46. Mercury **	0.9		ML	02
√	47. Nickel **	29		ML	20
√	48. Selenium **	5		ML	20
√	49. Silver	1.2		ML	10
√	50. Zinc **	66.6		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 "Aroclor 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 in EPA test Method 150.1.
[14] Temperature sampling per Method 170.1

CDW CONSULTANTS, INC.
CIVIL & ENVIRONMENTAL ENGINEERS

December 22, 2014

U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code OEP06-4
Boston, MA 02109-3912

Re: Notice of Intent for Remediation General Permit
85 Station Landing, Lot 44-5B, Medford, MA
CDW Project # 1406.00

To Whom It May Concern:

CDW Consultants, LLC is submitting this Notice of Intent (NOI) on behalf of Procon, Inc. for a Remediation General Permit (RGP) under EPA's National Pollutants Discharge Elimination System (NPDES) program. The RGP is required to discharge groundwater encountered during construction activities for development of a new hotel at the above-referenced site.

Construction will take place on a 1.75-acre parcel known as Lot 44-5B which is part of a larger property that is listed as a disposal site under the Massachusetts Contingency Plan (MCP) regulations. In April 2003, the Massachusetts Department of Environmental Protection (MassDEP) issued Release Tracking Number (RTN) 3-22880 due to the detection of Polycyclic Aromatic Hydrocarbons (PAHs), Volatile Organic Compounds (VOCs), arsenic, lead and Total Petroleum Hydrocarbons (TPH) in soil above MCP reportable concentrations. The contaminants were attributed to urban fill. In November 2006, EPA issued a RGP for excavation dewatering during implementation of a Release Abatement Measure (RAM) that included the excavation of approximately 4,070 cubic yards of soil. The site was closed out with a Class A-2 Response Action Outcome (RAO) in 2009.

Lot 44-5B is located within the RAO boundary. To obtain more updated groundwater quality, CDW collected groundwater samples for metals and volatile/extractable petroleum hydrocarbons with target VOCs and PAHs. All petroleum concentrations were non-detect except for naphthalene (6.14 µg/L) which was below Appendix III effluent limits. Metals concentrations however were elevated due to the very high level of suspended solids (TSS = 14,200 mg/L) in the groundwater sample. Our proposed groundwater treatment system for this project consists of a frac tank and filters to remove suspended solids before entering a catch basin and ultimately discharge to the Mystic River. If necessary, floc logs will be added to the frac tank to enhance settling. Dewatering will be intermittent and will not be encountered at all locations during construction.

CDW CONSULTANTS, INC.
CIVIL & ENVIRONMENTAL ENGINEERS

The project is scheduled to begin upon receiving the RGP and is anticipated to last approximately 4 to 6 weeks. Please do not hesitate to contact myself or Sherry Albert at 508-875-2657 if you have any questions.

Very truly yours,

CDW CONSULTANTS, INC.

Brian J. Miller, LSP
Project Manager

Attachments:

Notice of Intent

Attachment A:	Figure 1 – Priority Resource Map
	Figure 2 – Groundwater Treatment Flow Diagram
	Figure 3 – NPDES Discharge Location
Attachment B:	Dilution Factor Calculation and Metal Permit Limits
Attachment C:	Floc Log Material Safety Data Sheet (MSDS)
Attachment D:	Laboratory Analytical Data Report

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Remediation General Permit
Appendix V

Notice of Intent (NOI)
Suggested Forms & Instructions

I. Notice of Intent (NOI) Suggested Form and Instructions

In order to be covered by the remediation general permit (RGP), applicants must submit a completed Notice of Intent (NOI) to EPA Region I and the appropriate state agency. The owner or operator, as defined by 40 CFR § 122.2, means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.

The following are three general "**operator"** scenarios (variations on any of these three are possible, especially as the number of owners and contractors increases):

▸ **"***Owner" as "Operator" - sole permittee.* The property owner designs the structures and control systems for the site, develops and implements the BMPP, and serves as general contractor (or has an on-site representative with full authority to direct day-to-day operations). Under the definition of operator, in this case, the "Owner" would be considered the "operator" and therefore the only party that needs permit coverage. Everyone else working on the site may be considered subcontractors and do not need to apply for permit coverage.

▸ *"Contractor" as "Operator" - sole permittee.* The property owner hires a company (e.g., a contractor) to design the project and oversee all aspects, including preparation and implementation of the BMPP and compliance with the permit (e.g., a "turnkey" project). Here, the contractor would likely be the only party needing a permit. Similarly, EPA expects that property owners hiring a contractor or consultant to perform groundwater remediation work (e.g., due to a leaking fuel oil tank) would come under this type of scenario. EPA believes that the contractor, being a professional in the industry, should be the responsible entity rather than the individual. The contractor is better equipped to meet the requirements of both applying for permit coverage and developing and properly implementing the plans needed to comply with the permit. However, property owners would also meet the definition of "operator" and require permit coverage in instances where they perform any of the required tasks on their personal properties.

▸ *"Owner" and "Contractor" as "Operators" - co-permittees.* The owner retains control over any changes to site plans, BMPPs, or wastewater conveyance or control designs, but the contractor is responsible for conducting and overseeing the actual activities (e.g., excavation, installation and operation of treatment train, etc.) and daily implementation of BMPP and other permit conditions. In this case, both parties need to apply for coverage.

Generally, a person would not be considered an "operator," and subsequently would not need permit coverage, if: 1) that person is a subcontractor hired by, and under the supervision of, the owner or a general contractor (e.g., if the contractor directs the

subcontractor's activities on-site, it is probably not an operator); or 2) the person's activities would otherwise result in the need for coverage under the RGP but another operator has legally assumed responsibility for the impacts of project activities.

A. Instructions for the Suggested Notice of Intent (NOI) - At a minimum, the Notice of Intent must include the following for each individual facility or site. Additional information may be attached as needed.

1. General facility/site information.

a) Provide the facility/site name, mailing address, and telephone and fax numbers. Provide the facility Standard Industrial Classification (SIC) code(s), which can be found online at http://www.osha.gov/pls/imis/sic_manual.html. Provide the site location, including longitude and latitude.

b) Provide the facility/site owner's name, address, email address, telephone and fax numbers, if different from the site information. Indicate whether the owner is a Federal, State/Tribal, private, or other entity.

c) Provide the site operator's (e.g., contractor's) name, mailing address, telephone and fax numbers, and email address if different from the owner's information.

d) For the site for which the application is being submitted, indicate whether:

1) a prior NPDES permit exclusion has been granted for the discharge (if so, provide the tracking number of the exclusion letter);

2) a prior NPDES application (Form 1 & 2C – for reference, please visit http://www.epa.gov/region1/npdes/epa_attach.html) has ever been filed for the discharge (if so, provide the tracking number and date that the application was submitted to EPA);

3) the discharge is a "new discharge" as defined by 40 CFR 122.2; and

4) for sites in Massachusetts, is the discharge covered under the Massachusetts Contingency Plan (MCP) 310 CMR 40.0000 and exempt from state permitting.

e) Indicate whether there is any ongoing state permitting, licensing, or other action regarding the facility or site which is generating the discharge. If "yes," provide any site identification number assigned by the state of NH or MA, any permit or license number assigned, and the state agency contact information (e.g. name, location, telephone no.).

f) Indicate whether or not the facility is covered by other EPA permits including:

1) the Multi-Sector General Permit (MSGP) http://cfpub.epa.gov/npdes/stormwater/msgp.cfm;
2) the Final NPDES General Permit for Dewatering Activity Discharges in Massachusetts and New Hampshire http://www.epa.gov/region1/npdes/dewatering.html;
3) the EPA Construction General Permit http://cfpub.epa.gov/npdes/stormwater/cgp.cfm;
4) an individual NPDES permit; or
5) any other water quality-related individual or general permit.

If so, provide permit tracking number(s).

g) Indicate if the site/facility discharge(s) to an Area of Critical Environmental Concern (ACEC), as shown on the tables and maps in Appendix I.

h) Based on the nature of the facility/site and any historical sampling data, the applicant must indicate which of the sub-categories within which the potential discharge falls.

2. Discharge information.

a) Describe the discharge activities to be covered by the permit. Attach additional sheets as needed.

b) Provide the following information about each discharge:

1) the number of discharge points;
2) the maximum and average flow rate of the discharge in cubic feet per second. For the average flow magnitude, include the units and appropriate notation if this value is a calculated design value or estimate if technical/design information is not available;
3) the latitude and longitude of each discharge with an accuracy of 100 feet (see EPA's siting tool at: http://www.epa.gov/tri/report/siting_tool);
4) the total volume of potential discharge (gal), only if hydrostatic testing;
5) whether the discharge(s) is intermittent or seasonal and if ongoing.

c) Provide the expected start and end dates of discharge (month/day/year).

d) Attach a line drawing or flow schematic showing water flow through the facility including:

1) sources of intake water;
2) contributing flow from the operation;
3) treatment units; and
4) discharge points and receiving waters(s).

3. Contaminant information.

In order to complete the NOI, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for the parameters applicable to the sub-category into which the discharge falls, as listed in Appendix III of the permit and selected in Part 1 of the NOI form, except as noted below.

Permittees shall provide additional sampling results with the NOI if such sampling already exists, or if the permittee has reason to believe the site contains additional contaminants not listed in Appendix III for that sub-category or contains additional contaminants not included in Appendix III.

The applicant may use historical data as a substitute for the new sample if the data was collected no more than 2 years prior to the "Submittal of the NOI" and if collected pursuant to:

i. for sites in Massachusetts, 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E");

ii. for sites in New Hampshire, New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act;

a) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is believed present or believed absent in the potential discharge.

Based on the required sampling and analysis, the applicant must fill in the table, or provide a narrative description, with the following additional information for each chemical that is believed present (chemical that violate EPA's criteria limitations):

1) the number of samples taken (minimum of one sample for applicable parameters per Appendix III);
2) the type of sample (e.g. grab, composite, etc.);
3) the analytical method used, including the method number;
4) the minimum level (ML) of the method used (based on Appendix VI);
5) the maximum daily amount (concentration (ug/l) and mass (kg)) of each pollutant, based on the sampling data

lb/day (pounds per day) equals flow (in million gallons per day, MGD) times concentration in milligrams per liter (mg/l) times 8.34.
Example: 2.5 MGD x 30 mg/l TSS x 8.34 = 625.5 lb TSS/day
MGD = gallons per minute (gpm) x 0.00144
1 kg = 2.2 lbs

And;
6) the average daily amount (concentration and mass) of each pollutant, based on the sampling data.

If the results of any sampling indicate that pollutants exist in addition to those listed in Appendix III of the RGP of the permit, the applicant must also describe those contaminants on the NOI in boxes in section I.3.c.)on the line marked "Other," or use additional sheets as needed. Subsequently, EPA may require monitoring for such parameters or will decide if an individual permit is necessary.

c) Determination of Reasonable Potential and Allowable Dilution for Discharges of Metals:

If any *metals* are believed present in the potential discharge to freshwater[1], the applicant must follow the procedures below to determine the dilution factor for each metal.

Step 1: Initial Evaluation

1) The applicant must evaluate all metals believed present in the discharge subject to this permit, including "naturally occurring" metals such as dissolved and/or total Iron. Applicants must enter the highest detected concentration of the metal at zero dilution in the "Maximum value" column of the NOI.

2) Based on the maximum concentration of each metal, the applicant must perform an initial evaluation assuming zero dilution in the receiving water. The applicant must compare the metals concentrations in the untreated (intake) waters to the effluent limits contained in Appendix III.

[1]Dilution factors may be available for discharges to saline waters but only with approval of the flow modeling information from the State prior to the submission of the NOI.

i. If potential discharges (untreated influent) with metals contain concentrations above the concentration limits listed in Appendix III, applicant must proceed to step 2.
ii. If potential discharges (untreated influent) with metals contain concentrations below the concentrations listed in Appendix III, the applicant may skip step 2 and those metals will **not** be subject to permit limitations or monitoring requirements.

Step 2: Calculation of Dilution Factor

1) **For applicants in NH**: If a metal concentration in a potential discharge (untreated influent) to **freshwater** exceeds the limits in Appendix III with zero dilution, the applicant shall evaluate the potential concentration considering a dilution factor (DF) using the formula below. **For sites in New Hampshire, the applicant must contact NH DES to determine the 7Q10 and dilution factor.**

DF = [(Qd + Qs)/Qd] x 0.9

Where:

DF	**=**	**Dilution Factor**
Qd	**=**	**Maximum flow rate of the discharge in cubic feet per second (cfs) (1.0 gpm = .00223 cfs)**
Qs	**=**	**Receiving water 7Q10 flow, in cfs, where 7Q10 is the annual minimum flow for 7 consecutive days with a recurrence interval of 10 years**
0.9	=	**Allowance for reserving 10% of the assets in the receiving stream as per Chapter ENV-Wq 1700, Surface Water Quality Regulations**

i. Using the DF calculated from the formula above, the applicant must refer to the corresponding dilution range column in Appendix IV. The applicant then compares the maximum concentration of the metal entered on the NOI to the corresponding total recoverable metals limits listed in Appendix IV. Please note that for this reissuance the applicant will be permitted to determine a limit using any fraction within the 1-5 dilution factor range times the metal limit (for all regulated metals). For example: if the DF is 1.5, the Iron limit is 1,500 ug/L; if the DF is 1.5, the antimony limit is 8.4, etc. All limits above a dilution factor of 5 are maintained.

1. If a metal concentration in the potential discharge (untreated influent) is less than the corresponding limit in Appendix IV, the metal will **not** be subject to permit limitations or monitoring requirements.
2. If a metal concentration in the potential discharge (untreated influent) is equal to or exceeds the corresponding limit in Appendix IV, the applicant must reduce it in the effluent to a concentration below the applicable total recoverable metals limit in Appendix IV prior to discharge.

ii. In either case, the applicant must submit the results of this calculation as part of the NOI. EPA and NH DES will review the proposed effluent limitations for each metal and approve or disapprove the limits in the notification of coverage letter to the applicant.

2) **For applicants in MA**: If a metal concentration in a potential discharge (untreated influent) to **freshwater** exceeds the limits in Appendix III with zero dilution, the applicant must evaluate the potential concentration considering a dilution factor (DF) using the formula below.

DF = (Qd + Qs)/Qd

Where:
DF = Dilution Factor
Qd = Maximum flow rate of the discharge in cubic feet per second (cfs) (1.0 gpm = .00223 cfs)
Qs = Receiving water 7Q10 flow (cfs) where 7Q10 is the minimum flow (cfs) for 7 consecutive days with a recurrence interval of 10 years

i. The applicant may estimate the 7Q10 for receiving water by using available information such as nearby USGS stream gauging stations directly or by application of certain "flow factors," using historic streamflow publication information, calculations based on drainage area, information from state water quality offices, or other means. In many cases Massachusetts has calculated 7Q10 information using "flow factors" for a number of streams in the state. The source of the low flow value(s) used by the applicant must be included on NOI application form. Flow data can also be obtained from web applications such as the one located at: http://ma.water.usgs.gov/streamstats/.

ii. Using the DF calculated from the formula above, the applicant must refer to the corresponding dilution range column in Appendix IV. The applicant then shall compare the maximum concentration of each metal entered on the NOI to the corresponding total recoverable metals limit listed in Appendix IV. Please note that for this reissuance the applicant will be permitted to determine a limit using any fraction of the 0-5 of DF times the metal limit (for all regulated metals). For example: if the DF is 1.5, the Iron limit is 1,500 ug/L; if the DF is 1.5, the antimony limit is 8.4, etc. Not to exceed DF of 5.

1. If a metal concentration in the potential discharge (untreated influent) is less than the corresponding limit in Appendix IV, the metal will **not** be subject to permit limitations or monitoring requirements.
2. If a metal concentration in a potential discharge (untreated influent) is equal to or exceeds the corresponding limit in Appendix IV, the applicant must reduce it in the effluent to a concentration below the applicable total recoverable metals limit in Appendix IV prior to discharge.

iii. The applicant must submit the results of this calculation as part of the NOI. EPA (and MassDEP where the discharge is not covered by 310 CMR 40.0000) will review the proposed effluent limitations for each metal and approve or disapprove the limits in the notification of coverage letter to the applicant.

4. Treatment system information.

a) Provide a written description of the treatment train and how the system will be set up for each discharge and attach a schematic of the proposed or existing treatment system(s).
b) Identify each major treatment unit (e.g. frac tanks, filters, air stripper, liquid phase/vapor phase activated carbon, oil/water separators, etc.) by checking all that apply and describing any additional equipment not listed. Attach additional sheets as needed.
c) Provide the proposed average and maximum flow rates (in gallons per minute, gpm) for the discharge and the design flow rates (in gpm) of the treatment system. Clearly identify the component of the treatment with the most limited flow, i.e., the part of the treatment train that establishes the design flow.
d) Describe any chemical additives being used, or planned to be used, and attach MSDS sheets for each. EPA may request further information regarding the chemical composition of the additive, potential toxic effects, or other information to insure that approval of the use of the additive will not cause or contribute to a violation of State water quality standards. Approval of coverage under the RGP will constitute approval of the use of the chemical additive(s). If coverage of the discharge under the RGP has already been granted and the use of a chemical additive becomes necessary, the permittee must submit a Notice of Change (NOC).

5. Receiving surface water(s) information.

a) Identify the discharge pathway by checking whether it is discharged: directly to the receiving water (river, stream, or brook), within the facility (e.g., through a sewer drain), to a storm drain, to a wetland, or other receiving body.
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters into which discharge will occur.
c) Provide a detailed map(s) indicating the location of the site and outfall(s) to the receiving water(s):

1) For multiple discharges, the discharges should be numbered sequentially.
2) In the case of indirect dischargers (to municipal storm sewer, etc) the map(s) must be sufficient to indicate the location of the discharge to the indirect conveyance and the discharge to the state classified 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 and the basin (for Massachusetts, the Surface Water Quality Standards (314 CMR 4.00) are available at http://www.mass.gov/dep/water/laws/regulati.htm#wqual) (for New Hampshire, contact the NH DES at (603) 271-2984).
e) Specify the reported seven day-ten year low flow (7Q10) of the receiving water (see Section I.A.3) c. above). In New Hampshire, the 7Q10 must be provided by to the applicant by the New Hampshire Department of Environmental Services**.**

f) Indicate whether the receiving water is a listed 303(d) water quality impaired or limited water and if so, for which pollutants (see Section IX of the Fact Sheet for additional information).
For MA, the most updated integrated list of waters (CWA 303(d) and 305(b)) is available at http://www.mass.gov/dep/water/resources/tmdls.htm#info.
For NH, the most updated integrated list of waters (CWA 303(d) and 305(b)) is available at http://des.nh.gov/organization/divisions/water/wmb/swqa/index.htm.
Also, indicate if there is a final TMDL for any of the listed pollutants. For MA, final TMDLs can be found at: http://www.mass.gov/dep/water/resources/tmdls.htm and for NH, final TMDLs can be found at http://des.nh.gov/organization/divisions/water/wmb/tmdl/index.htm. For more information, contact the states at: New Hampshire Department of Environmental Services, Watershed Management Bureau at 603-271-3503 or the Massachusetts Department of Environmental Protection at 508-767-2796 or 508-767-2873.

6. ESA and NHPA Eligibility.
As required in Parts I.A.4 and Appendix VII the operator of a site/facility must ensure that the potential discharge will not adversely affect endangered species, designated critical habitat, or national historic places that are in proximity to the potential discharge. If the potential discharge is to certain water bodies, the applicant must also submit a formal certification with the NOI that indicates the consultation, with the U.S. Fish and Wildlife Service and National Marine Fisheries Service (the Services), resulted in either a no jeopardy opinion or a written concurrence on a finding that the discharge is not likely to adversely affect any endangered species or critical habitat. Facilities should begin the consultation as early in the process as possible.
a) Using the instructions in Appendix VII and information in Appendix II, indicate under which criterion listed you are eligible for coverage under this general permit.
b) If you selected criterion D or F, indicate if consultation with the federal services has been completed or if it is underway.
c) If consultation with the U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, indicate if a written concurrence finding that the discharge is "not likely to adversely affect" listed species or critical habitat was received.
d) Attach documentation of ESA eligibility as described below and required in Appendix VII, Part I.C, Step 4.

Criterion A - No federally-listed threatened or endangered species or federally-designated critical habitat are present: A copy of the most current county species list pages for the county(ies) where your site or facility and discharges are located. You must also include a statement on how you determined that no listed species or critical habitat are in proximity to your site or facility or discharge locations.

Criterion B – Section 7 consultation completed with the Service(s) on a prior project: A copy of the USFWS and/or NOAA Fisheries, as appropriate, biological opinion or concurrence on a finding of "unlikely to adversely effect" regarding the ESA Section 7 consultation.

Criterion C – Activities are covered by a Section 10 Permit: A copy of the USFWS and/or the NOAA Fisheries, as appropriate, letter transmitting the ESA Section 10 authorization.

Criterion D - Concurrence from the Service(s) that the discharge is "not likely to adversely affect" federally-listed species or federally-designated critical habitat (not including the four species of concern identified in Section I of Appendix I): A copy of the USFWS and/or the NOAA Fisheries, as appropriate, letter or memorandum concluding that the discharge is consistent with the general permit's "not likely to adversely affect" determination.

Criterion E – Activities are covered by certification of eligibility: A copy of the documents originally used by the other operator of your site or facility (or area including your site) to satisfy the documentation requirement of Criteria A, B, C or D.

Criterion F - Concurrence from the Service(s) that the discharge is "not likely to adversely affect" species of concern, as identified in Section I of Appendix I: A copy of the USFWS and/or the NOAA Fisheries, as appropriate, concurrence with the applicant's determination that the discharge is "not likely to adversely affect" listed species.

e) Using the instructions in Appendix VII, identify which criterion listed in Part C makes you eligible for coverage under this general permit.

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. Applicants should provide any supplemental information needed to meet the requirements of the permit, including any analytical data used to support the application, and any certification(s) required.

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.*

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**: 85 Station Landing, Lot 44-5B		**Facility/site** mailing address:			
Location of **facility/site**: longitude: 71,04,54 latitude: 42,24,08	Facility SIC code(s): None	Street: 85 Station Landing, Lot 44-5B			
b) Name of **facility/site owner:**		Town: Medford			
Email address of facility/site owner: lbennett@proconinc.com		State: MA	Zip: 02155	County: Middlesex	
Telephone no. of facility/site **owner**: 603 623 8811					
Fax no. of facility/site **owner**: 603 623 7250		**Owner** is (check one): 1. Federal ○ 2. State/Tribal ○ 3. Private ◉ 4. Other ○ if so, describe:			
Address of **owner** (if different from site):					
Street: 1359 Hooksett Road					
Town: Hooksett	State: NH	Zip: 03106	County: Merrimack		
c) Legal name of **operator**: Pro Con, Inc.	**Operator** telephone no: 603 623 8811				
	Operator fax no.: 603 623 7250	**Operator** email: lbennett@proconinc.com			
Operator contact name and title: Lance Bennett					
Address of **operator** (if different from owner): SAME	Street:				
Town:	State:	Zip:	County:		

d) Check Y for "yes" or N for "no" for the following:
1. Has a prior NPDES permit exclusion been granted for the discharge? Y ○ N ⊙, if Y, number:
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge?
Y ○ N ⊙, if Y, date and tracking #:
3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Y ⊙ N ○
4. For sites in Massachusetts, is the discharge covered under the Massachusetts Contingency Plan (MCP) and exempt from state permitting? Y ○ N ⊙

e) Is site/facility subject to any State permitting, license, or other action which is causing the generation of discharge? Y ⊙ N ○
If Y, please list:
1. site identification # assigned by the state of NH or MA: RTN 3-22800
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: MAR120000
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 ⊙
See Figure 1, MassGIS Map in Attachment A

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:

Construction dewatering for site development on a 1.75-acre parcel.

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 0.18 Is maximum flow a **design value**? Y ⊙ N ○
Average flow (include units) _____ Is average flow a design value or estimate? _____

3) Latitude and longitude of each discharge within 100 feet:
pt.1: lat _____ long _____ pt.2: lat. _____ long. _____;
pt.3: lat _____ long _____ pt.4: lat. _____ long. _____;
pt.5: lat _____ long _____ pt.6: lat. _____ long. _____;
pt.7: lat _____ long _____ pt.8: lat. _____ long. _____; etc.

4) If hydrostatic testing, total volume of the discharge (gals): _____

5) Is the discharge intermittent ⊙ or seasonal ○ ?
Is discharge ongoing? Y ○ N ⊙

c) Expected dates of discharge (mm/dd/yy): start 2/1/2015 end 30/3/2015

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). See Figure 2 - Dewatering Treatment System in Attachment A

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)		☐	☒	3	Grab	2540D	2,500	1.4 E7			
2. Total Residual Chlorine (TRC)		☒	☐	1	Grab		20	ND			
3. Total Petroleum Hydrocarbons (TPH)		☐	☒	1	Grab	EPH	135	580			
4. Cyanide (CN)	57125	☒	☐	2	Grab	335.2	5	ND			
5. Benzene (B)	71432	☒	☐	2	Grab	MADEP	5	ND			
6. Toluene (T)	108883	☒	☐	2	Grab	MADEP	5	ND			
7. Ethylbenzene (E)	100414	☐	☐	2	Grab	MADEP	5	ND			
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☐	☐	2	Grab	MADEP	5	ND			
9. Total BTEX [2]	n/a	☐	☐								
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) [3]	106934	☐	☐								
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☒	☐	2	Grab	MADEP	5	ND			
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☒	☐	1	Grab	624	10	ND			

* 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	☒	☐	1	Grab	624	20	ND			
14. Naphthalene	91203	☐	☒	1	Grab	MADEP	5	6.14			
15. Carbon Tetrachloride	56235	☒	☐	1	Grab	624	1.0	ND			
16. 1,2 Dichlorobenzene (o-DCB)	95501	☒	☐	1	Grab	624	5.0	ND			
17. 1,3 Dichlorobenzene (m-DCB)	541731	☒	☐	1	Grab	624	5.0	ND			
18. 1,4 Dichlorobenzene (p-DCB)	106467	☒	☐	1	Grab	624	5.0	ND			
18a. Total dichlorobenzene		☐	☐								
19. 1,1 Dichloroethane (DCA)	75343	☒	☐	1	Grab	624	1.5	ND			
20. 1,2 Dichloroethane (DCA)	107062	☒	☐	1	Grab	624	1.5	ND			
21. 1,1 Dichloroethene (DCE)	75354	☒	☐	1	Grab	624	1.0	ND			
22. cis-1,2 Dichloroethene (DCE)	156592	☐	☐								
23. Methylene Chloride	75092	☒	☐	1	Grab	624	5	ND			
24. Tetrachloroethene (PCE)	127184	☒	☐	1	Grab	624	1.5	ND			
25. 1,1,1 Trichloro-ethane (TCA)	71556	☒	☐	1	Grab	624	2.0	ND			
26. 1,1,2 Trichloro-ethane (TCA)	79005	☒	☐	1	Grab	624	1.5	ND			
27. Trichloroethene (TCE)	79016	☒	☐	1	Grab	624	1.0	ND			

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	☒	☐	1	Grab	624	2.0	ND			
29. Acetone	67641	☒	☐	1	Grab	624	10	ND			
30. 1,4 Dioxane	123911	☒	☐	1	Grab	624	2,000	ND			
31. Total Phenols	108952	☒	☐								
32. Pentachlorophenol (PCP)	87865	☒	☐	1	Grab	8270	8.9	ND			
33. Total Phthalates (Phthalate esters) [4]		☒	☐	1	Grab	8270	8.9	ND			
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	1	Grab	8270	8.9	ND			
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐								
a. Benzo(a) Anthracene	56553	☒	☐	2	Grab	MADEP	6.76	ND			
b. Benzo(a) Pyrene	50328	☒	☐	2	Grab	MADEP	6.76	ND			
c. Benzo(b)Fluoranthene	205992	☒	☐	2	Grab	MADEP	6.76	ND			
d. Benzo(k)Fluoranthene	207089	☒	☐	2	Grab	MADEP	6.76	ND			
e. Chrysene	21801	☒	☐	2	Grab	MADEP	6.76	ND			
f. Dibenzo(a,h)anthracene	53703	☒	☐	2	Grab	MADEP	6.76	ND			
g. Indeno(1,2,3-cd) Pyrene	193395	☒	☐	2	Grab	MADEP	6.76	ND			
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	☒	☐	2	Grab	MADEP	6.76	ND			
i. Acenaphthylene	208968	☒	☐	2	Grab	MADEP	6.76	ND			
j. Anthracene	120127	☒	☐	2	Grab	MADEP	6.76	ND			
k. Benzo(ghi) Perylene	191242	☒	☐	2	Grab	MADEP	6.76	ND			
l. Fluoranthene	206440	☒	☐	2	Grab	MADEP	6.76	ND			
m. Fluorene	86737	☒	☐	2	Grab	MADEP	6.76	ND			
n. Naphthalene	91203	☒	☐	2	Grab	MADEP	6.76	ND			
o. Phenanthrene	85018	☒	☐	2	Grab	MADEP	6.76	ND			
p. Pyrene	129000	☒	☐	2	Grab	MADEP	6.76	ND			
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	1	Grab	3510	0.55	ND			
38. Chloride	16887006	☐	☐								
39. Antimony	7440360	☒	☐	2	Grab	6010C	24	ND			
40. Arsenic	7440382	☐	☒	3	Grab	6010C		273			
41. Cadmium	7440439	☐	☒	2	Grab	6010C		36			
42. Chromium III (trivalent)	16065831	☐	☒	2	Grab	6010C		1,050			
43. Chromium VI (hexavalent)	18540299	☐	☒								
44. Copper	7440508	☐	☒	2	Grab	6010C		1,720			
45. Lead	7439921	☐	☒	2	Grab	6010C		1,230			
46. Mercury	7439976	☐	☒	2	Grab	7470		2.64			
47. Nickel	7440020	☐	☒	2	Grab	6010C		693			
48. Selenium	7782492	☒	☐	2	Grab	6010C	60	ND			
49. Silver	7440224	☒	☐	2	Grab	6010C	20	ND			
50. Zinc	7440666	☐	☒	2	Grab	6010C		2,910			
51. Iron	7439896	☐	☒	2	Grab	6010C		6 E5			
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? As, Cd, Cr, Cu, Pb, Hg, Ni, Zn
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: DF: DF = 22.9 Metal: DF: See Attachment B for Dilution Factor Calculations 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: As, Cd, Cr, Cu, Pb, Hg, Ni, Zn

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:

Groundwater in the excavation will be pumped to a 18,000-gallon frac tank at a maximum rate of 5,000 gph. The frac tank will discharge to a 20-micron bag filter before discharging to storm drain. Floc logs will be added to the frac tank to increase settling rate, if needed. Schematic is shown in Figure 2 in Attachment A.

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):	Floc logs, if required to reduce TSS		

c) Proposed **average** and **maximum flow rates** (gallons per minute) for the discharge and the **design flow rate**(s) (gallons per minute) of the treatment system:
Average flow rate of discharge [ ] gpm Maximum flow rate of treatment system [83] gpm
Design flow rate of treatment system [ ] gpm Frac tank volume will be sized to provide a minimum of 2 to 3 hours residence time to allow suspended solids to settle out.

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

Floc logs will be added if required to reduce the TSS in the effluent. MSDS (typical) for floc logs is attached.

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

a) Identify the discharge pathway:	Direct to receiving water ☐	Within facility (sewer) ☐	Storm drain ☒	Wetlands ☐	Other (describe):

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:
Storm drain to Mystic River

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water: See Figure 3
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 [B]

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water [4.4] 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)?
PCBs, Biotoxins, Nutrients, Petroleum Hydrocarbons
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 elevated metal concentrations in the groundwater sample were attributed to the high TSS (> 1%) in the sample. The sample was collected directly from a testpit and contained high levels of silt. Therefore, the concentrations were orders of magnitude higher than those collected by Haley & Aldrich for thier RGP application at the same site in November 2006.

Laboratory data reports for groundwater samples collected on December 1 and 4, 2014 are attached. Results shown for parameters not analyzed were based on results obtained in 2006 for the NOI submittted in November 2006.

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: 85 Station Landing, Lot 44-5B (Station Landing Hotel)

Operator signature:

Printed Name &Title: Brian Miller, Project Manager

Date: 12/22/14

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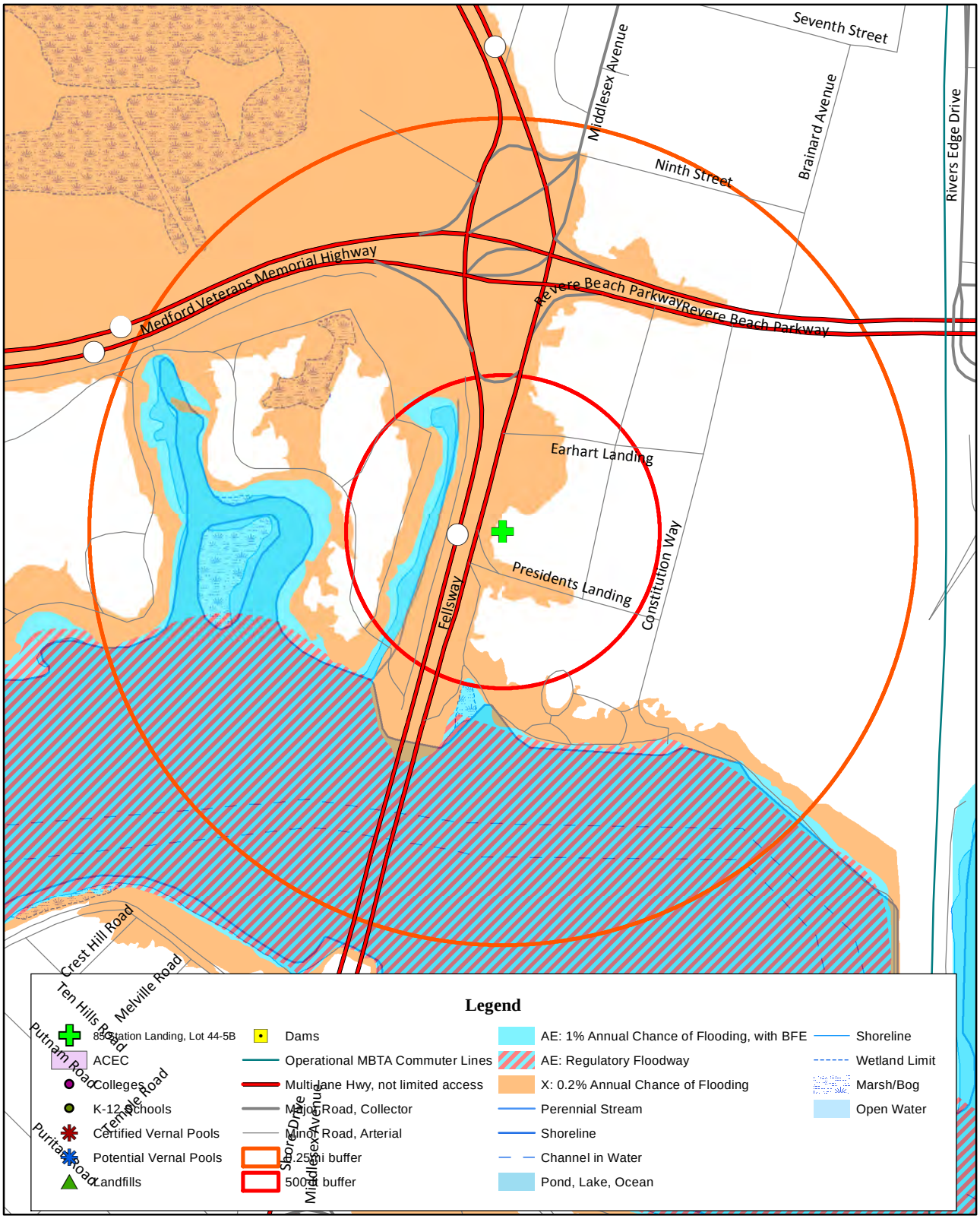
CIVIL & ENVIRONMENTAL ENGINEERS

ATTACHMENT A

FIGURES



CDW Consultants, Inc.

Figure 1

Priority Resource Map

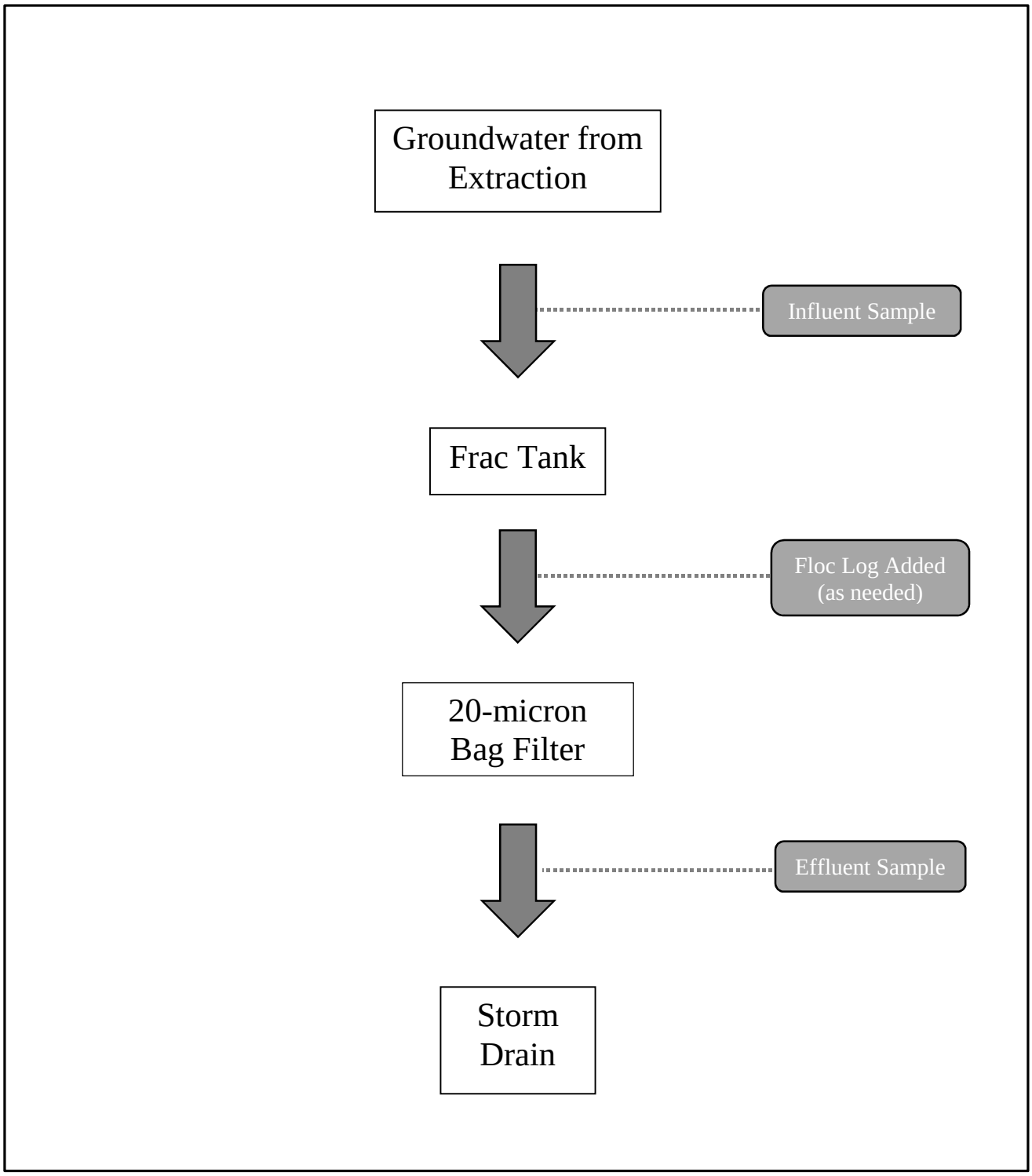
85 Station Landing, Lot 44-5B

Medford, MA

Source: MassGIS

Scale: 1 inch = 466 feet

CDW Project No.: 1406.00



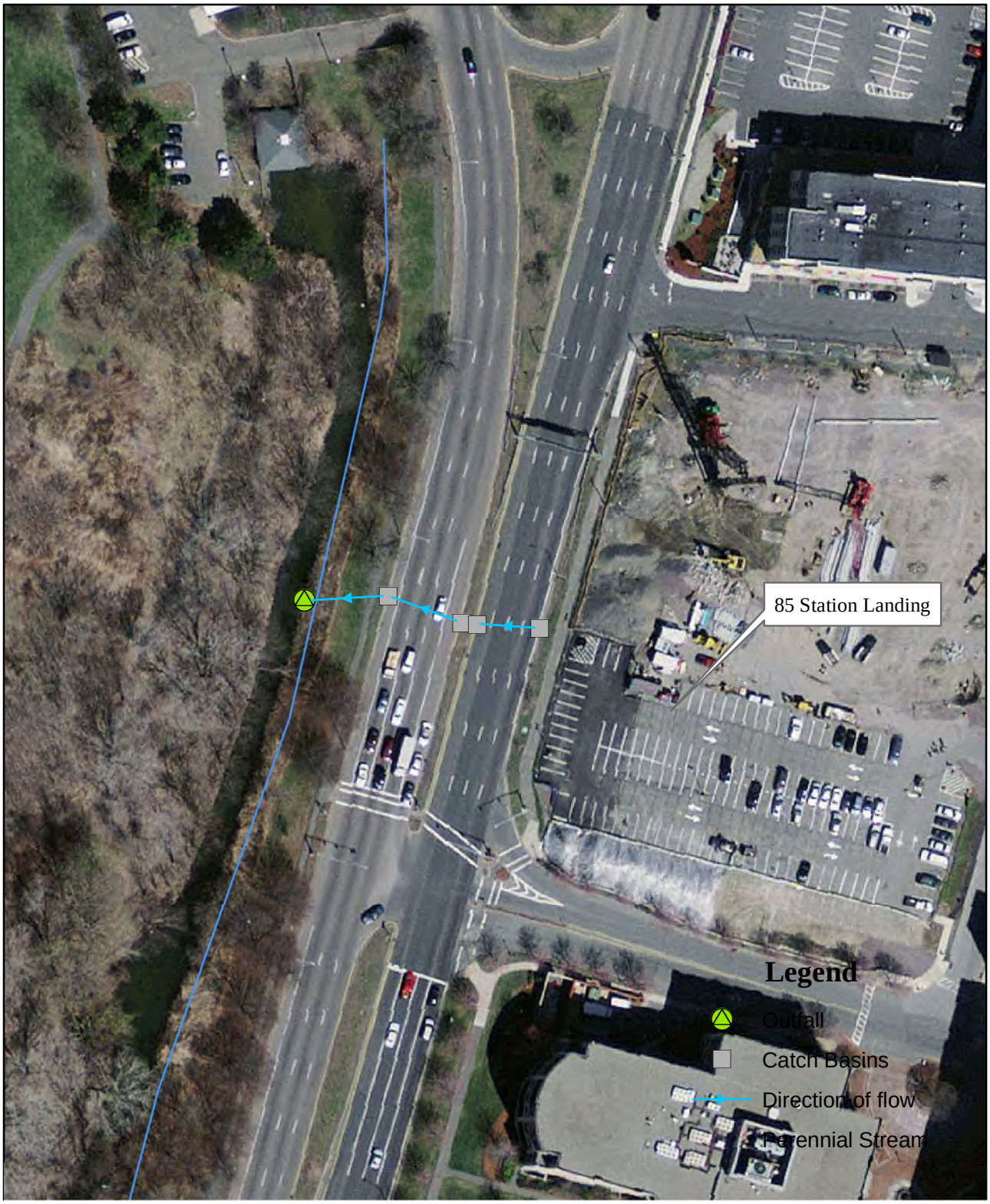
CDW Consultants, Inc.

Figure 2

Dewatering Treatment System

85 Station Landing, Lot 44-5B

Medford, MA



CDW Consultants, Inc.

Figure 3

NPDES Discharge Location
85 Station Landing, Lot 44-5B
Medford, MA

Source: MassGIS

Scale:1 in = 104 ft
CDW Project No. 1406.00

CDW CONSULTANTS, INC.
CIVIL & ENVIRONMENTAL ENGINEERS

ATTACHMENT B

DILUTION FACTOR CALCULATION AND METAL PERMIT LIMITS

DILUTION FACTOR CALCULATION AND METALS PERMIT LIMITS

Groundwater discharge rate: 5,000 gallons per hour = 0.18 cubic feet per second (cfs)
7q10 value for MBTA Everett Shops at Mystic River[1] = 4.4 cfs

Dilution Factor DF = $\frac{(4.4 + 0.18)}{0.18} * 0.9$ = 22.9

For DF = >10 to 50:

Metal	Metal Limit[2]	Groundwater Concentration
Antimony	60	<24
Arsenic	100	273
Cadmium	2	36
Total Chromium	114	1,050
Copper	52	1,720
Iron	5,000	601,000
Lead	13	1,230
Mercury	2.3	2.64
Nickel	290	693
Selenium	50	<60
Silver	12	<20
Zinc	666	2,910

All concentrations in micrograms per liter (µg/L).

[1]. Source of 7q10 values: http://www.epa.gov/region1/npdes/nccwgp/2014NCCWMAEstimated7Q10.pdf
[2]. Source: Remediation General Permit, Appendix IV.

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ATTACHMENT C

FLOC LOGS MATERIAL DATA SAFETY SHEET (MSDS)

Updated February 3, 2014

Applied Polymer Systems, Inc.

Safety Data Sheet

1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

Product Name: **APS 703d #3 Floc Log®**

Supplied:

Applied Polymer Systems, Inc.
519 Industrial Drive
Woodstock, GA 30189
Tel. 678-494-5998
Fax. 678-494-5298
www.siltstop.com

2. HAZARD IDENTIFICATION

Placement of these materials on wet walking surface will create extreme slipping hazard.

3. COMPOSITION/INFORMAION ON INGREDIENTS

Identification of the preparation: **Anionic water-soluble Co-polymer gel**

4. FIRST AID MEASURES

Inhalation: **None**

Skin contact: **Contact with wet skin could cause dryness and chapping. Wash with water and soap. Use of gloves recommended.**

Eye contact: **Rinse thoroughly with plenty of water, also under the eyelids, seek medical attention in case of persistent irritation.**

Ingestion: **Consult a physician**

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: **Water, water spray, foam, carbon dioxide, dry powder.**

Special fire-fighting precautions: **Floc Logs that become wet render surfaces extremely slippery.**

Protective equipment for firefighters: **No special equipment required.**

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: **No special precautions required.**

Methods for cleaning up: **Dry wipe as well as possible, Keep in suitable and closed containers for disposal. After cleaning, flush away traces with water.**

7. HANDLING AND STORAGE

Handling: **Avoid contact with skin and eyes. Wash hands after handling.**

Storage: **Keep in a cool, dry place.**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: **Use dry handling areas only.**

Personal protection equipment

Respiratory Protection: **None**
Hand protection: **Dry cloth, leather or rubber gloves.**
Eye Protection: **Safety glasses with side shields. Do not wear contact lenses.**
Skin protection: **No special protective clothing required.**
Hygiene measures: **Wash hands before breaks and at end of work day.**

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: **Granular semi-solid gel**
Color: **Blue**
Odor: **None**
pH: **7.73**
Melting point: **N/A**
Flash point: **N/A**
Vapor density: **N/A**

10. STABILITY AND REACTIVITY

Stability: **Product is stable, no hazardous polymerization will occur.**

Materials to avoid: **Oxidizing agents may cause exothermic reactions.**

Hazardous decomposition products: **Thermal decomposition may produce nitrogen oxides (NOx), carbon oxides.**

11. TOXICOLOGICAL / ECOLOGICAL INFORMATION

Acute toxicity (EPA-821-R-02-012)

LC 50 (Survival) / *Ceriodaphnia dubia* / 48h / 673 ppm
NOAEC (Survival) / *Ceriodaphnia dubia* / 48h / 420 ppm
LC 50 / *Oncorhynchus mykiss* / 96h / 2928 ppm

Chronic toxicity (EPA-821-R-02-013)

IC 25 (Survival) / *P. promelas* / 7 day / 77.8 ppm
NOEC (Survival) / *P. promelas* / 7 day / 52.5 ppm

IC 25 (Survival) / *C. dubia* / 7 day / 78.7 ppm
NOEC (Survival) / *C. dubia* / 7 day / 52.7 ppm

IC 25 (Growth) / *P. promelas* / 7 day / 50.1 ppm
NOEC (Growth) / *P. promelas* / 7 day / 52.5 ppm

IC 25 (Reproduction) / *C. dubia* / 7 day / 66.8 ppm
NOEC (Reproduction) / *C. dubia* / 7 day / 52.5 ppm

Bioaccumulation: **The product is not expected to bioaccumulate.**
Persistence / degradability: **Not readily biodegradable: (~85% after 180 days).**

12. DISPOSAL CONSIDERATIONS

Waste from residues/unused products.
Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environmental agency for specific rules).

13. TRANSPORT AND REGULATORY INFORMATION

Not regulated by DOT, **RCRA status-Not a hazardous waste**

NFPA and HMIS ratings:

NFPA	**Health:**	**1**	**Flammability:**	**0**	**Reactivity:**	**0**
HMIS	**Health**	**1**	**Flammability**	**0**	**Reactivity**	**0**

CDW CONSULTANTS, INC.
CIVIL & ENVIRONMENTAL ENGINEERS

ATTACHMENT D

LABORATORY DATA ANALYTICAL REPORTS

Report Date:
04-Dec-14 16:29

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

CDW Consultants, Inc.
40 Speen Street; Suite 301
Framingham, MA 01701
Attn: Brian Miller

Project: Procon - Medford, MA
Project #: 1406.00

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC00564-01	1201 DW-1	Ground Water	01-Dec-14 10:25	02-Dec-14 17:15
SC00564-02	1201 TB-2	Ground Water	01-Dec-14 10:30	02-Dec-14 17:15

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 18 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated Please refer to our Quality'web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, NJ-MA012, PA-68-04426 and FL-E87936).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report

Report Date:
11-Dec-14 11:55

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

CDW Consultants, Inc.
40 Speen Street; Suite 301
Framingham, MA 01701
Attn: Brian Miller

Project: Procon - Medford, MA
Project #: 1406.00

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC00796-01	DW-2	Ground Water	04-Dec-14 10:45	04-Dec-14 17:50

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 12 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated Please refer to our 'Quality' web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, NJ-MA012, PA-68-04426 and FL-E87936).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.	**Project #:** 1406.00
Project Location: Procon - Medford, MA	**RTN:**
This form provides certifications for the following data set:	SC00796-01
Matrices: Ground Water	

CAM Protocol

8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	✓ 9012 Total Cyanide/PAC CAM VI A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B

Affirmative responses to questions A through F are required for Presumptive Certainty status

A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	✓ Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	✓ Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	✓ Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	✓ Yes No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?	✓ Yes No

Responses to questions G, H and I below are required for Presumptive Certainty status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	Yes ✓ No

***Data User Note:* Data that achieve Presumptive Certainty status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes ✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes ✓ No

All negative responses are addressed in a case narrative on the cover page of this report.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Nicole Leja
Laboratory Director
Date: 12/11/2014

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 0.3 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

EPA 245.1/7470A

Duplicates:

1428947-DUP1 *Source: SC00796-01*

MRL raised to correlate to batch QC reporting limits.

Mercury

The Reporting Limit has been raised to account for matrix interference.

Mercury

The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.

Mercury

Samples:

SC00796-01 *W-2*

MRL raised to correlate to batch QC reporting limits.

Mercury

The Reporting Limit has been raised to account for matrix interference.

Mercury

SW846 6010C

Spikes:

1428946-MS1 *Source: SC00796-01*

SW846 6010C

Spikes:

1428946-MS1 *Source: SC00796-01*

The spike recovery was outside acceptance limits for the MS, MSD and/or PS due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.

Antimony
Beryllium
Cadmium
Chromium
Lead
Nickel
Zinc

1428946-MSD1 *Source: SC00796-01*

The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.

Iron

The spike recovery was outside acceptance limits for the MS, MSD and/or PS due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.

Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Nickel
Zinc

1428946-PS1 *Source: SC00796-01*

The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.

Iron

The spike recovery was outside acceptance limits for the MS, MSD and/or PS due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.

Antimony
Arsenic
Beryllium
Cadmium
Chromium
Lead
Nickel
Zinc

Duplicates:

1428946-DUP1 *Source: SC00796-01*

MRL raised to correlate to batch QC reporting limits.

Iron

SW846 6010C

Duplicates:

1428946-DUP1 *Source: SC00796-01*

The Reporting Limit has been raised to account for matrix interference.

Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Iron
Lead
Nickel
Selenium
Silver
Thallium
Zinc

Samples:

SC00796-01 *W-2*

MRL raised to correlate to batch QC reporting limits.

Iron

The Reporting Limit has been raised to account for matrix interference.

Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Iron
Lead
Nickel
Selenium
Silver
Thallium
Zinc

Sample Acceptance Check Form

Client:	CDW Consultants, Inc.
Project:	Procon - Medford, MA / 1406.00
Work Order:	SC00796
Sample(s) received on:	12/4/2014

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples refrigerated upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
DW-2	1406.00	Ground Water	04-Dec-14 10:45	04-Dec-14
SC00796-01				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*repared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Total Metals by EPA 200/6000 Series Methods													
	Preservation	**Lab Preserved**		N/A			1	EPA 200/6000 methods	05-Dec-14	05-Dec-14	YR	1428696	
Total Metals by EPA 6000/7000 Series Methods													
7440-22-4	Silver	< 0.0200	R01,LIV	mg/l	0.0200	0.0044	1	SW846 6010C	09-Dec-14	10-Dec-14	edt	1428946	
7440-38-2	Arsenic	**0.273**	R01,LIV	mg/l	0.0160	0.0076	1						
7440-41-7	Beryllium	**0.0443**	R01,LIV	mg/l	0.0080	0.0014	1						
7440-43-9	Cadmium	**0.0360**	R01,LIV	mg/l	0.0100	0.0048	1						
7440-47-3	Chromium	**1.05**	R01,LIV	mg/l	0.0200	0.0054	1						
7440-50-8	Copper	**1.72**	R01,LIV	mg/l	0.0200	0.0086	1						
7439-89-6	Iron	**601**	R01, R06,LIV	mg/l	0.160	0.0486	1						
7440-02-0	Nickel	**0.693**	R01,LIV	mg/l	0.0200	0.0058	1						
7439-92-1	Lead	**1.23**	R01,LIV	mg/l	0.0300	0.0130	1						
7440-36-0	Antimony	< 0.0240	R01,LIV	mg/l	0.0240	0.0088	1						
7782-49-2	Selenium	< 0.0600	R01,LIV	mg/l	0.0600	0.0268	1						
7440-28-0	Thallium	< 0.0200	R01,LIV	mg/l	0.0200	0.0074	1						
7440-66-6	Zinc	**2.91**	R01,LIV	mg/l	0.0200	0.0096	1						
Total Metals by EPA 200 Series Methods													
7439-97-6	Mercury	**0.00264**	R01, R06,LIV	mg/l	0.00180	0.00031	1	EPA 245.1/7470A	09-Dec-14	10-Dec-14	YR	1428947	X
General Chemistry Parameters													
57-12-5	Cyanide (total)	< 0.00500		mg/l	0.00500	0.00440	1	EPA 335.4 / SW846 9012B	10-Dec-14	10-Dec-14	RLT	1429039	X
	Total Suspended Solids	**14,200**	LIV	mg/l	500	216	1	SM2540D	06-Dec-14	08-Dec-14	CMB	1428786	X

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1428946 - SW846 3005A										
Blank (1428946-BLK1)					Prepared: 09-Dec-14 Analyzed: 10-Dec-14					
Iron	< 0.0400		mg/l	0.0400						
Selenium	< 0.0150		mg/l	0.0150						
Thallium	< 0.0050		mg/l	0.0050						
Antimony	< 0.0060		mg/l	0.0060						
Lead	< 0.0075		mg/l	0.0075						
Nickel	< 0.0050		mg/l	0.0050						
Chromium	< 0.0050		mg/l	0.0050						
Cadmium	< 0.0025		mg/l	0.0025						
Beryllium	< 0.0020		mg/l	0.0020						
Arsenic	< 0.0040		mg/l	0.0040						
Silver	< 0.0050		mg/l	0.0050						
Copper	< 0.0050		mg/l	0.0050						
Zinc	< 0.0050		mg/l	0.0050						
LCS (1428946-BS1)					Prepared: 09-Dec-14 Analyzed: 10-Dec-14					
Iron	**1.33**		mg/l	0.0400	1.25		106	85-115		
Silver	**1.33**		mg/l	0.0050	1.25		106	85-115		
Selenium	**1.39**		mg/l	0.0150	1.25		111	85-115		
Lead	**1.29**		mg/l	0.0075	1.25		103	85-115		
Nickel	**1.30**		mg/l	0.0050	1.25		104	85-115		
Copper	**1.33**		mg/l	0.0050	1.25		106	85-115		
Chromium	**1.32**		mg/l	0.0050	1.25		106	85-115		
Cadmium	**1.33**		mg/l	0.0025	1.25		107	85-115		
Arsenic	**1.35**		mg/l	0.0040	1.25		108	85-115		
Zinc	**1.31**		mg/l	0.0050	1.25		105	85-115		
Thallium	**1.34**		mg/l	0.0050	1.25		107	85-115		
Beryllium	**1.35**		mg/l	0.0020	1.25		108	85-115		
Antimony	**1.30**		mg/l	0.0060	1.25		104	85-115		
LCS Dup (1428946-BSD1)					Prepared: 09-Dec-14 Analyzed: 10-Dec-14					
Iron	**1.28**		mg/l	0.0400	1.25		103	85-115	3	20
Silver	**1.30**		mg/l	0.0050	1.25		104	85-115	2	20
Beryllium	**1.30**		mg/l	0.0020	1.25		104	85-115	4	20
Cadmium	**1.28**		mg/l	0.0025	1.25		102	85-115	4	20
Chromium	**1.26**		mg/l	0.0050	1.25		101	85-115	5	20
Copper	**1.25**		mg/l	0.0050	1.25		100	85-115	6	20
Nickel	**1.24**		mg/l	0.0050	1.25		99	85-115	5	20
Lead	**1.24**		mg/l	0.0075	1.25		99	85-115	4	20
Antimony	**1.23**		mg/l	0.0060	1.25		99	85-115	5	20
Selenium	**1.33**		mg/l	0.0150	1.25		106	85-115	5	20
Thallium	**1.30**		mg/l	0.0050	1.25		104	85-115	3	20
Arsenic	**1.28**		mg/l	0.0040	1.25		103	85-115	5	20
Zinc	**1.26**		mg/l	0.0050	1.25		101	85-115	4	20
Duplicate (1428946-DUP1)			**Source: SC00796-01**		Prepared: 09-Dec-14 Analyzed: 10-Dec-14					
Iron	**605**	R01, R06	mg/l	0.160		601			0.6	20
Thallium	< 0.0200	R01	mg/l	0.0200		BRL				20
Selenium	< 0.0600	R01	mg/l	0.0600		BRL				20
Lead	**1.23**	R01	mg/l	0.0300		1.23			0.4	20
Nickel	**0.655**	R01	mg/l	0.0200		0.693			6	20
Copper	**1.65**	R01	mg/l	0.0200		1.72			5	20
Chromium	**0.992**	R01	mg/l	0.0200		1.05			6	20
Cadmium	**0.0349**	R01	mg/l	0.0100		0.0360			3	20
Beryllium	**0.0435**	R01	mg/l	0.0080		0.0443			2	20

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1428946 - SW846 3005A										
Duplicate (1428946-DUP1)			**Source: SC00796-01**			Prepared: 09-Dec-14 Analyzed: 10-Dec-14				
Arsenic	**0.260**	R01	mg/l	0.0160		0.273			5	20
Silver	< 0.0200	R01	mg/l	0.0200		BRL				20
Zinc	**2.86**	R01	mg/l	0.0200		2.91			2	20
Antimony	< 0.0240	R01	mg/l	0.0240		BRL				20
Matrix Spike (1428946-MS1)			**Source: SC00796-01**			Prepared: 09-Dec-14 Analyzed: 10-Dec-14				
Iron	**607**		mg/l	0.160	5.00	601	120	75-125		
Beryllium	**3.68**	QM5	mg/l	0.0080	5.00	0.0443	73	75-125		
Silver	**3.96**		mg/l	0.0200	5.00	BRL	79	75-125		
Zinc	**6.24**	QM5	mg/l	0.0200	5.00	2.91	67	75-125		
Thallium	**5.19**		mg/l	0.0200	5.00	BRL	104	75-125		
Selenium	**3.82**		mg/l	0.0600	5.00	BRL	76	75-125		
Antimony	**2.06**	QM5	mg/l	0.0240	5.00	BRL	41	75-125		
Lead	**4.38**	QM5	mg/l	0.0300	5.00	1.23	63	75-125		
Nickel	**3.96**	QM5	mg/l	0.0200	5.00	0.693	65	75-125		
Copper	**5.63**		mg/l	0.0200	5.00	1.72	78	75-125		
Cadmium	**3.47**	QM5	mg/l	0.0100	5.00	0.0360	69	75-125		
Arsenic	**4.06**		mg/l	0.0160	5.00	0.273	76	75-125		
Chromium	**4.62**	QM5	mg/l	0.0200	5.00	1.05	71	75-125		
Matrix Spike Dup (1428946-MSD1)			**Source: SC00796-01**			Prepared: 09-Dec-14 Analyzed: 10-Dec-14				
Iron	**580**	QM2	mg/l	0.160	5.00	601	-428	75-125	5	20
Copper	**5.41**	QM5	mg/l	0.0200	5.00	1.72	74	75-125	4	20
Arsenic	**3.98**	QM5	mg/l	0.0160	5.00	0.273	74	75-125	2	20
Zinc	**6.08**	QM5	mg/l	0.0200	5.00	2.91	64	75-125	3	20
Beryllium	**3.69**	QM5	mg/l	0.0080	5.00	0.0443	73	75-125	0.5	20
Chromium	**4.47**	QM5	mg/l	0.0200	5.00	1.05	68	75-125	3	20
Thallium	**5.12**		mg/l	0.0200	5.00	BRL	102	75-125	1	20
Nickel	**3.86**	QM5	mg/l	0.0200	5.00	0.693	63	75-125	2	20
Lead	**4.37**	QM5	mg/l	0.0300	5.00	1.23	63	75-125	0.2	20
Antimony	**2.19**	QM5	mg/l	0.0240	5.00	BRL	44	75-125	6	20
Silver	**4.00**		mg/l	0.0200	5.00	BRL	80	75-125	1	20
Selenium	**3.79**		mg/l	0.0600	5.00	BRL	76	75-125	0.6	20
Cadmium	**3.42**	QM5	mg/l	0.0100	5.00	0.0360	68	75-125	2	20
Post Spike (1428946-PS1)			**Source: SC00796-01**			Prepared: 09-Dec-14 Analyzed: 10-Dec-14				
Iron	**588**	QM2	mg/l	0.160	5.00	601	-268	80-120		
Selenium	**3.98**		mg/l	0.0600	5.00	BRL	80	80-120		
Silver	**4.10**		mg/l	0.0200	5.00	BRL	82	80-120		
Thallium	**5.31**		mg/l	0.0200	5.00	BRL	106	80-120		
Antimony	**3.25**	QM5	mg/l	0.0240	5.00	BRL	65	80-120		
Lead	**4.54**	QM5	mg/l	0.0300	5.00	1.23	66	80-120		
Nickel	**4.08**	QM5	mg/l	0.0200	5.00	0.693	68	80-120		
Chromium	**4.68**	QM5	mg/l	0.0200	5.00	1.05	72	80-120		
Cadmium	**3.64**	QM5	mg/l	0.0100	5.00	0.0360	72	80-120		
Arsenic	**4.21**	QM5	mg/l	0.0160	5.00	0.273	79	80-120		
Beryllium	**3.80**	QM5	mg/l	0.0080	5.00	0.0443	75	80-120		
Zinc	**6.31**	QM5	mg/l	0.0200	5.00	2.91	68	80-120		
Copper	**5.72**		mg/l	0.0200	5.00	1.72	80	80-120		

Total Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1428947 - EPA200/SW7000 Series										
Blank (1428947-BLK1)						Prepared: 09-Dec-14 Analyzed: 10-Dec-14				
Mercury	< 0.00045		mg/l	0.00045						
LCS (1428947-BS1)						Prepared: 09-Dec-14 Analyzed: 10-Dec-14				
Mercury	**0.00498**		mg/l	0.00045	0.00500		100	85-115		
Duplicate (1428947-DUP1)			**Source: SC00796-01**			Prepared: 09-Dec-14 Analyzed: 10-Dec-14				
Mercury	**0.00197**	QR6, R01, R06	mg/l	0.00180		0.00264			29	20
Matrix Spike (1428947-MS1)			**Source: SC00796-01**			Prepared: 09-Dec-14 Analyzed: 10-Dec-14				
Mercury	**0.0249**		mg/l	0.00180	0.0200	0.00264	111	80-120		
Matrix Spike Dup (1428947-MSD1)			**Source: SC00796-01**			Prepared: 09-Dec-14 Analyzed: 10-Dec-14				
Mercury	**0.0232**		mg/l	0.00180	0.0200	0.00264	103	80-120	7	20
Post Spike (1428947-PS1)			**Source: SC00796-01**			Prepared: 09-Dec-14 Analyzed: 10-Dec-14				
Mercury	**0.0254**		mg/l	0.00180	0.0200	0.00264	114	85-115		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1428786 - General Preparation										
Blank (1428786-BLK1)					Prepared: 06-Dec-14 Analyzed: 08-Dec-14					
Total Suspended Solids	< 5.0		mg/l	5.0						
LCS (1428786-BS1)					Prepared: 06-Dec-14 Analyzed: 08-Dec-14					
Total Suspended Solids	**96.0**		mg/l	10.0	100		96	90-110		
Batch 1429039 - General Preparation										
Blank (1429039-BLK1)					Prepared & Analyzed: 10-Dec-14					
Cyanide (total)	< 0.00500		mg/l	0.00500						
LCS (1429039-BS1)					Prepared & Analyzed: 10-Dec-14					
Cyanide (total)	**0.280**		mg/l	0.00500	0.300		93	90-110		
Calibration Blank (1429039-CCB1)					Prepared & Analyzed: 10-Dec-14					
Cyanide (total)	**0.00288**		mg/l							
Calibration Blank (1429039-CCB2)					Prepared & Analyzed: 10-Dec-14					
Cyanide (total)	**0.00292**		mg/l							
Calibration Check (1429039-CCV1)					Prepared & Analyzed: 10-Dec-14					
Cyanide (total)	**0.303**		mg/l	0.00500	0.300		101	90-110		
Calibration Check (1429039-CCV2)					Prepared & Analyzed: 10-Dec-14					
Cyanide (total)	**0.301**		mg/l	0.00500	0.300		100	90-110		
Duplicate (1429039-DUP1)			**Source: SC00796-01**		Prepared & Analyzed: 10-Dec-14					
Cyanide (total)	< 0.00500		mg/l	0.00500		BRL				20
Matrix Spike (1429039-MS1)			**Source: SC00796-01**		Prepared & Analyzed: 10-Dec-14					
Cyanide (total)	**0.292**		mg/l	0.00500	0.300	BRL	97	90-110		
Matrix Spike Dup (1429039-MSD1)			**Source: SC00796-01**		Prepared & Analyzed: 10-Dec-14					
Cyanide (total)	**0.292**		mg/l	0.00500	0.300	BRL	97	90-110	0	20
Reference (1429039-SRM1)					Prepared & Analyzed: 10-Dec-14					
Cyanide (total)	**0.381**		mg/l	0.00500	0.372		102	75-125		

Notes and Definitions

QM2	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
QM5	The spike recovery was outside acceptance limits for the MS, MSD and/or PS due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QR6	The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.
R01	The Reporting Limit has been raised to account for matrix interference.
R06	MRL raised to correlate to batch QC reporting limits.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
LIV	The initial volume for this sample has been reduced due to sample matrix and/or historical data therefore elevating the reporting limit.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
June O'Connor
Rebecca Merz

SC00796 AME

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☑ Rush TAT - Date Needed: 12-11-14
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: CDW Consultants
40 Speen St Suite 301
Framingham, MA 01701

Telephone #: 508-875-2657
Project Mgr. Brian Miller

Invoice To: Same

P.O. No.: _____ RQN: _____

Project No.: 1406.00
Site Name: Procon - 85 Station Landing
Location: Med Pond State: MA
Sampler(s): Mike Gegre

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=_____ 12=_____

List preservative code below: 5 3

QA/QC Reporting Notes:
* additional charges may apply

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

MA DEP MCP CAM Report: Yes ☑ No ☐
CT DPH RCP Report: Yes ☐ No ☐

QA/QC Reporting Level
☑ Standard ☐ No QC ☐ DQA*
☐ NY ASP A* ☐ NY ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ TIER II* ☐ TIER IV*
☐ Other _____

State-specific reporting standards:

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: TSS	Total Cyanide	Total Iron (Total RCRA 8 metals)
SC00796-01	DW-2	12-4-14	10:45	G	GW				3	✓		✓

Relinquished by:	Received by:	Date:	Time:	Temp°C
		12-4-14	1535	1.3
		12/4/14	1750	-1
				0.3

☐ EDD Format _____
☑ E-mail to bmiller@cdwconsultants.com

Condition upon receipt:
☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

The following outlines the condition of all VPH samples contained within this report upon laboratory receipt.

Matrices	Ground Water		
Containers	✓ Satisfactory		
Sample Preservative	**Aqueous** (acid preserved)	N/A ✓ pH≤2 pH>2	
	Soil or Sediment	✓ N/A Samples not received in Methanol	ml Methanol/g soil 1:1 +/-25% Other
		Samples received in Methanol: covering soil/sediment not covering soil/sediment	
		Samples received in air-tight container	
Temperature	Received on ice	Received at 4 ± 2 ºC ✓ Other: 1.4ºC	

Were all QA/QC procedures followed as required by the VPH method? *Yes*
Were any significant modifications made to the VPH method as specified in section 11.3? *No*
Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

The following outlines the condition of all EPH samples contained within this report upon laboratory receipt.

Matrices	Ground Water			
Containers	✓ Satisfactory			
Aqueous Preservative	N/A	✓ pH≤2	pH>2	pH adjusted to <2 in lab
Temperature	Received on ice	Received at 4 ± 2 ºC	✓ Other: 1.4ºC	

Were all QA/QC procedures followed as required by the EPH method? *Yes*
Were any significant modifications made to the EPH method as specified in Section 11.3? *No*
Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Authorized by:

Nicole Leja
Laboratory Director

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.	**Project #:** 1406.00
Project Location: Procon - Medford, MA	**RTN:**
This form provides certifications for the following data set:	SC00564-01 through SC00564-02
Matrices: Ground Water	

CAM Protocol

8260 VOC CAM II A	7470/7471 Hg CAM III B	✓ MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	✓ MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9012 Total Cyanide/PAC CAM VI A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B

Affirmative responses to questions A through F are required for Presumptive Certainty status

A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	✓ Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	✓ Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	✓ Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	✓ Yes No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	✓ Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?	✓ Yes No

Responses to questions G, H and I below are required for Presumptive Certainty status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	Yes ✓ No

***Data User Note:* Data that achieve Presumptive Certainty status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes ✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	✓ Yes No

All negative responses are addressed in a case narrative on the cover page of this report.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Nicole Leja
Laboratory Director
Date: 12/4/2014

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 1.4 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

MADEP EPH 5/2004 R

Calibration:

1405044

Analyte quantified by quadratic equation type calibration.

Benzo (a) pyrene
Dibenzo (a,h) anthracene
Indeno (1,2,3-cd) pyrene

This affected the following samples:

1201 DW-1
1428473-BLK1
1428473-BS1
1428473-BS2
1428473-BSD1
S405318-ICV2
S413886-CCV2
S413886-CCV4
S413889-CCV2
S413889-CCV4
S413890-CCV1

Laboratory Control Samples:

1428473 BSD

Benzo (a) pyrene RPD 29% (25%) is outside individual acceptance criteria.

Benzo (b) fluoranthene RPD 26% (25%) is outside individual acceptance criteria.

MADEP EPH 5/2004 R

Laboratory Control Samples:

1428473 BSD

Benzo (g,h,i) perylene RPD 28% (25%) is outside individual acceptance criteria.

Benzo (k) fluoranthene RPD 26% (25%) is outside individual acceptance criteria.

Chrysene RPD 27% (25%) is outside individual acceptance criteria.

Dibenzo (a,h) anthracene RPD 27% (25%) is outside individual acceptance criteria.

Indeno (1,2,3-cd) pyrene RPD 30% (25%) is outside individual acceptance criteria.

Unadjusted C11-C22 Aromatic Hydrocarbons RPD 27% (25%) is outside individual acceptance criteria.

Samples:

SC00564-01 *1201 W-1*

Elevated Reporting Limits due to limited sample volume.

Sample Acceptance Check Form

Client:	CDW Consultants, Inc.
Project:	Procon - Medford, MA / 1406.00
Work Order:	SC00564
Sample(s) received on:	12/2/2014

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples refrigerated upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
1201 DW-1	1406.00	Ground Water	01-Dec-14 10:25	02-Dec-14
SC00564-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	repared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
MADEP VPH													
Prepared by method VPH - EPA 5030C Water													
	C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0	6.62	1	MADEP VPH 5/2004 Rev. 1.1	03-Dec-14	03-Dec-14	mp	1428451	
	C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0	7.11	1						
	C9-C10 Aromatic Hydrocarbons	< 25.0		µg/l	25.0	1.78	1						
	Unadjusted C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0	7.93	1						
	Unadjusted C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0	6.70	1						
71-43-2	Benzene	< 5.00		µg/l	5.00	1.16	1						
100-41-4	Ethylbenzene	< 5.00		µg/l	5.00	2.16	1						
1634-04-4	Methyl tert-butyl ether	< 5.00		µg/l	5.00	1.68	1						
91-20-3	Naphthalene	**6.14**		µg/l	5.00	1.80	1						
108-88-3	Toluene	< 5.00		µg/l	5.00	0.995	1						
179601-23-1	m,p-Xylene	< 10.0		µg/l	10.0	2.22	1						
95-47-6	o-Xylene	< 5.00		µg/l	5.00	2.22	1						
Surrogate recoveries:													
615-59-8	*2,5-Dibromotoluene (FID)*	*110*			*70-130 %*								
615-59-8	*2,5-Dibromotoluene (PID)*	*107*			*70-130 %*								
Extractable Petroleum Hydrocarbons													
MADEP EPH			R02										
Prepared by method SW846 3510C													
	C9-C18 Aliphatic Hydrocarbons	< 135		µg/l	135	34.6	1	MADEP EPH 5/2004 R	03-Dec-14	04-Dec-14	MWP	1428473	
	C19-C36 Aliphatic Hydrocarbons	< 135		µg/l	135	48.7	1						
	C11-C22 Aromatic Hydrocarbons	< 135		µg/l	135	79.5	1						
	Unadjusted C11-C22 Aromatic Hydrocarbons	< 135		µg/l	135	79.5	1						
91-20-3	Naphthalene	< 6.76		µg/l	6.76	2.80	1						
91-57-6	2-Methylnaphthalene	< 6.76		µg/l	6.76	2.73	1						
208-96-8	Acenaphthylene	< 6.76		µg/l	6.76	2.82	1						
83-32-9	Acenaphthene	< 6.76		µg/l	6.76	3.32	1						
86-73-7	Fluorene	< 6.76		µg/l	6.76	2.95	1						
85-01-8	Phenanthrene	< 6.76		µg/l	6.76	2.51	1						
120-12-7	Anthracene	< 6.76		µg/l	6.76	2.59	1						
206-44-0	Fluoranthene	< 6.76		µg/l	6.76	2.35	1						
129-00-0	Pyrene	< 6.76		µg/l	6.76	2.27	1						
56-55-3	Benzo (a) anthracene	< 6.76		µg/l	6.76	3.61	1						
218-01-9	Chrysene	< 6.76		µg/l	6.76	3.64	1						
205-99-2	Benzo (b) fluoranthene	< 6.76		µg/l	6.76	4.18	1						
207-08-9	Benzo (k) fluoranthene	< 6.76		µg/l	6.76	4.65	1						
50-32-8	Benzo (a) pyrene	< 6.76		µg/l	6.76	3.66	1						
193-39-5	Indeno (1,2,3-cd) pyrene	< 6.76		µg/l	6.76	4.18	1						
53-70-3	Dibenzo (a,h) anthracene	< 6.76		µg/l	6.76	3.97	1						
191-24-2	Benzo (g,h,i) perylene	< 6.76		µg/l	6.76	4.15	1						

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
1201 DW-1 SC00564-01	1406.00	Ground Water	01-Dec-14 10:25	02-Dec-14

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	repared	Analyzed	Analyst	Batch	Cert.
Extractable Petroleum Hydrocarbons													
MADEP EPH Prepared by method SW846 3510C			R02										
Surrogate recoveries:													
3386-33-2	*1-Chlorooctadecane*	*67*			*40-140 %*			MADEP EPH 5/2004 R	03-Dec-14	04-Dec-14	MWP	1428473	
84-15-1	*Ortho-Terphenyl*	*62*			*40-140 %*								
321-60-8	*2-Fluorobiphenyl*	*64*			*40-140 %*								

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
1201 TB-2	1406.00	Ground Water	01-Dec-14 10:30	02-Dec-14
SC00564-02				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*repared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
MADEP VPH													
Prepared by method VPH - EPA 5030C Water													
	C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0	6.62	1	MADEP VPH 5/2004 Rev. 1.1	03-Dec-14	03-Dec-14	mp	1428451	
	C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0	7.11	1						
	C9-C10 Aromatic Hydrocarbons	< 25.0		µg/l	25.0	1.78	1						
	Unadjusted C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0	7.93	1						
	Unadjusted C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0	6.70	1						
71-43-2	Benzene	< 5.00		µg/l	5.00	1.16	1						
100-41-4	Ethylbenzene	< 5.00		µg/l	5.00	2.16	1						
1634-04-4	Methyl tert-butyl ether	< 5.00		µg/l	5.00	1.68	1						
91-20-3	Naphthalene	< 5.00		µg/l	5.00	1.80	1						
108-88-3	Toluene	< 5.00		µg/l	5.00	0.995	1						
179601-23-1	m,p-Xylene	< 10.0		µg/l	10.0	2.22	1						
95-47-6	o-Xylene	< 5.00		µg/l	5.00	2.22	1						

Surrogate recoveries:

615-59-8	*2,5-Dibromotoluene (FID)*	*105*	*70-130 %*
615-59-8	*2,5-Dibromotoluene (PID)*	*104*	*70-130 %*

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1428451 - VPH - EPA 5030C Water										
Blank (1428451-BLK1)					Prepared & Analyzed: 03-Dec-14					
C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0						
C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0						
C9-C10 Aromatic Hydrocarbons	< 25.0		µg/l	25.0						
Unadjusted C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0						
Unadjusted C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0						
Benzene	< 5.00		µg/l	5.00						
Ethylbenzene	< 5.00		µg/l	5.00						
Methyl tert-butyl ether	< 5.00		µg/l	5.00						
Naphthalene	< 5.00		µg/l	5.00						
Toluene	< 5.00		µg/l	5.00						
m,p-Xylene	< 10.0		µg/l	10.0						
o-Xylene	< 5.00		µg/l	5.00						
2-Methylpentane	< 5.00		µg/l	5.00						
n-Nonane	< 10.0		µg/l	10.0						
n-Pentane	< 10.0		µg/l	10.0						
1,2,4-Trimethylbenzene	< 5.00		µg/l	5.00						
2,2,4-Trimethylpentane	< 5.00		µg/l	5.00						
n-Butylcyclohexane	< 5.00		µg/l	5.00						
n-Decane	< 5.00		µg/l	5.00						
Surrogate: 2,5-Dibromotoluene (FID)	*51.3*		µg/l		*50.0*		*103*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*51.2*		µg/l		*50.0*		*102*	*70-130*		
LCS (1428451-BS1)					Prepared & Analyzed: 03-Dec-14					
C5-C8 Aliphatic Hydrocarbons	**55.4**		µg/l		60.0		92	70-130		
C9-C12 Aliphatic Hydrocarbons	**58.8**		µg/l		60.0		98	70-130		
C9-C10 Aromatic Hydrocarbons	**21.8**		µg/l		20.0		109	70-130		
Unadjusted C5-C8 Aliphatic Hydrocarbons	**199**		µg/l		200		100	70-130		
Unadjusted C9-C12 Aliphatic Hydrocarbons	**80.6**		µg/l		80.0		101	70-130		
Benzene	**20.2**		µg/l		20.0		101	70-130		
Ethylbenzene	**20.5**		µg/l		20.0		102	70-130		
Methyl tert-butyl ether	**20.0**		µg/l		20.0		100	70-130		
Naphthalene	**19.4**		µg/l		20.0		97	70-130		
Toluene	**20.4**		µg/l		20.0		102	70-130		
m,p-Xylene	**41.9**		µg/l		40.0		105	70-130		
o-Xylene	**21.0**		µg/l		20.0		105	70-130		
2-Methylpentane	**18.8**		µg/l		20.0		94	70-130		
n-Nonane	**21.0**		µg/l		20.0		105	70-130		
n-Pentane	**16.6**		µg/l		20.0		83	70-130		
1,2,4-Trimethylbenzene	**21.7**		µg/l		20.0		109	70-130		
2,2,4-Trimethylpentane	**21.3**		µg/l		20.0		107	70-130		
n-Butylcyclohexane	**21.9**		µg/l		20.0		109	70-130		
n-Decane	**20.4**		µg/l		20.0		102	70-130		
Surrogate: 2,5-Dibromotoluene (FID)	*53.7*		µg/l		*50.0*		*107*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*54.0*		µg/l		*50.0*		*108*	*70-130*		
LCS Dup (1428451-BSD1)					Prepared & Analyzed: 03-Dec-14					
C5-C8 Aliphatic Hydrocarbons	**53.9**		µg/l		60.0		90	70-130	3	25
C9-C12 Aliphatic Hydrocarbons	**52.6**		µg/l		60.0		88	70-130	11	25
C9-C10 Aromatic Hydrocarbons	**20.5**		µg/l		20.0		103	70-130	6	25
Unadjusted C5-C8 Aliphatic Hydrocarbons	**192**		µg/l		200		96	70-130	4	25
Unadjusted C9-C12 Aliphatic Hydrocarbons	**73.2**		µg/l		80.0		91	70-130	10	25

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1428451 - VPH - EPA 5030C Water										
LCS Dup (1428451-BSD1)					Prepared & Analyzed: 03-Dec-14					
Benzene	**19.6**		µg/l		20.0		98	70-130	3	25
Ethylbenzene	**19.6**		µg/l		20.0		98	70-130	5	25
Methyl tert-butyl ether	**19.5**		µg/l		20.0		98	70-130	2	25
Naphthalene	**18.8**		µg/l		20.0		94	70-130	4	25
Toluene	**19.6**		µg/l		20.0		98	70-130	4	25
m,p-Xylene	**39.9**		µg/l		40.0		100	70-130	5	25
o-Xylene	**20.0**		µg/l		20.0		100	70-130	4	25
2-Methylpentane	**17.1**		µg/l		20.0		86	70-130	9	25
n-Nonane	**17.7**		µg/l		20.0		89	70-130	17	25
n-Pentane	**15.2**		µg/l		20.0		76	70-130	9	25
1,2,4-Trimethylbenzene	**20.4**		µg/l		20.0		102	70-130	6	25
2,2,4-Trimethylpentane	**18.4**		µg/l		20.0		92	70-130	15	25
n-Butylcyclohexane	**18.7**		µg/l		20.0		94	70-130	15	25
n-Decane	**17.9**		µg/l		20.0		89	70-130	13	25
Surrogate: 2,5-Dibromotoluene (FID)	*53.7*		µg/l		*50.0*		*107*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*53.6*		µg/l		*50.0*		*107*	*70-130*		

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1428473 - SW846 3510C										
Blank (1428473-BLK1)					Prepared: 03-Dec-14 Analyzed: 04-Dec-14					
C9-C18 Aliphatic Hydrocarbons	< 100		µg/l	100						
C19-C36 Aliphatic Hydrocarbons	< 100		µg/l	100						
C11-C22 Aromatic Hydrocarbons	< 100		µg/l	100						
Unadjusted C11-C22 Aromatic Hydrocarbons	< 100		µg/l	100						
Total Petroleum Hydrocarbons	< 300		µg/l	300						
Unadjusted Total Petroleum Hydrocarbons	< 300		µg/l	300						
Naphthalene	< 5.00		µg/l	5.00						
2-Methylnaphthalene	< 5.00		µg/l	5.00						
Acenaphthylene	< 5.00		µg/l	5.00						
Acenaphthene	< 5.00		µg/l	5.00						
Fluorene	< 5.00		µg/l	5.00						
Phenanthrene	< 5.00		µg/l	5.00						
Anthracene	< 5.00		µg/l	5.00						
Fluoranthene	< 5.00		µg/l	5.00						
Pyrene	< 5.00		µg/l	5.00						
Benzo (a) anthracene	< 5.00		µg/l	5.00						
Chrysene	< 5.00		µg/l	5.00						
Benzo (b) fluoranthene	< 5.00		µg/l	5.00						
Benzo (k) fluoranthene	< 5.00		µg/l	5.00						
Benzo (a) pyrene	< 5.00		µg/l	5.00						
Indeno (1,2,3-cd) pyrene	< 5.00		µg/l	5.00						
Dibenzo (a,h) anthracene	< 5.00		µg/l	5.00						
Benzo (g,h,i) perylene	< 5.00		µg/l	5.00						
n-Nonane (C9)	< 5.00		µg/l	5.00						
n-Decane	< 5.00		µg/l	5.00						
n-Dodecane	< 5.00		µg/l	5.00						
n-Tetradecane	< 5.00		µg/l	5.00						
n-Hexadecane	< 5.00		µg/l	5.00						
n-Octadecane	< 5.00		µg/l	5.00						
n-Nonadecane	< 5.00		µg/l	5.00						
n-Eicosane	< 5.00		µg/l	5.00						
n-Docosane	< 5.00		µg/l	5.00						
n-Tetracosane	< 5.00		µg/l	5.00						
n-Hexacosane	< 5.00		µg/l	5.00						
n-Octacosane	< 5.00		µg/l	5.00						
n-Triacontane	< 5.00		µg/l	5.00						
n-Hexatriacontane	< 5.00		µg/l	5.00						
Naphthalene (aliphatic fraction)	**0.00**		µg/l							
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l							
Surrogate: 1-Chlorooctadecane	*44.6*		µg/l		*50.0*		*89*	*40-140*		
Surrogate: Ortho-Terphenyl	*36.3*		µg/l		*50.0*		*73*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*27.5*		µg/l		*40.0*		*69*	*40-140*		
LCS (1428473-BS1)					Prepared: 03-Dec-14 Analyzed: 04-Dec-14					
C9-C18 Aliphatic Hydrocarbons	**552**		µg/l	100	600		92	40-140		
C19-C36 Aliphatic Hydrocarbons	**557**		µg/l	100	800		70	40-140		
Unadjusted C11-C22 Aromatic Hydrocarbons	**412**		µg/l	100	680		61	40-140		
Naphthalene	**26.9**		µg/l	5.00	40.0		67	40-140		
2-Methylnaphthalene	**27.7**		µg/l	5.00	40.0		69	40-140		
Acenaphthylene	**32.4**		µg/l	5.00	40.0		81	40-140		
Acenaphthene	**31.4**		µg/l	5.00	40.0		78	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1428473 - SW846 3510C										
LCS (1428473-BS1)					Prepared: 03-Dec-14 Analyzed: 04-Dec-14					
Fluorene	**32.2**		µg/l	5.00	40.0		80	40-140		
Phenanthrene	**32.5**		µg/l	5.00	40.0		81	40-140		
Anthracene	**33.0**		µg/l	5.00	40.0		83	40-140		
Fluoranthene	**31.2**		µg/l	5.00	40.0		78	40-140		
Pyrene	**29.9**		µg/l	5.00	40.0		75	40-140		
Benzo (a) anthracene	**27.3**		µg/l	5.00	40.0		68	40-140		
Chrysene	**33.2**		µg/l	5.00	40.0		83	40-140		
Benzo (b) fluoranthene	**26.2**		µg/l	5.00	40.0		66	40-140		
Benzo (k) fluoranthene	**28.7**		µg/l	5.00	40.0		72	40-140		
Benzo (a) pyrene	**21.5**		µg/l	5.00	40.0		54	40-140		
Indeno (1,2,3-cd) pyrene	**21.1**		µg/l	5.00	40.0		53	40-140		
Dibenzo (a,h) anthracene	**20.5**		µg/l	5.00	40.0		51	40-140		
Benzo (g,h,i) perylene	**24.5**		µg/l	5.00	40.0		61	40-140		
n-Nonane (C9)	**47.1**		µg/l	5.00	100		47	30-140		
n-Decane	**62.9**		µg/l	5.00	100		63	40-140		
n-Dodecane	**73.0**		µg/l	5.00	100		73	40-140		
n-Tetradecane	**83.3**		µg/l	5.00	100		83	40-140		
n-Hexadecane	**92.6**		µg/l	5.00	100		93	40-140		
n-Octadecane	**98.6**		µg/l	5.00	100		99	40-140		
n-Nonadecane	**99.3**		µg/l	5.00	100		99	40-140		
n-Eicosane	**100**		µg/l	5.00	100		100	40-140		
n-Docosane	**98.0**		µg/l	5.00	100		98	40-140		
n-Tetracosane	**95.8**		µg/l	5.00	100		96	40-140		
n-Hexacosane	**93.9**		µg/l	5.00	100		94	40-140		
n-Octacosane	**94.1**		µg/l	5.00	100		94	40-140		
n-Triacontane	**86.5**		µg/l	5.00	100		87	40-140		
n-Hexatriacontane	**82.3**		µg/l	5.00	100		82	40-140		
Naphthalene (aliphatic fraction)	**0.00**		µg/l					0-200		
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l					0-200		
Surrogate: 1-Chlorooctadecane	*33.4*		µg/l		*50.0*		*67*	*40-140*		
Surrogate: Ortho-Terphenyl	*30.2*		µg/l		*50.0*		*60*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*27.9*		µg/l		*40.0*		*70*	*40-140*		
LCS (1428473-BS2)					Prepared & Analyzed: 03-Dec-14					
C9-C18 Aliphatic Hydrocarbons	**509**		µg/l	100	600		85	40-140		
C19-C36 Aliphatic Hydrocarbons	**604**		µg/l	100	800		75	40-140		
Unadjusted C11-C22 Aromatic Hydrocarbons	**490**		µg/l	100	680		72	40-140		
Naphthalene	**27.1**		µg/l	5.00	40.0		68	40-140		
2-Methylnaphthalene	**28.2**		µg/l	5.00	40.0		71	40-140		
Acenaphthylene	**32.0**		µg/l	5.00	40.0		80	40-140		
Acenaphthene	**31.2**		µg/l	5.00	40.0		78	40-140		
Fluorene	**31.8**		µg/l	5.00	40.0		80	40-140		
Phenanthrene	**33.7**		µg/l	5.00	40.0		84	40-140		
Anthracene	**34.5**		µg/l	5.00	40.0		86	40-140		
Fluoranthene	**35.0**		µg/l	5.00	40.0		88	40-140		
Pyrene	**34.1**		µg/l	5.00	40.0		85	40-140		
Benzo (a) anthracene	**31.3**		µg/l	5.00	40.0		78	40-140		
Chrysene	**39.0**		µg/l	5.00	40.0		98	40-140		
Benzo (b) fluoranthene	**30.0**		µg/l	5.00	40.0		75	40-140		
Benzo (k) fluoranthene	**36.1**		µg/l	5.00	40.0		90	40-140		
Benzo (a) pyrene	**26.1**		µg/l	5.00	40.0		65	40-140		
Indeno (1,2,3-cd) pyrene	**25.3**		µg/l	5.00	40.0		63	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1428473 - SW846 3510C										
LCS (1428473-BS2)					Prepared & Analyzed: 03-Dec-14					
Dibenzo (a,h) anthracene	**24.3**		µg/l	5.00	40.0		61	40-140		
Benzo (g,h,i) perylene	**29.0**		µg/l	5.00	40.0		73	40-140		
n-Nonane (C9)	**59.4**		µg/l	5.00	100		59	30-140		
n-Decane	**67.8**		µg/l	5.00	100		68	40-140		
n-Dodecane	**72.6**		µg/l	5.00	100		73	40-140		
n-Tetradecane	**80.8**		µg/l	5.00	100		81	40-140		
n-Hexadecane	**88.7**		µg/l	5.00	100		89	40-140		
n-Octadecane	**93.9**		µg/l	5.00	100		94	40-140		
n-Nonadecane	**95.2**		µg/l	5.00	100		95	40-140		
n-Eicosane	**96.8**		µg/l	5.00	100		97	40-140		
n-Docosane	**95.3**		µg/l	5.00	100		95	40-140		
n-Tetracosane	**93.2**		µg/l	5.00	100		93	40-140		
n-Hexacosane	**91.0**		µg/l	5.00	100		91	40-140		
n-Octacosane	**90.7**		µg/l	5.00	100		91	40-140		
n-Triacontane	**84.8**		µg/l	5.00	100		85	40-140		
n-Hexatriacontane	**81.4**		µg/l	5.00	100		81	40-140		
Naphthalene (aliphatic fraction)	**0.00**		µg/l					0-200		
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l					0-200		
Surrogate: 1-Chlorooctadecane	*47.1*		µg/l		*50.0*		*94*	*40-140*		
Surrogate: Ortho-Terphenyl	*38.9*		µg/l		*50.0*		*78*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*26.2*		µg/l		*40.0*		*66*	*40-140*		
LCS Dup (1428473-BSD1)					Prepared: 03-Dec-14 Analyzed: 04-Dec-14					
C9-C18 Aliphatic Hydrocarbons	**501**		µg/l	100	600		83	40-140	10	25
C19-C36 Aliphatic Hydrocarbons	**498**		µg/l	100	800		62	40-140	11	25
Unadjusted C11-C22 Aromatic Hydrocarbons	**541**	QR2	µg/l	100	680		80	40-140	27	25
Naphthalene	**32.5**		µg/l	5.00	40.0		81	40-140	19	25
2-Methylnaphthalene	**33.9**		µg/l	5.00	40.0		85	40-140	20	25
Acenaphthylene	**39.9**		µg/l	5.00	40.0		100	40-140	21	25
Acenaphthene	**37.8**		µg/l	5.00	40.0		94	40-140	18	25
Fluorene	**39.1**		µg/l	5.00	40.0		98	40-140	20	25
Phenanthrene	**39.6**		µg/l	5.00	40.0		99	40-140	20	25
Anthracene	**41.4**		µg/l	5.00	40.0		104	40-140	22	25
Fluoranthene	**39.5**		µg/l	5.00	40.0		99	40-140	24	25
Pyrene	**37.7**		µg/l	5.00	40.0		94	40-140	23	25
Benzo (a) anthracene	**34.5**		µg/l	5.00	40.0		86	40-140	23	25
Chrysene	**43.4**	QR2	µg/l	5.00	40.0		108	40-140	27	25
Benzo (b) fluoranthene	**33.9**	QR2	µg/l	5.00	40.0		85	40-140	26	25
Benzo (k) fluoranthene	**37.3**	QR2	µg/l	5.00	40.0		93	40-140	26	25
Benzo (a) pyrene	**28.9**	QR2	µg/l	5.00	40.0		72	40-140	29	25
Indeno (1,2,3-cd) pyrene	**28.6**	QR2	µg/l	5.00	40.0		72	40-140	30	25
Dibenzo (a,h) anthracene	**26.9**	QR2	µg/l	5.00	40.0		67	40-140	27	25
Benzo (g,h,i) perylene	**32.3**	QR2	µg/l	5.00	40.0		81	40-140	28	25
n-Nonane (C9)	**44.6**		µg/l	5.00	100		45	30-140	6	25
n-Decane	**59.6**		µg/l	5.00	100		60	40-140	5	25
n-Dodecane	**69.1**		µg/l	5.00	100		69	40-140	5	25
n-Tetradecane	**79.1**		µg/l	5.00	100		79	40-140	5	25
n-Hexadecane	**87.9**		µg/l	5.00	100		88	40-140	5	25
n-Octadecane	**92.8**		µg/l	5.00	100		93	40-140	6	25
n-Nonadecane	**93.4**		µg/l	5.00	100		93	40-140	6	25
n-Eicosane	**94.2**		µg/l	5.00	100		94	40-140	6	25
n-Docosane	**92.1**		µg/l	5.00	100		92	40-140	6	25

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1428473 - SW846 3510C										
LCS Dup (1428473-BSD1)						Prepared: 03-Dec-14 Analyzed: 04-Dec-14				
n-Tetracosane	**90.1**		µg/l	5.00	100		90	40-140	6	25
n-Hexacosane	**88.6**		µg/l	5.00	100		89	40-140	6	25
n-Octacosane	**88.5**		µg/l	5.00	100		88	40-140	6	25
n-Triacontane	**81.6**		µg/l	5.00	100		82	40-140	6	25
n-Hexatriacontane	**77.2**		µg/l	5.00	100		77	40-140	6	25
Naphthalene (aliphatic fraction)	**0.00**		µg/l					0-200		200
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l					0-200		200
Surrogate: 1-Chlorooctadecane	*41.2*		µg/l		*50.0*		*82*	*40-140*		
Surrogate: Ortho-Terphenyl	*41.5*		µg/l		*50.0*		*83*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*33.7*		µg/l		*40.0*		*84*	*40-140*		

Extractable Petroleum Hydrocarbons - CCV Evaluation Report

Analyte(s)	Average RF	CCRF	% D	Limit
Batch S413890				
Calibration Check (S413890-CCV1)				
C9-C18 Aliphatic Hydrocarbons	91673.27	68462.13	3.0	25
C19-C36 Aliphatic Hydrocarbons	256548.2	89404.15	-24.0	25
Unadjusted C11-C22 Aromatic Hydrocarbons	29.12129	18.92458	2.9	25
Naphthalene	6.2694	6.779059	8.1	25
2-Methylnaphthalene	4.235157	4.670346	10.3	25
Acenaphthylene	5.540151	6.779374	22.4	25
Acenaphthene	3.85867	4.254016	10.2	25
Fluorene	4.260425	4.698508	10.3	25
Phenanthrene	6.038506	6.56371	8.7	25
Anthracene	5.613434	6.584575	17.3	25
Fluoranthene	6.693959	6.937405	3.6	25
Pyrene	7.062016	7.30268	3.4	25
Benzo (a) anthracene	5.547265	5.654467	1.9	25
Chrysene	5.823555	6.903045	18.5	25
Benzo (b) fluoranthene	5.85705	5.099452	-12.9	25
Benzo (k) fluoranthene	5.668055	6.600697	16.5	25
Benzo (a) pyrene	4.979028	5.784562	-1.8	25
Indeno (1,2,3-cd) pyrene	5.734964	6.289702	-7.0	25
Dibenzo (a,h) anthracene	4.890124	5.177344	-9.1	25
Benzo (g,h,i) perylene	5.51948	5.71425	3.5	25
n-Nonane (C9)	58904.95	56445.18	-4.2	30
n-Decane	60136.54	58422.54	-2.9	25
n-Dodecane	61478.14	59761.24	-2.8	25
n-Tetradecane	61779.43	61301.38	-0.8	25
n-Hexadecane	61734.34	61322.02	-0.7	25
n-Octadecane	61395.45	61225.92	-0.3	25
n-Nonadecane	61057.75	60797.82	-0.4	25
n-Eicosane	61025.73	61013.6	-0.02	25
n-Docosane	62231.4	61920.86	-0.5	25
n-Tetracosane	63291.95	63209.58	-0.1	25
n-Hexacosane	64761.06	63621.02	-1.8	25
n-Octacosane	64554.53	64400.84	-0.2	25
n-Triacontane	67725.64	65108.04	-3.9	25
n-Hexatriacontane	67679.87	65202.78	-3.7	25

Analyte(s)	Average RF	CCRF	% D	Limit
Batch S413814				
Calibration Check (S413814-CCV1)				
Benzene	134892.9	134778.4	-0.08	25
Ethylbenzene	88922.29	87634.4	-1.4	25
Methyl tert-butyl ether	67420.15	68831.05	2.1	25
Naphthalene	60539.7	58866.9	-2.8	25
Toluene	113012.7	112317.7	-0.6	25
m,p-Xylene	100408.9	99563.1	-0.8	25
o-Xylene	85586.94	85061.75	-0.6	25
2-Methylpentane	22260.82	20727.1	-6.9	25
n-Nonane	13580.97	11226.65	-17.3	30
n-Pentane	21463.22	19626.95	-8.6	25
1,2,4-Trimethylbenzene	72580.58	73094.25	0.7	25
2,2,4-Trimethylpentane	20533.14	19088.15	-7.0	25
n-Butylcyclohexane	13263.12	11349.85	-14.4	25
n-Decane	10478	7947.8	-24.1	25
Calibration Check (S413814-CCV2)				
Benzene	134892.9	136385	1.1	25
Ethylbenzene	88922.29	89460.15	0.6	25
Methyl tert-butyl ether	67420.15	68295.9	1.3	25
Naphthalene	60539.7	58855.2	-2.8	25
Toluene	113012.7	114115	1.0	25
m,p-Xylene	100408.9	101601.2	1.2	25
o-Xylene	85586.94	86499.75	1.1	25
2-Methylpentane	22260.82	22089.9	-0.8	25
n-Nonane	13580.97	12402.3	-8.7	30
n-Pentane	21463.22	20183.45	-6.0	25
1,2,4-Trimethylbenzene	72580.58	76668.2	5.6	25
2,2,4-Trimethylpentane	20533.14	20386.45	-0.7	25
n-Butylcyclohexane	13263.12	12283.3	-7.4	25
n-Decane	10478	8776.8	-16.2	25
Calibration Check (S413814-CCV3)				
Benzene	134892.9	135190.1	0.2	25
Ethylbenzene	88922.29	88332.05	-0.7	25
Methyl tert-butyl ether	67420.15	68839.95	2.1	25
Naphthalene	60539.7	58450.05	-3.5	25
Toluene	113012.7	113063.8	0.05	25
m,p-Xylene	100408.9	100726.4	0.3	25
o-Xylene	85586.94	85654.4	0.08	25
2-Methylpentane	22260.82	20995.45	-5.7	25
n-Nonane	13580.97	10376.4	-23.6	30
n-Pentane	21463.22	19682.95	-8.3	25
1,2,4-Trimethylbenzene	72580.58	74773.75	3.0	25
2,2,4-Trimethylpentane	20533.14	18779.5	-8.5	25
n-Butylcyclohexane	13263.12	10648	-19.7	25
n-Decane	10478	8125.6	-22.5	25

Notes and Definitions

QR2	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
R02	Elevated Reporting Limits due to limited sample volume.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
June O'Connor

SC005604 AMS

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page ____ of ____

Special Handling:

☐ Standard TAT - 7 to 10 business days

☒ Rush TAT - Date Needed: 12/4 - Agreed

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 60 days unless otherwise instructed.

Report To: CDW Consultants Inc
40 Speen Street, Suite 301
Framingham, MA 01701

Telephone #: 508-875-2657 ext 31
Project Mgr: Brian Miller

Invoice To: CDW Consultants Inc
40 Speen Street, Suite 301
Framingham, MA 01701

P.O No.: 1406.00 Quote/RQN: ____

Project No: 1406.00
Site Name: ProCon - 95 Station Landing
Location: Medfield State: MA
Sampler(s): Christopher Hauck

F=Field Filtered 1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=____ 12=____

DW=Dinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=____ X2=____ X3=____

G= Grab C=Compsite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analysis: EPH	VPH	List Preservative Code below: 3	2	Check if chlorinated
SC005604-01	1201 DW-1	12/01/14	10:25	G	GW	3	1			X	X			☐
-02	1201 TB-2	12/01/14	10:30	G	GW	1					X			☐
														☐
														☐
														☐
														☐
														☐
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														☐

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☑ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☐ Standard ☐ No QC ☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: ____
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature]	12/2/14	10:25
[signature]	[signature]	12/2/14	17:15

Temp °C: Observed 1.4; Correction Factor 0; Corrected 1.4; IR ID # 01

☐ EDD format:
☑ E-mail to: bmiller@cdwconsultants.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen