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

CERTIFIED MAIL RETURN RECEIPT REQUESTED

MAY 08 2014

Dan Galante
Vice President
T. Ford Company
118 Tenney Street
Georgetown, MA 01833

Re: Authorization to discharge under the Remediation General Permit (RGP) – MAG910000. Circle finishing site located at 3 Newburyport Turnpike, Newbury, MA 01950: Authorization # MAG910615

Dear Mr. Galante:

Based on the review of a Notice of Intent (NOI) submitted by Mr. Allen Walker from the firm ARCADIS U.S., Inc., on behalf of T. Ford Company, Inc., for the site referenced above, the U.S. Environmental Protection Agency (EPA) hereby authorizes you, as the named Owner and 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 total metal parameters that exceeded Appendix III limits. Also, per your consultant's agreement with this office, the checklist includes parameters conforming the activity sub-category (primarily heavy metals) selected, in lieu of missing laboratory information.

Also, please note that the metals included on the checklist are dilution dependent pollutants and subject to discharge limitations based on a dilution factor range (DFR). With the limited dilution at the mitigating wetland, EPA determined that the DFR for

each parameter is in the one and five (1-5) range. (See the RGP Appendix IV for Massachusetts facilities) Therefore, the limit for antimony of 5.6 ug/L, arsenic of 10 ug/L, Cadmium of 0.2 ug/L, trivalent chromium of 48.8 ug/L, hexavalent chromium of 11.4 ug/L, copper of 5.2 ug/L, lead of 1.3 ug/L, Mercury of 0.9 ug/L, nickel of 29 ug/L, selenium of 5 ug/L, silver of 1.2 ug/L, zinc of 66.6 ug/L, and iron of 1,000 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 May 21, 2014. 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
Timothy Leonard Sr., Town of Newbury, DPW
Donna D. Holaday, City of Newburyport, City Mayor
Allen Walker, ARCADIS U.S., Inc.

2010 Remediation General Permit
Summary of Monitoring Parameters[1]

NPDES Authorization Number:	**MAG910615**
Authorization Issued:	May 1, 2014
Facility/Site Name:	Circle Finishing
Facility/Site Address:	3 Newburyport Turnpike, MA 01950
	Email address of owner: rdlcircle@aol.com
Legal Name of Operator:	T. Ford Company
Operator contact name, title, and Address:	Dan Galante 118 Tenney Street, Georgetown, MA 01833
	Email: Same as the owner
Estimated date of The Project Completion:	May 21, 2014
Category and Sub-Category:	Category II- Non Petroleum Site Remediation. Sub-category C. Primarily Heavy Metals Sites.
RGP Termination Date:	September 9, 2015
Receiving Water:	Wetland

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 Metal Limit @ H [10]= 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) [11/12]		Minimum level=ML	
		Freshwater	Saltwater		
√	39. Antimony	5.6/ML 10			
√	40. Arsenic **	10/ML20	36/ML 20		
√	41. Cadmium **	0.2/ML10	8.9/ML 10		
√	42. Chromium III (trivalent) **	48.8/ML15	100/ML 15		
√	43. Chromium VI (hexavalent) **	11.4/ML10	50.3/ML 10		
√	44. Copper **	5.2/ML15	3.7/ML 15		
√	45. Lead **	1.3/ML20	8.5/ML 20		
√	46. Mercury **	0.9/ML0.2	1.1/ML 0.2		
√	47. Nickel **	29/ML20	8.2/ML 20		
√	48. Selenium **	5/ML20	71/ML 20		
√	49. Silver	1.2/ML10	2.2/ML 10		
√	50. Zinc **	66.6/ML15	85.6/ML 15		
√	51. Iron	1,000/ML 20			

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

Footnotes:

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

ARCADIS U.S., Inc.
194 Forbes Road
Braintree
Massachusetts 02184
Tel 781 356 7300
Fax 781 356 2211
www.arcadis-us.com

Environmental

Mr. Victor Alvarez
U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100
Mail Code OEP06-4
Boston, Massachusetts 02109-3912
Attn: Remediation General Permit NOI Processing

Date:
April 15, 2014

Contact:
Allen Walker

Phone:-
781.356.7300 X261

Email:
Allen.Walker@arcadis-us.com

Our ref:
BN012703.0005

Subject: Notice of Intent
NPDES Remediation General Permit
Circle Finishing Inc. Upland and Wetland Area Remediation
3 Newburyport Turnpike
Newbury, Massachusetts

Dear Mr. Alvarez:

On behalf of T Ford Company, Inc. (TFord), contractor implementing the work, ARCADIS U.S., Inc. (ARCADIS) has prepared this Notice of Intent (NOI) for coverage under the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP), Massachusetts General Permit (MAG910000). This NOI was prepared in accordance with the general requirements of the NPDES and related guidance documentation provided by the US Environmental Protection Agency (EPA). The completed NOI form is provided in **Appendix A**.

Site Information

This NOI has been prepared for the management of water generated from dewatering at a wetland sediment removal project, which includes the removal, transportation and disposal of contaminated sediment at the former Circle Finishing, Inc. metal plating facility property in Newbury and Newburyport, Massachusetts (the Site). On December 20, 1993 a fire occurred at the Site that resulted in a release of oil and/or hazardous materials (OHM) to the environment with fire-fighting water carrying OHM into the adjacent wetland.

The Site consists of approximately 1.7 acres located immediately south of the traffic circle on US Route 1 and is located in the towns of Newbury and Newburyport as identified on the Town of Newburyport Tax Assessor's Map 34 as Lot 1 and the Town of Newbury Tax Assessor's Map R-47 as Lots 38 and 39, though all work is proposed within the Town of Newbury, as seen in the attached figures. The topography of the land is relatively level and includes a wetland area to the east. The former site building has been razed (see attached **Figure 1**).

Work Summary and Description

The applicant proposes to excavate and remove contaminated sediment and soil within upland and wetland areas of the site. At this time it is estimated that between 250-400 cubic yards of soil/sediment are proposed to be removed from the site based upon extensive soil testing conducted by ARCADIS over a period of several years. Excavation is expected to generally extend from a few inches to 1.5 feet in depth in wetland areas. In areas with significant clay underlying the contaminated soil or sediment, 1 to 3 inches of this clay may also be removed. Contaminated material is expected to be taken to Waste Management's Turnkey Landfill in Rochester, NH, pending final characterization testing following excavation.

Work within wetlands is expected to be conducted primarily from equipment operating from 4 x 20 foot timber mats ("swamp mats"). There may be wetland areas which are stable enough for tracked vehicles to operate safely without mats. Upon removal of material, clean soil (clean sandy loam containing a minimum 20% organic matter content) will be replaced on site to approximate pre-excavation grades. The edges of the wetland will be re-planted with herbaceous, native vegetation and the buffer zone will be seeded with a grass.

This work requires dewatering within the wetland excavation so that work can be completed in dry conditions. Water generated from the excavation will be handled in accordance with a best management practices (BMPs) plan included in **Appendix B**, which was included as part of the Water Quality Certificate that was submitted to the Massachusetts Department of Environmental Protection (MassDEP). Additional information and design detail for the water treatment system and can be found in the attached figures. The project activity is expected to last approximately 4 weeks.

To characterize water from the excavation, ARCADIS utilized laboratory analytical data from surface water samples collected at the Site in 2012. Historical analytical data from surface water samples collected at the Site were also reviewed for comparison of historical and current concentration trends. These samples were analyzed for the parameters specified for this RGP NOI. Laboratory data reports for the more recent sampling data are provided in **Appendix C**.

Discharge and Receiving Surface Water Information

Based on analytical results of surface water samples collected by ARCADIS, there are detectable concentrations of metals that slightly exceeded the discharge concentration criteria. While it is unknown whether total suspended solids (TSS) concentrations will exceed the discharge criteria, TSS is expected to be significantly

reduced via settling that is expected in the influent equalization tank and also by the filtration that occurs as part of the surface water treatment system. Residual metals are expected to be reduced by the filtration. Refer to **Figure 2** for a proposed wetland excavation area and water treatment system layout.

Calculation of Dilution Criteria

For applications in Massachusetts, the following formula is used to calculate site specific dilution criteria:

DF = (Qd + Qs)/Qd

DF = Dilution Factor

Qd = Maximum flow rate of the discharge in cubic feet per second (cfs)

Qs = Receiving water 7Q10 flow (cfs) where 7Q10 is the minimum flow for seven consecutive days with a reoccurrence interval of 10 years

The value for Qd is the maximum expected flow rate of discharge from the proposed treatment system, which is approximately 50 gpm or 0.111 cfs. The value for Qs was estimated using field observations, as the discharge is not continuous throughout the year and water levels can be too low for discharge to occur. The mean 7Q10 for the discharge was calculated at 0.0 cfs. Using this Q for Qs provides a Dilution Factor of 1.

Consultation with Federal Services

ARCADIS reviewed online electronic data viewers and databases from the Massachusetts Geographical Information System (MassGIS) and the Massachusetts Division of Fisheries and Wildlife (MassWildlife; Natural Heritage and Endangered Species Program), the Massachusetts Historical Commission (MHC) and the U.S. National Parks Service Natural Historic Places (NPS). Based on this review, neither the Site nor the point where the proposed discharge reaches the receiving surface water body are Areas of Critical Environmental Concern (ACEC), Habitats of Rare Wetland Wildlife, Habitats of Rare Species or Estimated Habitats of Rare Wildlife or listed as a National Historic Place.

Coverage under NPDES RGP

It is our opinion that the proposed discharge is eligible for coverage under the NPDES RGP. On behalf of TFord, we are requesting coverage under the NPDES RGP for the discharge of collected surface water during construction activities to the receiving stream adjacent and connected to the surface water body at the Site, a tributary of the Little River. The enclosed NOI form provides required information on the general site conditions, discharge, treatment system, receiving water, and consultation with federal services. For this project, T Ford has operational control over the construction plans and specifications, including the ability to make modifications to those plans and specifications.

Please call us at (781) 356-7300, if you have any questions.

Sincerely,

ARCADIS U.S., Inc.

Allen Walker, PE, LSP
Principal Environmental Engineer

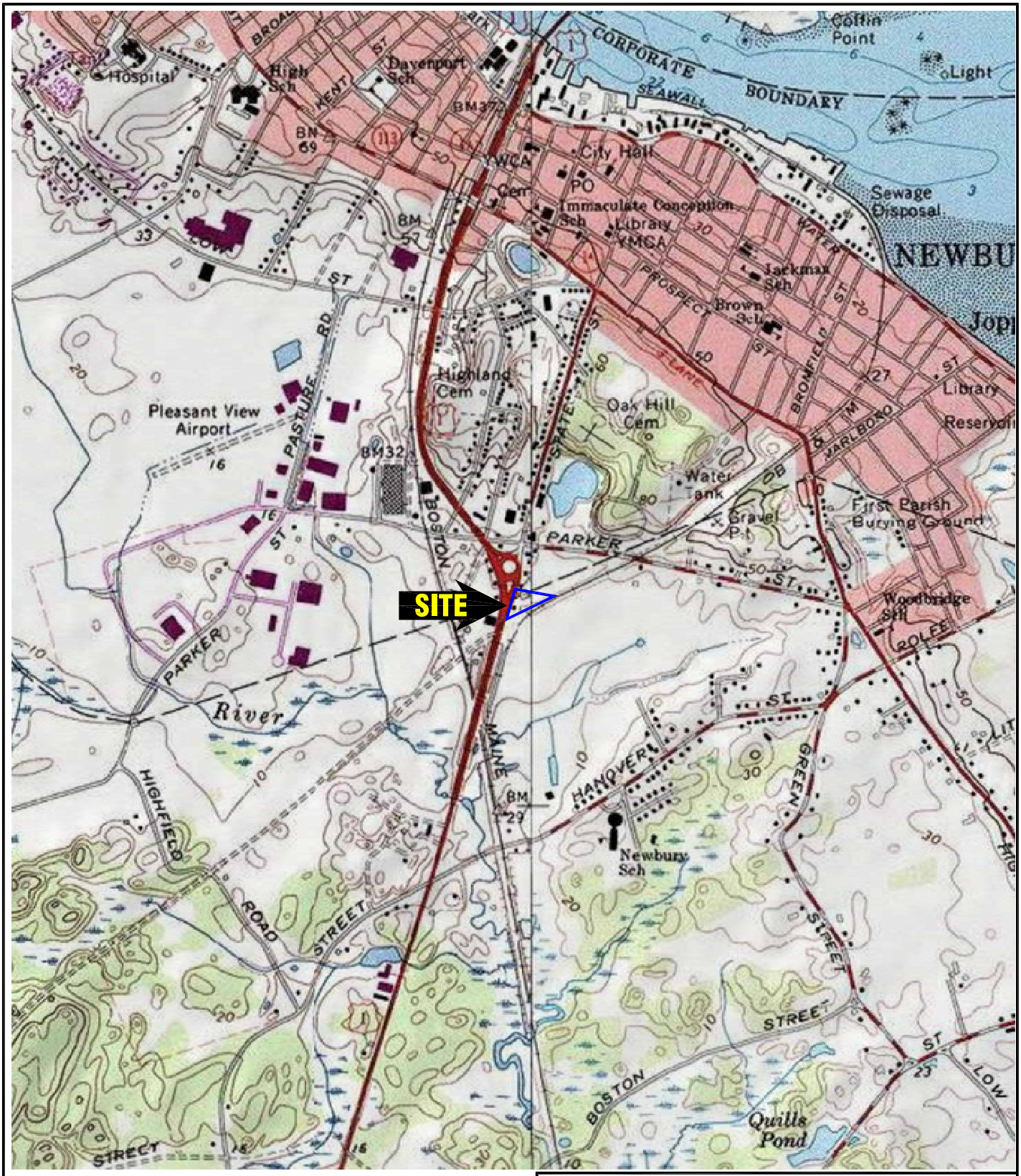
Thomas Duffy
Environmental Scientist II

Attachments:

Figure 1 – Site Location Map
Figure 2 – Proposed Wetland and Soil Excavation Areas
Figure 3 – Discharge Area Detail
Schematic of Water Treatment System

Appendix A – NOI Form
Appendix B – BMPs
Appendix C – 2012 Laboratory Data

Figures



SOURCE: USGS
QUADRANGLE:
NEWBURYPORT, MA
DATED: 1987

0 1500' 3000'

GRAPHIC SCALE

CIRCLE FINISHING INC.
US ROUTE 1 / TRAFFIC CIRCLE
NEWBURY, MASSACHUSETTS

SITE LOCATION MAP

ARCADIS

FIGURE
1

CITY: MANCHESTER DIV/GROUP: ENVCAD DB: T.HALLIWELL PM: TM:
G:\ENVCAD\Manchester\ACT\BN012703\0005\000008\12703-B01.dwg LAYOUT: 1 SAVED: 10/17/2013 1:00 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: --- PLOTTED: 10/17/2013 1:03 PM BY: SMALL, BRIAN

CITY: MANCHESTER DIV/GROUP: ENVCAD DB: T.HALLIWELL PM: TM:
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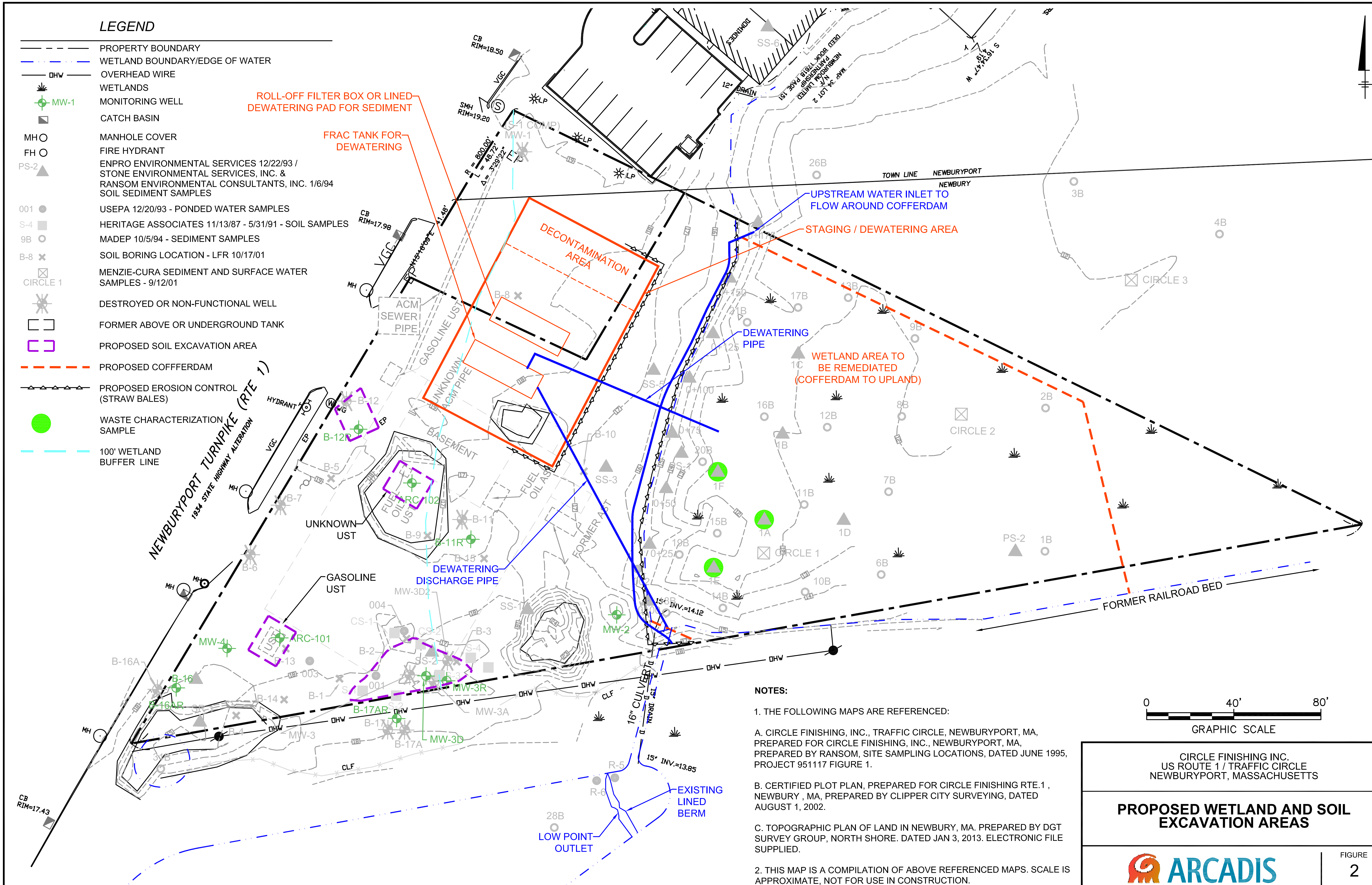


LEGEND
PROPERTY BOUNDARY
WETLAND BOUNDARY/EDGE OF WATER
OVERHEAD WIRE
WETLANDS
MONITORING WELL
CATCH BASIN
MANHOLE COVER
FIRE HYDRANT
ENPRO ENVIRONMENTAL SERVICES 12/22/93 / STONE ENVIRONMENTAL SERVICES, INC. & RANSOM ENVIRONMENTAL CONSULTANTS, INC. 1/6/94 SOIL SEDIMENT SAMPLES
USEPA 12/20/93 - PONDED WATER SAMPLES
HERITAGE ASSOCIATES 11/13/87 - 5/31/91 - SOIL SAMPLES
MADEP 10/5/94 - SEDIMENT SAMPLES
SOIL BORING LOCATION - LFR 10/17/01
MENZIE-CURA SEDIMENT AND SURFACE WATER SAMPLES - 9/12/01
DESTROYED OR NON-FUNCTIONAL WELL
FORMER ABOVE OR UNDERGROUND TANK
PROPOSED SOIL EXCAVATION AREA
PROPOSED COFFFERDAM
PROPOSED EROSION CONTROL (STRAW BALES)
WASTE CHARACTERIZATION SAMPLE
100' WETLAND BUFFER LINE
NEWBURYPORT TURNPIKE (RTE 1)
1934 STATE HIGHWAY ALTERATION
ROLL-OFF FILTER BOX OR LINED DEWATERING PAD FOR SEDIMENT
FRAC TANK FOR DEWATERING
DECONTAMINATION AREA
UPSTREAM WATER INLET TO FLOW AROUND COFFERDAM
STAGING / DEWATERING AREA
DEWATERING PIPE
WETLAND AREA TO BE REMEDIATED (COFFERDAM TO UPLAND)
DEWATERING DISCHARGE PIPE
UNKNOWN UST
GASOLINE UST
EXISTING LINED BERM
LOW POINT OUTLET
16" CULVERT
FORMER RAILROAD BED
TOWN LINE
NEWBURYPORT
NEWBURY
CIRCLE 1
CIRCLE 2
CIRCLE 3

GRAPHIC SCALE 0 40' 80'

NOTES:

1. THE FOLLOWING MAPS ARE REFERENCED:

A. CIRCLE FINISHING, INC., TRAFFIC CIRCLE, NEWBURYPORT, MA, PREPARED FOR CIRCLE FINISHING, INC., NEWBURYPORT, MA, PREPARED BY RANSOM, SITE SAMPLING LOCATIONS, DATED JUNE 1995, PROJECT 951117 FIGURE 1.

B. CERTIFIED PLOT PLAN, PREPARED FOR CIRCLE FINISHING RTE.1 , NEWBURY , MA, PREPARED BY CLIPPER CITY SURVEYING, DATED AUGUST 1, 2002.

C. TOPOGRAPHIC PLAN OF LAND IN NEWBURY, MA. PREPARED BY DGT SURVEY GROUP, NORTH SHORE. DATED JAN 3, 2013. ELECTRONIC FILE SUPPLIED.

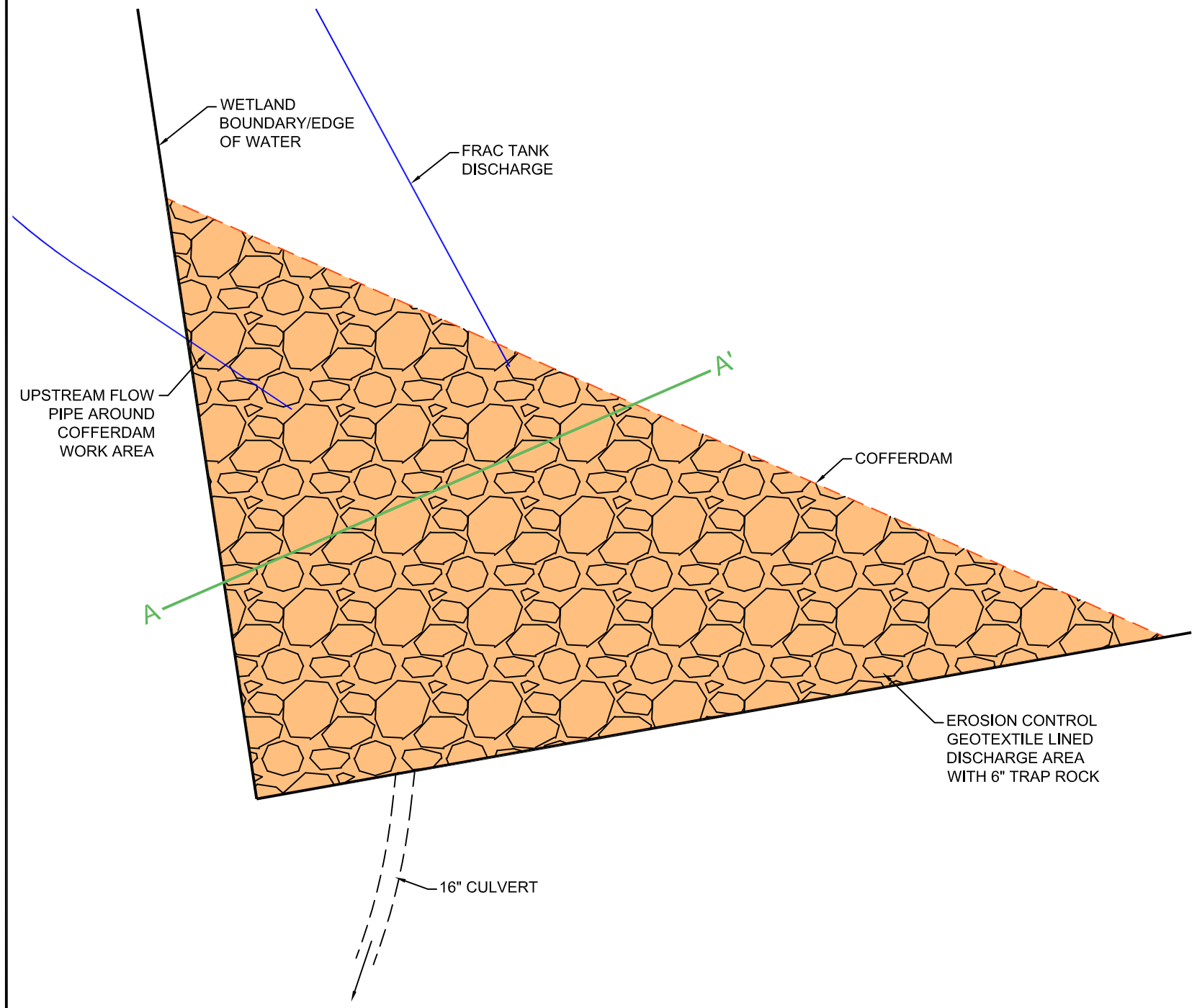
2. THIS MAP IS A COMPILATION OF ABOVE REFERENCED MAPS. SCALE IS APPROXIMATE, NOT FOR USE IN CONSTRUCTION.

CIRCLE FINISHING INC.
US ROUTE 1 / TRAFFIC CIRCLE
NEWBURYPORT, MASSACHUSETTS

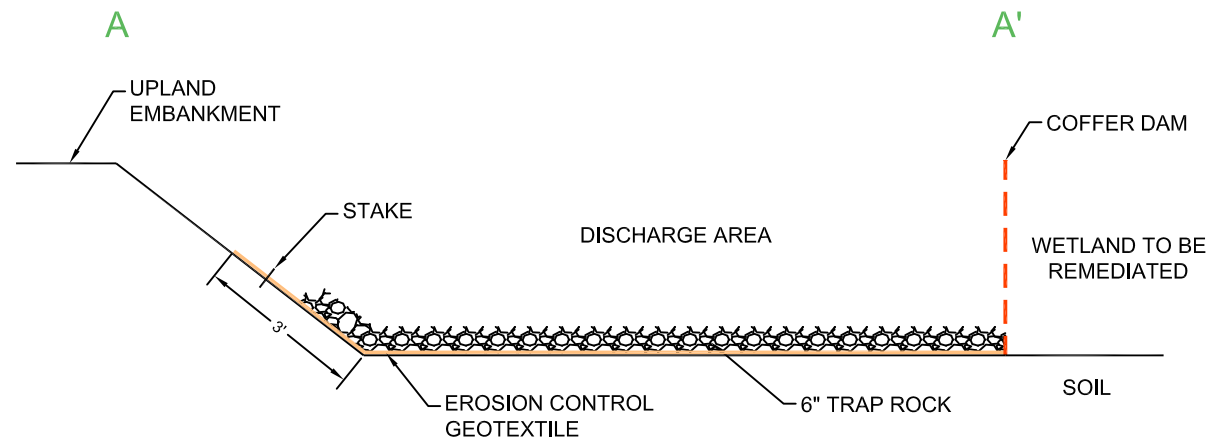
PROPOSED WETLAND AND SOIL EXCAVATION AREAS

ARCADIS

FIGURE 2



PLAN VIEW



PROFILE VIEW

NOT TO SCALE

CIRCLE FINISHING INC.
US ROUTE 1 / TRAFFIC CIRCLE
NEWBURY, MASSACHUSETTS

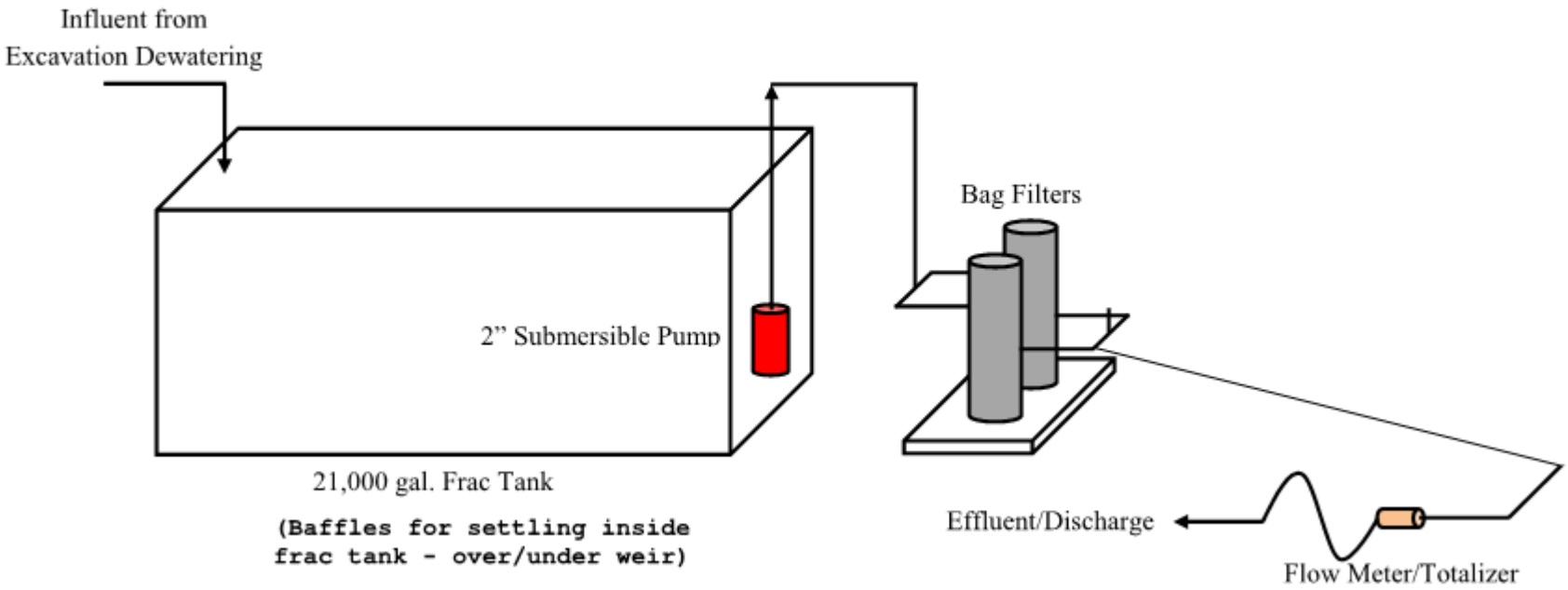
DISCHARGE AREA DETAIL

ARCADIS

FIGURE
3

ARCADIS

Schematic of Water Treatment System



Schematic of Water Treatment System
Dewatering of Wetland Area for Sediment Remediation
Circle Finishing, Inc., Newbury, MA
RTN 3-392

ARCADIS

Appendix A

NOI Form

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**: Circle Finishing		**Facility/site** mailing address:		
Location of **facility/site**: longitude: -70.874592 latitude: 42.797530	Facility SIC code(s): 3471	Street: 3 Newburyport Turnpike		
b) Name of **facility/site owner:**		Town: Newbury		
Email address of facility/site owner: rdlcircle@aol.com		State: MA	Zip: 01950	County: US
Telephone no. of facility/site **owner**: 978-462-7171				
Fax no. of facility/site **owner**: 978-465-1631		**Owner** is (check one): 1. Federal ○ 2. State/Tribal ○ 3. Private ◉ 4. Other ○ if so, describe:		
Address of **owner** (if different from site):		Circle Finishing, Inc.		
Street: 19 Graf Road				
Town: Newburyport	State: MA	Zip: 01950	County: US	
c) Legal name of **operator**:		**Operator** telephone no: 978-352-5606		
T. Ford Company		**Operator** fax no.:	**Operator** email: dan@tford.com	
Operator contact name and title: Dan Galante				
Address of **operator** (if different from owner):		Street: 118 Tenney Street		
Town: Georgetown	State: MA	Zip: 01833	County: US	

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: X258013
2. permit or license # assigned: 103253
3. state agency contact information: name, location, and telephone number:

Mass. DEP - Northeast Region
205 B Lowell Street
Wilmington ,MA 01887 attn: Nancy White 978-694-3359

f) Is the site/facility covered by any other EPA permit, including:
1. Multi-Sector General Permit? Y ○ N ◉,
if Y, number:
2. Final Dewatering General Permit? Y ○ N ◉,
if Y, number:
3. EPA Construction General Permit? Y ○ N ◉,
if Y, number:
4. Individual NPDES permit? Y ○ N ◉,
if Y, number:
5. any other water quality related individual or general permit? Y ○ N ◉, if Y, number:

g) Is the site/facility located within or does it discharge to an Area of Critical Environmental Concern (ACEC)? Y ○ N ◉

h) Based on the facility/site information and any historical sampling data, identify the sub-category into which the potential discharge falls.

Activity Category	**Activity Sub-Category**
I - Petroleum Related Site Remediation	A. Gasoline Only Sites ☐ B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges) ☐ C. Petroleum Sites with Additional Contamination ☐
II - Non Petroleum Site Remediation	A. Volatile Organic Compound (VOC) Only Sites ☐ B. VOC Sites with Additional Contamination ☐ C. Primarily Heavy Metal Sites ☒
III - Contaminated Construction Dewatering	A. General Urban Fill Sites ☐ B. Known Contaminated Sites ☐

IV - Miscellaneous Related Discharges	A. Aquifer Pump Testing to Evaluate Formerly Contaminated Sites ☐ B. Well Development/Rehabilitation at Contaminated/Formerly Contaminated Sites ☐ C. Hydrostatic Testing of Pipelines and Tanks ☐ D. Long-Term Remediation of Contaminated Sumps and Dikes ☐ E. Short-term Contaminated Dredging Drain Back Waters (if not covered by 401/404 permit) ☐

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

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

Dewatering associated with the remediation of contaminated sediments within a wetland contaminated by a fire-related release in 1993.

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 0.111 cfs Is maximum flow a **design value**? Y ○ N ⊙
Average flow (include units) 0.067 cfs Is average flow a design value or estimate? Estimate

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

pt.1: lat.	42.797966	long.	-70.872838	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): NA

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

c) Expected dates of discharge (mm/dd/yy): start Apr 21, 2014 end May 21, 2014

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 5 attached

3. Contaminant information.

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

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids (TSS)		☐	☒								
2. Total Residual Chlorine (TRC)		☒	☐								
3. Total Petroleum Hydrocarbons (TPH)		☒	☐								
4. Cyanide (CN)	57125	☐	☒	19	GRAB	SW-846 9014	10	170	0.0463	170	0.0463
5. Benzene (B)	71432	☒	☐								
6. Toluene (T)	108883	☒	☐								
7. Ethylbenzene (E)	100414	☒	☐								
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☒	☐								
9. Total BTEX [2]	n/a	☒	☐								
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) [3]	106934	☒	☐								
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☒	☐								
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☒	☐								

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

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

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

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

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

[4] The sum of individual phthalate compounds.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
h. Acenaphthene	83329	☒	☐								
i. Acenaphthylene	208968	☒	☐								
j. Anthracene	120127	☒	☐								
k. Benzo(ghi) Perylene	191242	☒	☐								
l. Fluoranthene	206440	☒	☐								
m. Fluorene	86737	☒	☐								
n. Naphthalene	91203	☒	☐								
o. Phenanthrene	85018	☒	☐								
p. Pyrene	129000	☒	☐								
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐								
38. Chloride	16887006	☒	☐								
39. Antimony	7440360	☒	☐								
40. Arsenic	7440382	☒	☐								
41. Cadmium	7440439	☐	☒	18	GRAB	SW-846 6010C	4	ND	0	2	0.0005
42. Chromium III (trivalent)	16065831	☐	☒	26	GRAB	SW-846 6010C	10	32	0.0087	11	0.003
43. Chromium VI (hexavalent)	18540299	☐	☒	2	GRAB						
44. Copper	7440508	☐	☒	26	GRAB	SW-846 6010C	10	430	0.1172	61	0.0166
45. Lead	7439921	☒	☐								
46. Mercury	7439976	☒	☐								
47. Nickel	7440020	☐	☒	26	GRAB	SW-846 6010C	10	300	0.0818	176	0.048
48. Selenium	7782492	☒	☐								
49. Silver	7440224	☒	☐								
50. Zinc	7440666	☐	☒	26	GRAB	SW-846 6010C	20	100	0.0273	33	0.009
51. Iron	7439896	☒	☐								
Other (describe):		☒	☐								

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

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

Step 1: Do any of the metals in the influent exceed the effluent limits in Appendix III (i.e., the limits set at zero dilution)? Y ☒ N ○	If yes, which metals? Copper, nickel
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: Copper DF: 1 Metal: Nickel DF: 1 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: Copper, nickel

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:

Before the wetland sediment excavation is commenced, any standing water inside the cofferdam will be discharged downstream in two stages:
(a) Initial drawdown of standing water in the wetland area will be conducted by pumping clear water downstream via the VRS and 15" culvert discharge pipe.
(b) Following initial drawdown, any remaining standing water in the wetland excavation area will be collected by hose with a screen at the suction end and treated by directing the water through a weir tank with baffles that will allow for sediment settling and a bag/cartridge filter prior to discharge at the VRS.
During the two-week sediment excavation period, crushed stone collection sumps will be created at low points in the remediation area and any water accumulating within the wetland area will be pumped to the weir tank and bag/catridge filter prior to discharge through the VRS.

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):	riprap velocity dissapator		

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_____30_____ gpm Maximum flow rate of treatment system _____50_____ gpm Design flow rate of treatment system _____50_____ gpm

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

None planned.

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:
Discharge is back to same wetland as dewatering location, near its outlet under the existing MBTA rail right-of-way. Site is tributary to Little River.

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:
1. For multiple discharges, number the discharges sequentially.
2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water
The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.

d) Provide the state water quality classification of the receiving water: Class B

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 0 cfs
Please attach any calculation sheets used to support stream flow and dilution calculations.

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Y○ N◉ If yes, for which pollutant(s)?

Is there a final TMDL? Y○ N◉ If yes, for which pollutant(s)?

6. ESA and NHPA Eligibility.

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

a) Using the instructions in Appendix VII and information on Appendix II, under which criterion listed in Part I.C are you eligible for coverage under this general permit?

A ◉ B ○ C ○ D ○ E ○ F ○

b) If you selected Criterion D or F, has consultation with the federal services been completed? Y ○ N ○ Underway ○

c) If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is "not likely to adversely affect" listed species or critical habitat received? Y ○ N ○

d) Attach documentation of ESA eligibility as described in the NOI instructions and required by Appendix VII, Part I.C, Step 4.

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

1 ◉ 2 ○ 3 ○

f) If Criterion 3 was selected, attach all written correspondence with the State or Tribal historic preservation officers, including any terms and conditions that outline measures the applicant must follow to mitigate or prevent adverse effects due to activities regulated by the RGP.

7. Supplemental information.

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

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

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

Facility/Site Name:	Circle Finishing
Operator signature:	
Printed Name &Title:	Dan Galante, Vice President T. Ford Company
Date:	**4/15/14**

Appendix B

BMPs

Appendix B
Mitigation Measures
Best Management Practices

The following best management practices (BMPs) will be employed during construction in order to minimize the potential for adverse impacts to wetlands during construction activities:

1. Installation of erosion control barriers at the wetland/upland interface and at the discharge location to prevent the migration of sediment into downgradient wetland resources.

2. Use of weir tank, silt bags, filter cartridges and other sediment settling devices during dewatering measures to prevent discharge of turbid water downstream.

3. Use of timber mats for equipment operation within wetland areas to minimize soil compaction of non-target wetland areas.

4. Proper containment of soil stockpile areas to prevent migration of sediment toward wetland and to prevent cross-contamination during construction activities.

5. Conducting work during low flow or frozen ground conditions to minimize soil disruption and necessary dewatering, as feasible during the period of remediation.

6. Re-vegetation of disturbed soils upon completion of construction using native wetland and upland plant material with high wildlife habitat value.

ARCADIS

Appendix C

2012 Laboratory Data

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 6, 2012

Allen Walker
Arcadis US Inc. - Braintree, MA
194 Forbes Road
Braintree, MA 02184

Project Location: Newburyport, MA
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 12H1011

Enclosed are results of analyses for samples received by the laboratory on August 29, 2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager

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

Arcadis US Inc. - Braintree, MA
194 Forbes Road
Braintree, MA 02184
ATTN: Allen Walker

REPORT DATE: 9/6/2012

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 12H1011

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

PROJECT LOCATION: Newburyport, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
ARC-SW1	12H1011-01	Surface Water		SM18-20 2340B	
				SW-846 6010C	
				SW-846 9014	
ARC-SW2	12H1011-02	Surface Water		SM18-20 2340B	
				SW-846 6010C	
ARC-SW3	12H1011-03	Surface Water		SM18-20 2340B	
				SW-846 6010C	
ARC-SW4	12H1011-04	Surface Water		SM18-20 2340B	
				SW-846 6010C	
ARC-SW5	12H1011-05	Surface Water		SM18-20 2340B	
				SW-846 6010C	
ARC-SW6	12H1011-06	Surface Water		SM18-20 2340B	
				SW-846 6010C	
ARC-SW7	12H1011-07	Surface Water		SM18-20 2340B	
				SW-846 6010C	
ARC-SW8	12H1011-08	Surface Water		SM18-20 2340B	
				SW-846 6010C	
ARC-SO1F (32-34in)	12H1011-11	Soil		SM 2540G	
				SW-846 6010C	
ARC-SO1E (37-39in)	12H1011-12	Soil		SM 2540G	
				SW-846 6010C	
ARC-SO1A (37-39in)	12H1011-14	Soil		SM 2540G	
				SW-846 6010C	

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

CASE NARRATIVE SUMMARY

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

For method 6010, only Cd, Cr, Cu, Ni and Zn results were requested and reported.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Daren J. Damboragian
Laboratory Manager

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW1 | Sampled: 8/29/2012 10:15

Sample ID: 12H1011-01

Sample Matrix: Surface Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	0.35	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:19	OP
Chromium	57	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:19	OP
Copper	64	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:19	OP
Nickel	43	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:19	OP
Zinc	8.3	0.020	mg/L	1		SW-846 6010C	8/30/12	9/4/12 16:05	OP
Hardness	480	3.0	mg/L	1		SM18-20 2340B	8/30/12	9/4/12 11:21	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW1 | Sampled: 8/29/2012 10:15

Sample ID: 12H1011-01

Sample Matrix: Surface Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 12:31	OP
Chromium	0.010	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 12:31	OP
Copper	ND	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 12:31	OP
Nickel	0.18	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 12:31	OP
Zinc	0.021	0.020	mg/L	1		SW-846 6010C	8/30/12	8/31/12 12:31	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW1 | Sampled: 8/29/2012 10:15

Sample ID: 12H1011-01

Sample Matrix: Surface Water

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

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	0.17	0.010	mg/L	1		SW-846 9014	9/5/12	9/5/12 14:15	VAK

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW2 | Sampled: 8/29/2012 09:55

Sample ID: 12H1011-02

Sample Matrix: Surface Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:29	OP
Chromium	0.54	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:29	OP
Copper	0.68	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:29	OP
Nickel	0.39	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:29	OP
Zinc	0.15	0.020	mg/L	1		SW-846 6010C	8/30/12	9/4/12 16:12	OP
Hardness	110	3.0	mg/L	1		SM18-20 2340B	8/30/12	9/4/12 11:21	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW2 | Sampled: 8/29/2012 09:55

Sample ID: 12H1011-02

Sample Matrix: Surface Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 12:57	OP
Chromium	0.032	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 12:57	OP
Copper	0.43	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 12:57	OP
Nickel	0.30	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 12:57	OP
Zinc	0.10	0.020	mg/L	1		SW-846 6010C	8/30/12	8/31/12 12:57	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW3 | Sampled: 8/29/2012 10:05

Sample ID: 12H1011-03

Sample Matrix: Surface Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	0.0072	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:33	OP
Chromium	1.1	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:33	OP
Copper	0.99	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:33	OP
Nickel	0.55	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:33	OP
Zinc	0.10	0.020	mg/L	1		SW-846 6010C	8/30/12	9/4/12 16:17	OP
Hardness	110	3.0	mg/L	1		SM18-20 2340B	8/30/12	9/4/12 11:21	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW3 | Sampled: 8/29/2012 10:05

Sample ID: 12H1011-03

Sample Matrix: Surface Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 13:02	OP
Chromium	0.019	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 13:02	OP
Copper	0.029	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 13:02	OP
Nickel	0.15	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 13:02	OP
Zinc	0.037	0.020	mg/L	1		SW-846 6010C	8/30/12	8/31/12 13:02	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW4 | Sampled: 8/29/2012 09:35

Sample ID: 12H1011-04

Sample Matrix: Surface Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:38	OP
Chromium	0.018	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:38	OP
Copper	ND	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:38	OP
Nickel	0.21	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 17:38	OP
Zinc	ND	0.020	mg/L	1		SW-846 6010C	8/30/12	9/4/12 16:21	OP
Hardness	120	3.0	mg/L	1		SM18-20 2340B	8/30/12	9/4/12 11:21	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW4 | Sampled: 8/29/2012 09:35

Sample ID: 12H1011-04

Sample Matrix: Surface Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 13:26	OP
Chromium	ND	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 13:26	OP
Copper	ND	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 13:26	OP
Nickel	0.16	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 13:26	OP
Zinc	ND	0.020	mg/L	1		SW-846 6010C	8/30/12	8/31/12 13:26	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW5 | Sampled: 8/29/2012 09:50

Sample ID: 12H1011-05

Sample Matrix: Surface Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	0.013	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:03	OP
Chromium	0.47	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:03	OP
Copper	5.2	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:03	OP
Nickel	1.0	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:03	OP
Zinc	1.2	0.020	mg/L	1		SW-846 6010C	8/30/12	9/4/12 16:27	OP
Hardness	290	3.0	mg/L	1		SM18-20 2340B	8/30/12	9/4/12 11:21	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW5 | Sampled: 8/29/2012 09:50

Sample ID: 12H1011-05

Sample Matrix: Surface Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 14:51	OP
Chromium	ND	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 14:51	OP
Copper	ND	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 14:51	OP
Nickel	0.13	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 14:51	OP
Zinc	0.062	0.020	mg/L	1		SW-846 6010C	8/30/12	8/31/12 14:51	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW6 | Sampled: 8/29/2012 09:25

Sample ID: 12H1011-06

Sample Matrix: Surface Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:08	OP
Chromium	0.020	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:08	OP
Copper	0.012	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:08	OP
Nickel	0.20	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:08	OP
Zinc	ND	0.020	mg/L	1		SW-846 6010C	8/30/12	9/4/12 16:32	OP
Hardness	110	3.0	mg/L	1		SM18-20 2340B	8/30/12	9/4/12 11:21	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW6 | Sampled: 8/29/2012 09:25

Sample ID: 12H1011-06

Sample Matrix: Surface Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 14:57	OP
Chromium	ND	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 14:57	OP
Copper	ND	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 14:57	OP
Nickel	0.16	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 14:57	OP
Zinc	ND	0.020	mg/L	1		SW-846 6010C	8/30/12	8/31/12 14:57	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW7 | Sampled: 8/29/2012 09:15

Sample ID: 12H1011-07

Sample Matrix: Surface Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	0.012	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:14	OP
Chromium	1.2	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:14	OP
Copper	0.75	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:14	OP
Nickel	0.86	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:14	OP
Zinc	0.14	0.020	mg/L	1		SW-846 6010C	8/30/12	9/4/12 16:38	OP
Hardness	120	3.0	mg/L	1		SM18-20 2340B	8/30/12	9/4/12 11:21	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW7 | Sampled: 8/29/2012 09:15

Sample ID: 12H1011-07

Sample Matrix: Surface Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 15:06	OP
Chromium	ND	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 15:06	OP
Copper	ND	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 15:06	OP
Nickel	0.15	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 15:06	OP
Zinc	ND	0.020	mg/L	1		SW-846 6010C	8/30/12	8/31/12 15:06	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW8 | Sampled: 8/29/2012 09:45

Sample ID: 12H1011-08

Sample Matrix: Surface Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	0.013	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:19	OP
Chromium	1.0	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:19	OP
Copper	0.66	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:19	OP
Nickel	0.81	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 18:19	OP
Zinc	0.17	0.020	mg/L	1		SW-846 6010C	8/30/12	9/4/12 16:43	OP
Hardness	130	3.0	mg/L	1		SM18-20 2340B	8/30/12	9/4/12 11:21	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SW8 | Sampled: 8/29/2012 09:45

Sample ID: 12H1011-08

Sample Matrix: Surface Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	ND	0.0040	mg/L	1		SW-846 6010C	8/30/12	8/31/12 15:12	OP
Chromium	ND	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 15:12	OP
Copper	ND	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 15:12	OP
Nickel	0.18	0.010	mg/L	1		SW-846 6010C	8/30/12	8/31/12 15:12	OP
Zinc	ND	0.020	mg/L	1		SW-846 6010C	8/30/12	8/31/12 15:12	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SO1F (32-34in) | Sampled: 8/29/2012 13:30

Sample ID: 12H1011-11

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	1.0	0.39	mg/Kg dry	1		SW-846 6010C	8/30/12	8/31/12 17:47	OP
Chromium	160	0.79	mg/Kg dry	1		SW-846 6010C	8/30/12	8/31/12 17:47	OP
Copper	120	0.79	mg/Kg dry	1		SW-846 6010C	8/30/12	8/31/12 17:47	OP
Nickel	130	0.79	mg/Kg dry	1		SW-846 6010C	8/30/12	8/31/12 17:47	OP
Zinc	69	1.6	mg/Kg dry	1		SW-846 6010C	8/30/12	8/31/12 17:47	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SO1F (32-34in) | Sampled: 8/29/2012 13:30

Sample ID: 12H1011-11

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	59.8		% Wt	1		SM 2540G	8/31/12	9/1/12 16:02	HGA

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SO1E (37-39in) | Sampled: 8/29/2012 11:15

Sample ID: 12H1011-12

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	0.43	0.38	mg/Kg dry	1		SW-846 6010C	8/30/12	8/31/12 17:51	OP
Chromium	70	0.77	mg/Kg dry	1		SW-846 6010C	8/30/12	8/31/12 17:51	OP
Copper	38	0.77	mg/Kg dry	1		SW-846 6010C	8/30/12	8/31/12 17:51	OP
Nickel	48	0.77	mg/Kg dry	1		SW-846 6010C	8/30/12	8/31/12 17:51	OP
Zinc	49	1.5	mg/Kg dry	1		SW-846 6010C	8/30/12	8/31/12 17:51	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SO1E (37-39in) | Sampled: 8/29/2012 11:15

Sample ID: 12H1011-12

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	64.4		% Wt	1		SM 2540G	8/31/12	9/1/12 16:02	HGA

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SO1A (37-39in) | Sampled: 8/29/2012 12:05

Sample ID: 12H1011-14

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Cadmium	6.1	0.44	mg/Kg dry	1		SW-846 6010C	8/30/12	8/31/12 18:23	OP
Chromium	160	0.87	mg/Kg dry	1		SW-846 6010C	8/30/12	8/31/12 18:23	OP
Copper	150	0.87	mg/Kg dry	1		SW-846 6010C	8/30/12	8/31/12 18:23	OP
Nickel	310	0.87	mg/Kg dry	1		SW-846 6010C	8/30/12	8/31/12 18:23	OP
Zinc	160	1.7	mg/Kg dry	1		SW-846 6010C	8/30/12	8/31/12 18:23	OP

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Project Location: Newburyport, MA | Sample Description: | Work Order: 12H1011

Date Received: 8/29/2012

Field Sample #: ARC-SO1A (37-39in) | Sampled: 8/29/2012 12:05

Sample ID: 12H1011-14

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	55.8		% Wt	1		SM 2540G	8/31/12	9/1/12 16:02	HGA

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
12H1011-11 [ARC-SO1F (32-34in)]	B058024	08/31/12
12H1011-12 [ARC-SO1E (37-39in)]	B058024	08/31/12
12H1011-14 [ARC-SO1A (37-39in)]	B058024	08/31/12

Prep Method: SW-846 3005A-SM18-20 2340B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12H1011-01 [ARC-SW1]	B057952	50.0	50.0	08/30/12
12H1011-02 [ARC-SW2]	B057952	50.0	50.0	08/30/12
12H1011-03 [ARC-SW3]	B057952	50.0	50.0	08/30/12
12H1011-04 [ARC-SW4]	B057952	50.0	50.0	08/30/12
12H1011-05 [ARC-SW5]	B057952	50.0	50.0	08/30/12
12H1011-06 [ARC-SW6]	B057952	50.0	50.0	08/30/12
12H1011-07 [ARC-SW7]	B057952	50.0	50.0	08/30/12
12H1011-08 [ARC-SW8]	B057952	50.0	50.0	08/30/12

Prep Method: SW-846 3050B-SW-846 6010C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
12H1011-11 [ARC-SO1F (32-34in)]	B057919	1.06	50.0	08/30/12
12H1011-12 [ARC-SO1E (37-39in)]	B057919	1.01	50.0	08/30/12
12H1011-14 [ARC-SO1A (37-39in)]	B057919	1.03	50.0	08/30/12

Prep Method: SW-846 3005A Dissolved-SW-846 6010C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12H1011-01 [ARC-SW1]	B057948	50.0	50.0	08/30/12
12H1011-02 [ARC-SW2]	B057948	50.0	50.0	08/30/12
12H1011-03 [ARC-SW3]	B057948	50.0	50.0	08/30/12
12H1011-04 [ARC-SW4]	B057948	50.0	50.0	08/30/12
12H1011-05 [ARC-SW5]	B057948	50.0	50.0	08/30/12
12H1011-06 [ARC-SW6]	B057948	50.0	50.0	08/30/12
12H1011-07 [ARC-SW7]	B057948	50.0	50.0	08/30/12
12H1011-08 [ARC-SW8]	B057948	50.0	50.0	08/30/12

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12H1011-01 [ARC-SW1]	B057951	50.0	50.0	08/30/12
12H1011-02 [ARC-SW2]	B057951	50.0	50.0	08/30/12
12H1011-03 [ARC-SW3]	B057951	50.0	50.0	08/30/12
12H1011-04 [ARC-SW4]	B057951	50.0	50.0	08/30/12
12H1011-05 [ARC-SW5]	B057951	50.0	50.0	08/30/12
12H1011-06 [ARC-SW6]	B057951	50.0	50.0	08/30/12
12H1011-07 [ARC-SW7]	B057951	50.0	50.0	08/30/12
12H1011-08 [ARC-SW8]	B057951	50.0	50.0	08/30/12

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Sample Extraction Data

SW-846 9014

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12H1011-01 [ARC-SW1]	B058234	50.0	50.0	09/05/12

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B057919 - SW-846 3050B										
Blank (B057919-BLK1)				Prepared: 08/30/12 Analyzed: 08/31/12						
Cadmium	ND	0.25	mg/Kg wet							
Chromium	ND	0.50	mg/Kg wet							
Copper	ND	0.50	mg/Kg wet							
Nickel	ND	0.50	mg/Kg wet							
Zinc	ND	1.0	mg/Kg wet							
LCS (B057919-BS1)				Prepared: 08/30/12 Analyzed: 08/31/12						
Cadmium	94.6	0.50	mg/Kg wet	103		91.9	83.6-115.5			
Chromium	112	0.99	mg/Kg wet	119		94.1	81.6-117.6			
Copper	117	0.99	mg/Kg wet	118		99.4	81.6-117.8			
Nickel	64.9	0.99	mg/Kg wet	70.0		92.7	81.7-118.1			
Zinc	238	2.0	mg/Kg wet	276		86.1	82.2-117.8			
LCS Dup (B057919-BSD1)				Prepared: 08/30/12 Analyzed: 08/31/12						
Cadmium	98.0	0.50	mg/Kg wet	103		95.1	83.6-115.5	3.47	30	
Chromium	116	0.99	mg/Kg wet	119		97.6	81.6-117.6	3.68	30	
Copper	121	0.99	mg/Kg wet	118		102	81.6-117.8	2.98	30	
Nickel	66.5	0.99	mg/Kg wet	70.0		95.0	81.7-118.1	2.51	30	
Zinc	235	2.0	mg/Kg wet	276		85.3	82.2-117.8	0.977	30	
Batch B057951 - SW-846 3005A										
Blank (B057951-BLK1)				Prepared: 08/30/12 Analyzed: 08/31/12						
Cadmium	ND	0.0040	mg/L							
Chromium	ND	0.010	mg/L							
Copper	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
Zinc	ND	0.020	mg/L							
LCS (B057951-BS1)				Prepared: 08/30/12 Analyzed: 08/31/12						
Cadmium	2.08	0.0040	mg/L	2.00		104	80-120			
Chromium	1.91	0.010	mg/L	2.00		95.5	80-120			
Copper	1.99	0.010	mg/L	2.00		99.3	80-120			
Nickel	1.99	0.010	mg/L	2.00		99.3	80-120			
Zinc	2.05	0.020	mg/L	2.00		103	80-120			
LCS Dup (B057951-BSD1)				Prepared: 08/30/12 Analyzed: 08/31/12						
Cadmium	2.12	0.0040	mg/L	2.00		106	80-120	2.27	20	
Chromium	1.95	0.010	mg/L	2.00		97.5	80-120	2.04	20	
Copper	2.05	0.010	mg/L	2.00		103	80-120	3.16	20	
Nickel	2.03	0.010	mg/L	2.00		101	80-120	2.00	20	
Zinc	2.09	0.020	mg/L	2.00		105	80-120	2.02	20	

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B057952 - SW-846 3005A										
Blank (B057952-BLK1)				Prepared: 08/30/12 Analyzed: 09/04/12						
Hardness	ND	3.0	mg/L							

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QUALITY CONTROL

Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B057948 - SW-846 3005A Dissolved										
Blank (B057948-BLK1)				Prepared: 08/30/12 Analyzed: 08/31/12						
Cadmium	ND	0.0040	mg/L							
Chromium	ND	0.010	mg/L							
Copper	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
Zinc	ND	0.020	mg/L							
LCS (B057948-BS1)				Prepared: 08/30/12 Analyzed: 08/31/12						
Cadmium	0.538	0.0040	mg/L	0.500		108	80-120			
Chromium	0.534	0.010	mg/L	0.500		107	80-120			
Copper	0.532	0.010	mg/L	0.500		106	80-120			
Nickel	0.541	0.010	mg/L	0.500		108	80-120			
Zinc	0.543	0.020	mg/L	0.500		109	80-120			
LCS Dup (B057948-BSD1)				Prepared: 08/30/12 Analyzed: 08/31/12						
Cadmium	0.515	0.0040	mg/L	0.500		103	80-120	4.45	20	
Chromium	0.510	0.010	mg/L	0.500		102	80-120	4.56	20	
Copper	0.510	0.010	mg/L	0.500		102	80-120	4.22	20	
Nickel	0.515	0.010	mg/L	0.500		103	80-120	5.05	20	
Zinc	0.522	0.020	mg/L	0.500		104	80-120	4.03	20	
Duplicate (B057948-DUP1)	**Source: 12H1011-01**			Prepared: 08/30/12 Analyzed: 08/31/12						
Cadmium	ND	0.0040	mg/L		ND			NC	20	
Chromium	ND	0.010	mg/L		0.0104			NC	20	
Copper	ND	0.010	mg/L		ND			NC	20	
Nickel	0.174	0.010	mg/L		0.179			2.74	20	
Zinc	0.0200	0.020	mg/L		0.0206			2.96	20	
Matrix Spike (B057948-MS1)	**Source: 12H1011-01**			Prepared: 08/30/12 Analyzed: 08/31/12						
Cadmium	0.565	0.0040	mg/L	0.500	ND	113	75-125			
Chromium	0.572	0.010	mg/L	0.500	0.0104	112	75-125			
Copper	0.583	0.010	mg/L	0.500	0.00797	115	75-125			
Nickel	0.734	0.010	mg/L	0.500	0.179	111	75-125			
Zinc	0.607	0.020	mg/L	0.500	0.0206	117	75-125			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B058234 - SW-846 9014										
Blank (B058234-BLK1)				Prepared & Analyzed: 09/05/12						
Cyanide	ND	0.010	mg/L							
LCS (B058234-BS1)				Prepared & Analyzed: 09/05/12						
Cyanide	0.70	0.010	mg/L	0.704		99.2	80-120			
LCS Dup (B058234-BSD1)				Prepared & Analyzed: 09/05/12						
Cyanide	0.68	0.010	mg/L	0.704		96.2	80-120	3.00	20	
Matrix Spike (B058234-MS1)	**Source: 12H1011-01**			Prepared & Analyzed: 09/05/12						
Cyanide	0.52	0.010	mg/L	0.348	0.17	103	75-125			
Matrix Spike Dup (B058234-MSD1)	**Source: 12H1011-01**			Prepared & Analyzed: 09/05/12						
Cyanide	0.51	0.010	mg/L	0.348	0.17	97.9	75-125	3.47	20	

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SM18-20 2340B in Water	
Hardness	CT,MA,NH,NY,RI
SW-846 6010C in Soil	
Cadmium	CT,NH,NY,ME,NC
Chromium	CT,NH,NY,ME,NC
Copper	CT,NH,NY,ME,NC
Nickel	CT,NH,NY,ME,NC
Zinc	CT,NH,NY,ME,NC
SW-846 6010C in Water	
Cadmium	CT,NH,NY,RI,ME,NC
Cadmium	CT,NH,NY,RI,ME,NC
Chromium	CT,NH,NY,RI,ME,NC
Chromium	CT,NH,NY,RI,ME,NC
Copper	CT,NH,NY,RI,ME,NC
Copper	CT,NH,NY,RI,ME,NC
Nickel	CT,NH,NY,RI,ME,NC
Nickel	CT,NH,NY,RI,ME,NC
Zinc	CT,NH,NY,RI,ME,NC
Zinc	CT,NH,NY,RI,ME,NC
SW-846 9014 in Water	
Cyanide	NY,CT,NH,RI,NC,ME

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2013
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2013
RI	Rhode Island Department of Health	LAO00112	12/30/2012
NC	North Carolina Div. of Water Quality	652	12/31/2012
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2013
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	1381	12/14/2012

CHAIN OF CUSTODY RECORD

con-test® ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com
39 Spruce Street
East longmeadow, MA 01028

Rev 04.05.12

12H1011

Company Name: ARCADIS
Address: 194 FORBES RD, BRAINTREE, MA
Attention: ALLEN WALKER
Project Location: NEWBURYPORT, MA
Sampled By: Tom Duffy

Telephone: 781-356-7300
Project #: * contact A. Walker
Client PO#:

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

DATA DELIVERY (check all that apply)
○ FAX ☒ EMAIL ☒ WEBSITE
Fax #:
Email: allen.walker@arcadis-us.com
Format: ☒ PDF ☒ EXCEL ○ GIS
○ OTHER _____
○ "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	# of Containers	** Preservation	*** Container Code	Metals (total/dissolved)	Hardness (total/dissolved)	Cyanide (total/dissolved)	Metals (soil)
								1	1	2	1			
								N/I	N	X	I			
								P	P	P	A			
01	ARC-SW1	8-29-12	1015		X	SW	U				X	X	X	
02	ARC-SW2		955		X	SW	U				X	X		
03	ARC-SW3		1005		X	SW	U				X	X		
04	ARC-SW4		935		X	SW	U				X	X		
05	ARC-SW5		950		X	SW	U				X	X		
06	ARC-SW6		925		X	SW	U				X	X		
07	ARC-SW7		915		X	SW	U				X	X		
08	ARC-SW8		945		X	SW	U				X	X		
09	ARC-SO1E (41-43")		1115		X	S	U							X
10	ARC-SO1A (41-43")		1205		X	S	U							X
11	ARC-SO1F (32-34")		1330		X	S	U							X

ANALYSIS REQUESTED

Dissolved Metals
○ Field Filtered
☒ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V=vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other _____

*Matrix Code:
GW = groundwater
WW = wastewater
DW = drinking water
A = air
S = soil/solid
SL = sludge
O = other _____

Comments: Dissolved cyanide sample was field filtered
- water samples are surface water
* Please hold dissolved cyanide for further instruction

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time:
Thomas Duffy	8/29/12 1447
Received by: (signature)	Date/Time:
Steve Malfas	1447 8.29.12
Relinquished by: (signature)	Date/Time:
Steve Malfas	1905 8.29.12
Received by: (signature)	Date/Time:
Kelly McGee 4.1C	8-29-12 19:05

Turnaround ††
☐ 7-Day
☐ 10-Day
☒ Other 5 DAY
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
Require lab approval

Detection Limit Requirements
Massachusetts: S1
Connecticut:
Other:

Is your project MCP or RCP ?
☒ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # _____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

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

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

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CHAIN OF CUSTODY RECORD

Rev 04.05.12

12H1011

Company Name: ARCADIS
Address: 194 FORBES RD
BRAINTREE, MA
Attention: ALLEN WALKER
Project Location: NEWBURYPORT, MA
Sampled By: Tom Duffy

Telephone: 781-356-7300
Project #
Client PO#

DATA DELIVERY (check all that apply)
○ FAX ☒ EMAIL ☒ WEBSITE
Fax #
Email: allen.walker@arcadis-us.com
Format: ☒ PDF ☒ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	Metals (soil)	# of Containers	** Preservation	***Container Code
12	*ARC-SO1E (37-39")	8-29-12	1115		X	S	U	X	1	I	A
13	ARC-SO1E (39-41")		1115		X	S	U	X	1	I	A
14	*ARC-SO1A (37-39")		1205		X	S	U	X	1	I	A
15	ARC-SO1A (39-41")		1205		X	S	U	X	1	I	A
16	ARC-SO1F (34-36")		1330		X	S	U	X	1	I	A
17	ARC-SO1F (36-38")		1330		X	S	U	X	1	I	A

ANALYSIS REQUESTED

Dissolved Metals
○ Field Filtered
☒ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other

*Matrix Code:
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL= sludge
O = other

Comments: Metals: Cd, Cr, Cu, Ni, Zn
* - Please run these first and hold other soil samples pending results (3 total)

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time:
	8/29/12 1447
Received by: (signature)	Date/Time:
Sgt Maffa 1447	8.29.12
Relinquished by: (signature)	Date/Time:
Sgt Maffa 1905	8.29.12
Received by: (signature)	Date/Time:
Kim McGee 4.1C	8-29-12 19:05

Turnaround ††
☐ 7-Day
☐ 10-Day
☒ Other 5 DAY
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
Require lab approval

Detection Limit Requirements
Massachusetts: S1
Connecticut:
Other:

Is your project MCP or RCP ?
☒ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # _____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

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

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East Longmeadow, MA. 01028
P: 413-525-2332
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Sample Receipt Checklist

CLIENT NAME: Arcadis RECEIVED BY: KKM DATE: 8-29-12

1) **Was the chain(s) of custody relinquished and signed?** (Yes) No No CoC Included

2) **Does the chain agree with the samples?** (Yes) No

If not, explain:

3) **Are all the samples in good condition?** (Yes) No

If not, explain:

4) **How were the samples received:**

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

Were the samples received in Temperature Compliance of (2-6°C)? (Yes) No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 4.1C

5) **Are there Dissolved samples for the lab to filter?** (SLD) (Yes) No

Who was notified ~~AED~~ Not Available Date ~~8-29-12~~ Time ~~19:15~~

6) **Are there any RUSH or SHORT HOLDING TIME samples?** Yes No

Who was notified AED Date 8-29-12 Time 19:15

7) **Location where samples are stored:** 19

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

8) **Do all samples have the proper Acid pH:** (Yes) No N/A _____

9) **Do all samples have the proper Base pH:** (Yes) No N/A _____

10) **Was the PC notified of any discrepancies with the CoC vs the samples:** Yes No (N/A)

Containers received at Con-Test

	# of containers			# of containers
1 Liter Amber			8 oz amber/clear jar	9
500 mL Amber			4 oz amber/clear jar	
250 mL Amber (8oz amber)			2 oz amber/clear jar	
1 Liter Plastic			Air Cassette	
500 mL Plastic			Hg/Hopcalite Tube	
250 mL plastic	18		Plastic Bag / Ziploc	
40 mL Vial - type listed below			PM 2.5 / PM 10	
Colisure / bacteria bottle			PUF Cartridge	
Dissolved Oxygen bottle			SOC Kit	
Encore			TO-17 Tubes	
Flashpoint bottle			Non-ConTest Container	
Perchlorate Kit			Other glass jar	
Other			Other	

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol _____

Bisulfate _____ # DI Water _____

Thiosulfate _____ Unpreserved _____

Time and Date Frozen:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 12H1011
Project Location: Newburyport, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

12H1011-01 thru 12H1011-14

Matrices: Soil Water

CAM Protocol (check all that below)

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB ( )	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 A ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A (X)	6860 Perchlorate CAM VIII B ( )	

Affirmative response to Questions A throughF is 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[1]
B	Were the analytical method(s) and all associated QC requirements specificed in the selected CAM protocol(s) followed?	☑ Yes	☐ No[1]
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[1]
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidlines for the Acquisition and Reporting of Analytical Data?	☑ Yes	☐ No[1]
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☐ Yes	☐ No[1]
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes	☐ No[1]
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Qestions A through E)?	☑ Yes	☐ No[1]

A response to questions G, H and I below is 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[1]

<u>Data User Note:</u> 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 perfomance standards specified in the CAM protocol(s) achieved?	☑ Yes	☐ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No[1]

[1] *All Negative responses must be addressed in an attached Environmental Laboratory case narrative.*

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.

Signature:  Position: Laboratory Manager

Printed Name: Daren J. Damboragian Date: 09/06/12