Charles Castelluccio Consulting LLC
62 Wescroft Road, Reading, Massachusetts 01867
978-505-1123 | charles.castelluccio@gmail.com

June 14, 2017

Ms. Shauna Little
USEPA
5 Post Office Square
Boston, Massachusetts 02109

RE: Notice of Intent – 2017 Remediation General Permit
YRC, Inc. Terminal, 95 Concord Street, North Reading, Massachusetts 01864

Dear Ms. Little,

On behalf of YRC, Inc., CCC Environmental Services LLC (CCC Environmental) is submitting the attached Notice of Intent (NOI) for a reapplication for coverage under the Massachusetts 2017 Remediation General Permit (RGP) for the groundwater treatment system located at the YRC (formerly known as Roadway Express) Terminal located at 95 Concord Street. The treated water is discharged into a storm water drainage system which ultimately discharges to the Ipswich River. CCC Environmental is the operator of the remediation system currently operating under the 2010 RGP under permit number MAG910195. The remediation is being conducted in accordance with the Massachusetts Contingency Plan under Release Tracking Number (RTN) 3-2363.

If you have any questions or concerns regarding this submittal, please contact me at 978.505.1123.

Sincerely,

Charles Castelluccio Consulting LLC.

Charles Castelluccio, LSP
Cc:
Ruben Byerley, YRC, Inc.
Massachusetts Department of Environmental Protection
Town of North Reading
Robert Zimmermann, Zimmermann Environmental

II. Suggested Format for the Remediation General Permit Notice of Intent (NOI)

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
YRC (Formerly Roadway Express) Terminal</td><td colspan="3">Site address: 95 Concord Street
Street:</td></tr>
<tr><td>City: North Reading</td><td>State: MA</td><td>Zip: 01864</td></tr>
<tr><td rowspan="4">2. Site owner
YRC Inc.

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Ruben Byerley</td></tr>
<tr><td colspan="2">Telephone: 913-344-3644</td><td>Email: ruben.byerley@yrcfreight.com</td></tr>
<tr><td colspan="3">Mailing address: 10990 Roe Avenue
Street:</td></tr>
<tr><td>City: Overland Park</td><td>State: KS</td><td>Zip: 66211</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
CCC Environmental Services LLC</td><td colspan="3">Contact Person: Charles Castelluccio</td></tr>
<tr><td colspan="2">Telephone: 978-505-1123</td><td>Email: charles.castelluccio@gmail.com</td></tr>
<tr><td colspan="3">Mailing address:
Street: 62 Wescroft Road</td></tr>
<tr><td>City: Reading</td><td>State: MA</td><td>Zip: 01867</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:
MAG910000

NPDES permit is (check all that apply: ■ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="3">5. Other regulatory program(s) that apply to the site (check all that apply):
■ MA Chapter 21e; list RTN(s):
RTN 3-2363
☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:
☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Ipswich River	Source to Salem Beverly	Class B

Receiving water is (check any that apply): ☐ Outstanding Resource Water ☐ Ocean Sanctuary ☐ territorial sea ☐ Wild and Scenic River

2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): ■ Yes ☐ No

Are sensitive receptors present near the site? (check one): ☐ Yes ■ No
If yes, specify:

3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. Yes. Low flow alteration, mercury in fish tissue, and dissolved oxygen

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	1.06
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	12.9

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ■ Yes ☐ No
If yes, indicate date confirmation received: 6/29/17

7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ■ Yes ☐ No

C. Source water information:

1. Source water(s) is (check any that apply):

■ Contaminated groundwater Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ■ Yes ☐ No	☐ Contaminated surface water Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☐ Yes ☐ No	☐ The receiving water ☐ A surface water other than the receiving water; if so, indicate waterbody:	☐ Potable water; if so, indicate municipality or origin: ☐ Other; if so, specify:

2. Source water contaminants:	
a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): ☐ Yes ■ No If yes, indicate the contaminant(s) and the maximum concentration present in accordance with the instructions in Appendix VIII.	b. For a source water that is a surface water other than the receiving water, potable water or other, indicate any contaminants present at the maximum concentration in accordance with the instructions in Appendix VIII? (check one): ☐ Yes ☐ No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ■ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ■ Existing discharge ☐ New discharge ☐ New source	
Outfall(s): Storm water catch basin	Outfall location(s): (Latitude, Longitude) 42 33' 30"N 71 07' 58"W
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: Water discharges to an on-site storm water catch basin which discharges to the Ipswich River via an unnamed stream/brook ■ A private storm sewer system ☐ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ■ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ■ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission: Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ■ No	
Provide the expected start and end dates of discharge(s) (month/year): 6/2017 to 4/2022 Indicate if the discharge is expected to occur over a duration of: ☐ less than 12 months ■ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

<table>
<tr><td>2. Activity Category: (check all that apply)</td><td colspan="2">3. Contamination Type Category: (check all that apply)</td></tr>
<tr><td rowspan="4">☐ I – Petroleum-Related Site Remediation
■ II – Non-Petroleum-Related Site Remediation
☐ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

☐ A. Inorganics
☐ B. Non-Halogenated Volatile Organic Compounds
■ C. Halogenated Volatile Organic Compounds
☐ D. Non-Halogenated Semi-Volatile Organic Compounds
☐ E. Halogenated Semi-Volatile Organic Compounds
☐ F. Fuels Parameters</td></tr>
<tr><td colspan="2">b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)</td></tr>
<tr><td>☐ G. Sites with Known Contamination</td><td>☐ H. Sites with Unknown Contamination</td></tr>
<tr><td>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)

☐ A. Inorganics
☐ B. Non-Halogenated Volatile Organic Compounds
☐ C. Halogenated Volatile Organic Compounds
☐ D. Non-Halogenated Semi-Volatile Organic Compounds
☐ E. Halogenated Semi-Volatile Organic Compounds
☐ F. Fuels Parameters</td><td>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</td></tr>
</table>

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia	✓		1	SM4500-N	1000	<1000	0	Report mg/L	---
Chloride		✓	6	E300	10000	420000	385000	Report µg/l	---
Total Residual Chlorine	✓		1	M4500-Cl	100	<100	0	0.2 mg/L	213
Total Suspended Solids		✓	1	SM2540D	4000	4	4	30 mg/L	---
Antimony	✓		1	200.8	20	<20	0	206 µg/L	12418
Arsenic	✓		1	E200.9_As	2.0	<2	0	104 µg/L	194
Cadmium	✓		1	200.8	4.0	<4	0	10.2 µg/L	4.6354
Chromium III	✓		1	7196A	10	<10	0	323 µg/L	1456.9
Chromium VI	✓		1	M3500-Cr	10	<10	0	323 µg/L	221.9
Copper	✓		1	200.8	25	<25	0	242 µg/L	156.8
Iron	✓		1	E200.7	100	<100	0	5,000 µg/L	19403
Lead	✓		1	E200.9_Pb	2.0	<2	0	160 µg/L	49.83
Mercury	✓		1	E245.1	0.20	<0.2	0	0.739 µg/L	17.58
Nickel	✓		1	E200.7	40	<40	0	1,450 µg/L	877.8
Selenium	✓		1	E200.9_Se	5	<5	0	235.8 µg/L	97.0
Silver	✓		1	200.8	7	<7	0	35.1 µg/L	55.0
Zinc		✓	1	E200.7	20	23	23	420 µg/L	2914.0
Cyanide	✓		1	SM4500-C	10	<10	0	178 mg/L	100.9
B. Non-Halogenated VOCs									
Total BTEX	✓					0		100 µg/L	---
Benzene	✓					0		5.0 µg/L	---
1,4 Dioxane	✓					0		200 µg/L	---
Acetone	✓					0		7.97 mg/L	---
Phenol	✓					0		1,080 µg/L	5821

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✓		6	SW8260C	2.0	<2	0	4.4 µg/L	31.0
1,2 Dichlorobenzene		✓	6	SW8260C	2.0	<2	0	600 µg/L	---
1,3 Dichlorobenzene		✓	6	SW8260C	2.0	<2	0	320 µg/L	---
1,4 Dichlorobenzene		✓	6	SW8260C	2.0	<2	0	5.0 µg/L	---
Total dichlorobenzene		✓	6	SW8260C	2.0	<2	0	763 µg/L in NH	---
1,1 Dichloroethane		✓	6	SW8260C	2.0	<2	0	70 µg/L	---
1,2 Dichloroethane	✓		6	SW8260C	2.0	<2	0	5.0 µg/L	---
1,1 Dichloroethylene		✓	6	SW8260C	1.0	<1	0	3.2 µg/L	---
Ethylene Dibromide	✓		6	SW8260C	0.05	<0.05	0	0.05 µg/L	---
Methylene Chloride	✓		6	SW8260C	5.0	<5	0	4.6 µg/L	---
1,1,1 Trichloroethane		✓	6	SW8260C	2.0	<2	0	200 µg/L	---
1,1,2 Trichloroethane	✓		6	SW8260C	2.0	<2	0	5.0 µg/L	---
Trichloroethylene		✓	6	SW8260C	2.0	7.7	7.2	5.0 µg/L	---
Tetrachloroethylene		✓	6	SW8260C	2.0	150	93.7	5.0 µg/L	64.0
cis-1,2 Dichloroethylene		✓	6	SW8260C	2.0	<2	0	70 µg/L	---
Vinyl Chloride	✓		6	SW8260C	2.0	<2	0	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✓							190 µg/L	
Diethylhexyl phthalate	✓							101 µg/L	
Total Group I PAHs	✓							1.0 µg/L	---
Benzo(a)anthracene	✓							As Total PAHs	
Benzo(a)pyrene	✓								
Benzo(b)fluoranthene	✓								
Benzo(k)fluoranthene	✓								
Chrysene	✓								
Dibenzo(a,h)anthracene	✓								
Indeno(1,2,3-cd)pyrene	✓								

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs	✓							100 µg/L	---
Naphthalene	✓							20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✓							0.000064 µg/L	---
Pentachlorophenol	✓							1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✓							5.0 mg/L	---
Ethanol	✓							Report mg/L	---
Methyl-tert-Butyl Ether	✓							70 µg/L	
tert-Butyl Alcohol	✓							120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✓							90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
1,2,3-trichlorobenzene		✓	6	SW8260B	2.0	7	4.7		
1,2,4-trichlorobenzene		✓	6	SW8260B	2.0	3	2.2		
chlorobenzene		✓	6	SW8260B	1.0	0	0		
pH		✓	6	SM4500-H		6.9	6.7		
temperature		✓	1			13.3	13.3		
hardness		✓	1	E200.7	17	370	370		

E. Treatment system information

1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply)

☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ■ Air Stripping ☐ Granulated Activated Carbon ("GAC")/Liquid Phase Carbon Adsorption
☐ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ☐ Separation/Filtration ☐ Other; if so, specify:

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.

Groundwater is extracted from up to four on-site extraction wells and conveyed to the groundwater remediation system for treatment. Treatment includes air stripping, venting of low level vapors and discharge of treated groundwater to the storm water basin.

Identify each major treatment component (check any that apply):
☐ Fractionation tanks☐ Equalization tank ☐ Oil/water separator ☐ Mechanical filter ☐ Media filter
☐ Chemical feed tank ■ Air stripping unit ☐ Bag filter ☐ Other; if so, specify:

Indicate if either of the following will occur (check any that apply):
☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: size of piping and transfer pump Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	40
Provide the proposed maximum effluent flow in gpm.	40
Provide the average effluent flow in gpm.	30
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	NA

4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): ■ Yes ☐ No

F. Chemical and additive information

1. Indicate the type(s) of chemical or additive that will be applied to effluent prior to discharge or that may otherwise be present in the discharge(s): (check all that apply)

☐ Algaecides/biocides ☐ Antifoams ☐ Coagulants ☐ Corrosion/scale inhibitors ☐ Disinfectants ☐ Flocculants ☐ Neutralizing agents ☐ Oxidants ☐ Oxygen ☐ scavengers ☐ pH conditioners ☐ Bioremedial agents, including microbes ☐ Chlorine or chemicals containing chlorine ☐ Other; if so, specify:
NA

2. Provide the following information for each chemical/additive, using attachments, if necessary:
NA
a. Product name, chemical formula, and manufacturer of the chemical/additive;
b. Purpose or use of the chemical/additive or remedial agent;
c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;
d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive;
e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and
f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).

3. Has the operator attached an explanation which demonstrates that the addition of such chemicals/additives may be authorized under this general permit in accordance with the instructions in F, above? (check one): ☐ Yes ☐ No; if no, has the operator attached data that demonstrates each of the 126 priority pollutants in CWA Section 307(a) and 40 CFR Part 423.15(j)(1) are non-detect in discharges with the addition of the proposed chemical/additive?
(check one): ☐ Yes ☐ No

G. Endangered Species Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

☐ **FWS Criterion A**: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the "action area".

☐ **FWS Criterion B**: Formal or informal consultation with the FWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by FWS on a finding that the discharges and related activities are "not likely to adversely affect" listed species or critical habitat (informal consultation). Has the operator completed consultation with FWS? (check one): ☐ Yes ☐ No; if no, is consultation underway? (check one): ☐ Yes ☐ No

■ **FWS Criterion C**: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have "no effect" on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the FWS. This determination was made by: (check one) ■ the operator ☐ EPA ☐ Other; if so, specify:

☐ **NMFS Criterion**: A determination made by EPA is affirmed by the operator that the discharges and related activities will have "no effect" or are "not likely to adversely affect" any federally threatened or endangered listed species or critical habitat under the jurisdiction of NMFS and will not result in any take of listed species. Has the operator previously completed consultation with NMFS? (check one): ☐ Yes ☐ No

2. Has the operator attached supporting documentation of ESA eligibility in accordance with the instructions in Appendix I, and G, above? (check one): ■ Yes ☐ No

Does the supporting documentation include any written concurrence or finding provided by the Services? (check one): ☐ Yes ■ No; if yes, attach.

H. National Historic Preservation Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

■ **Criterion A**: No historic properties are present. The discharges and discharge-related activities (e.g., BMPs) do not have the potential to cause effects on historic properties.

☐ **Criterion B**: Historic properties are present. Discharges and discharge related activities do not have the potential to cause effects on historic properties.

☐ **Criterion C**: Historic properties are present. The discharges and discharge-related activities have the potential to have an effect or will have an adverse effect on historic properties.

2. Has the operator attached supporting documentation of NHPA eligibility in accordance with the instructions in H, above? (check one): ■ Yes ☐ No

Does the supporting documentation include any written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (TPHO), or other tribal representative that outlines measures the operator will carry out to mitigate or prevent any adverse effects on historic properties? (check one): ☐ Yes ■ No

I. Supplemental information

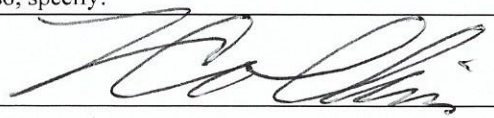
Describe any supplemental information being provided with the NOI. Include attachments if required or otherwise necessary.

Has the operator attached data, including any laboratory case narrative and chain of custody used to support the application? (check one): ■ Yes ☐ No

Has the operator attached the certification requirement for the Best Management Practices Plan (BMPP)? (check one): ■ Yes ☐ No

J. Certification requirement

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 gathered and evaluated 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, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

BMPP certification statement:	A BMPP has been developed, implemented, and maintained for the discharges covered under the previous permit for this site and have been updated for this general permit.
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐ NA ☐
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ■ No ☐ NA ☐
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ☐ NA ■
Signature: 	Date: June 13, 2017
Print Name and Title: Lance Collins, Director - Properties	

ATTACHMENT A

Site Location Map

0 500

SCALE IN FEET

N

SOURCE: MASSGIS ONLINE MAPPING TOOL OLIVER

APPROXIMATE SITE COORDINATES:
LAT: 42° 33' 33" N
LONG: 71° 07' 59" W

NOI LOCATION MAP

YRC FREIGHT INC.
95 CONCORD STREET
NORTH READING, MASSACHUSETTS
RTN 3-2363

CCC ENVIRONMENTAL SERVICES, LLC

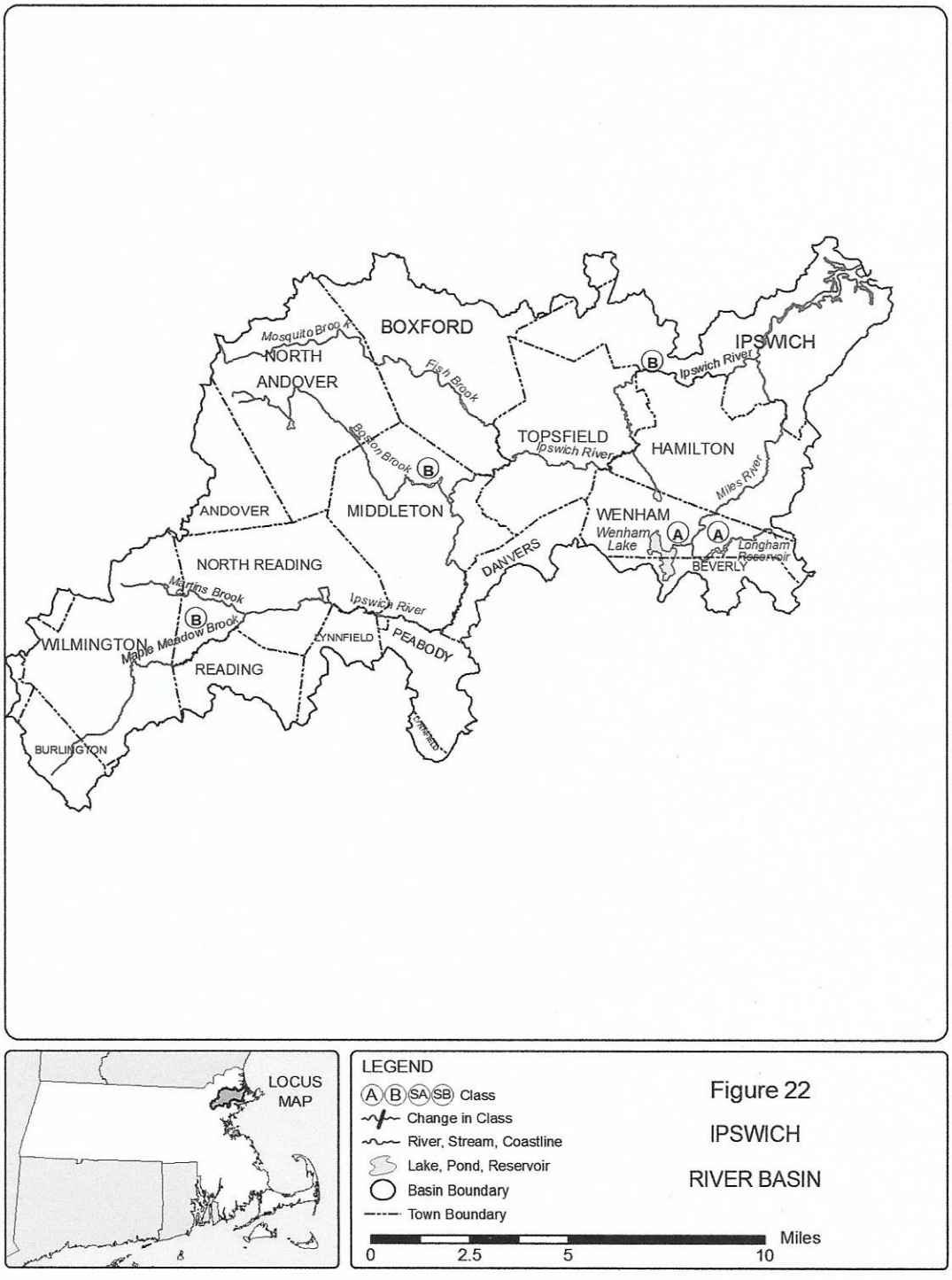
FIGURE 1

C:\Users\Doreen Local\Documents\Charles Castelluccio\YRC North Reading\YRC North Reading NOI Location.dwg, Tab: 1, Plotted: Apr 21, 2017

ATTACHMENT B

Impaired Water

4.06: continued



4.06: continued

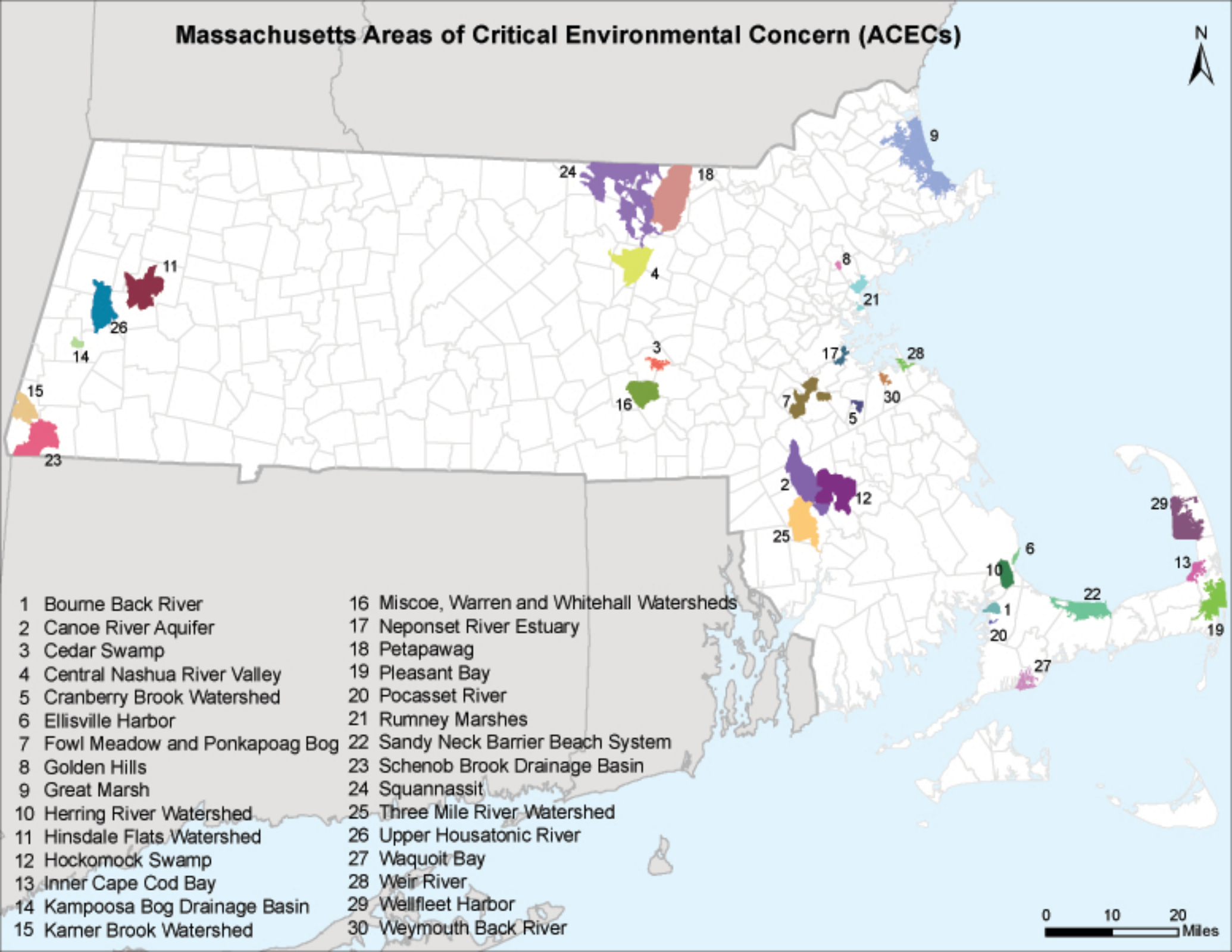
TABLE 22
IPSWICH RIVER BASIN

BOUNDARY	MILE POINT	CLASS	QUALIFIERS
Ipswich River			
Source to Salem Beverly Waterway Canal	41.1 - 16.4	B	Treated Water Supply Warm Water High Quality Water
Salem Beverly Waterway Canal to tidal portion	16.4 - 4.5	B	Warm Water High Quality Water
Tidal portion and tributaries thereto	4.5 - 0.0	SA	Shellfishing
Middleton Pond			
Source to outlet in Middleton and those tributaries thereto	-	A	Public Water Supply
Swan Pond			
Source to outlet in North Reading and those tributaries thereto	-	A	Public Water Supply
Mill Pond Reservoir			
Source to outlet in Burlington and those tributaries thereto	-	A	Public Water Supply
Longham Reservoir			
Source to outlet in Wenham and those tributaries thereto	-	A	Public Water Supply
Wenham Lake			
Source to outlet in Wenham and those tributaries thereto	-	A	Public Water Supply
Putnamville Reservoir			
Source to outlet in Danvers and those tributaries thereto	-	A	Public Water Supply
Suntaug Lake			
Source to outlet in Lynn and Peabody and those tributaries thereto	-	A	Public Water Supply
Winona Pond			
Pond to outlet in Peabody and those tributaries thereto	-	A	Public Water Supply

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Howlett Brook	MA92-17	Headwaters north of Great Hill, Topsfield to confluence with Ipswich River, Topsfield.	2.796	MILES	Fecal Coliform	
					Fishes Bioassessments	
Ipswich River	MA92-02	Ipswich Dam (formerly known as Sylvania Dam), Ipswich to mouth at Ipswich Bay, Ipswich.	0.411	SQUARE MILES	Fecal Coliform	
Ipswich River	MA92-06	Source at confluence of Maple Meadow Brook and Lubbers Brook, Wilmington, to Salem Beverly Waterway Canal, Topsfield.	20.415	MILES	(Low flow alterations*)	
					Mercury in Fish Tissue	
					Oxygen, Dissolved	
Ipswich River	MA92-15	Salem Beverly Waterway Canal, Topsfield to Ipswich Dam (formerly known as Sylvania Dam), Ipswich.	10.977	MILES	(Low flow alterations*)	
					Fishes Bioassessments	
					Mercury in Fish Tissue	
					Oxygen, Dissolved	
Kimball Brook	MA92-21	Headwaters, west of Scott Hill, Ipswich to confluence with Ipswich River, Ipswich.	2.241	MILES	Fecal Coliform	
					Oxygen, Dissolved	
Labor In Vain Creek	MA92-22	South of Argilla Road, Ipswich to confluence with Ipswich River Estuary, Ipswich.	0.03	SQUARE MILES	Fecal Coliform	
					Oxygen, Dissolved	
Lowe Pond	MA92034	Boxford	35.761	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
Martins Brook	MA92-08	Outlet of Martins Pond, North Reading to the confluence with the Ipswich River, North Reading.	4.561	MILES	Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	
					Fishes Bioassessments	
					Oxygen, Dissolved	
Martins Pond	MA92038	North Reading	89.012	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
					Mercury in Fish Tissue	33880
					Turbidity	
Miles River	MA92-03	Outlet Longham Reservoir, Beverly to confluence with Ipswich River, Ipswich.	8.892	MILES	Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	
					Oxygen, Dissolved	
Norris Brook	MA92-11	Outlet of Elginwood Pond, Peabody to confluence with Ipswich River, Danvers (Danvers/Middleton town line).	1.541	MILES	Oxygen, Dissolved	
					Total Suspended Solids (TSS)	
					Turbidity	
Pleasant Pond	MA92049	(Idlewood Lake) Wenham/Hamilton	26.551	ACRES	Mercury in Fish Tissue	
Salem Pond	MA92057	North Andover/Andover	14.681	ACRES	Turbidity	
Silver Lake	MA92059	Wilmington	29.874	ACRES	DDT	
					Mercury in Fish Tissue	33880

Massachusetts Areas of Critical Environmental Concern (ACECs)



1 Bourne Back River
2 Canoe River Aquifer
3 Cedar Swamp
4 Central Nashua River Valley
5 Cranberry Brook Watershed
6 Ellisville Harbor
7 Fowl Meadow and Ponkapoag Bog
8 Golden Hills
9 Great Marsh
10 Herring River Watershed
11 Hinsdale Flats Watershed
12 Hockomock Swamp
13 Inner Cape Cod Bay
14 Kampoosa Bog Drainage Basin
15 Karner Brook Watershed
16 Miscoe, Warren and Whitehall Watersheds
17 Neponset River Estuary
18 Petapawag
19 Pleasant Bay
20 Pocasset River
21 Rumney Marshes
22 Sandy Neck Barrier Beach System
23 Schenob Brook Drainage Basin
24 Squannassit
25 Three Mile River Watershed
26 Upper Housatonic River
27 Waquoit Bay
28 Weir River
29 Wellfleet Harbor
30 Weymouth Back River

MASSACHUSETTS AREAS OF CRITICAL ENVIRONMENTAL CONCERN
November 2010

Total Approximate Acreage: 268,000 acres
Approximate acreage and designation date follow ACEC names below.

Bourne Back River
(1,850 acres, 1989) Bourne

Canoe River Aquifer and Associated Areas (17,200 acres, 1991) Easton, Foxborough, Mansfield, Norton, Sharon, and Taunton

Cedar Swamp
(1,650 acres, 1975) Hopkinton and Westborough

Central Nashua River Valley
(12,900 acres, 1996) Bolton, Harvard, Lancaster, and Leominster

Cranberry Brook Watershed
(1,050 acres, 1983) Braintree and Holbrook

Ellisville Harbor
(600 acres, 1980) Plymouth

Fowl Meadow and Ponkapoag Bog
(8,350 acres, 1992) Boston, Canton, Dedham, Milton, Norwood, Randolph, Sharon, and Westwood

Golden Hills
(500 acres, 1987) Melrose, Saugus, and Wakefield

Great Marsh (originally designated as Parker River/Essex Bay)
(25,500 acres, 1979) Essex, Gloucester, Ipswich, Newbury, and Rowley

Herring River Watershed
(4,450 acres, 1991) Bourne and Plymouth

Hinsdale Flats Watershed
(14,500 acres, 1992) Dalton, Hinsdale, Peru, and Washington

Hockomock Swamp
(16,950 acres, 1990) Bridgewater, Easton, Norton, Raynham, Taunton, and West Bridgewater

Inner Cape Cod Bay
(2,600 acres, 1985) Brewster, Eastham, and Orleans

Kampoosa Bog Drainage Basin
(1,350 acres, 1995) Lee and Stockbridge

Karner Brook Watershed
(7,000 acres, 1992) Egremont and Mount Washington

Miscoe, Warren, and Whitehall Watersheds
(8,700 acres, 2000) Grafton, Hopkinton, and Upton

Neponset River Estuary
(1,300 acres, 1995) Boston, Milton, and Quincy

Petapawag
(25,680 acres, 2002) Ayer, Dunstable, Groton, Pepperell, and Tyngsborough

Pleasant Bay
(9,240 acres, 1987) Brewster, Chatham, Harwich, and Orleans

Pocasset River
(160 acres, 1980) Bourne

Rumney Marshes
(2,800 acres, 1988) Boston, Lynn, Revere, Saugus, and Winthrop

Sandy Neck Barrier Beach System
(9,130 acres, 1978) Barnstable and Sandwich

Schenob Brook Drainage Basin
(13,750 acres, 1990) Mount Washington and Sheffield

Squannassit
(37,420 acres, 2002) Ashby, Ayer, Groton, Harvard, Lancaster, Lunenburg, Pepperell, Shirley, and Townsend

Three Mile River Watershed
(14,280 acres, 2008) Dighton, Norton, Taunton

Upper Housatonic River
(12,280 acres, 2009) Lee, Lenox, Pittsfield, Washington

Waquoit Bay
(2,580 acres, 1979) Falmouth and Mashpee

Weir River
(950 acres, 1986) Cohasset, Hingham, and Hull

Wellfleet Harbor
(12,480 acres, 1989) Eastham, Truro, and Wellfleet

Weymouth Back River
(800 acres, 1982) Hingham and Weymouth

ACEC acreages above are based on MassGIS calculations and may differ from numbers originally presented in designation documents and other ACEC publications due to improvements in accuracy of GIS data and boundary clarifications. Listed acreages have been rounded to the nearest 50 or 10 depending on whether boundary clarification has occurred. For more information please see, http://www.mass.gov/dcr/stewardship/acec/aboutMaps.htm.

Towns with ACECs within their Boundaries November 2010

TOWN	ACEC
Ashby	Squannassit
Ayer	Petapawag
	Squannassit
Barnstable	Sandy Neck Barrier Beach System
Bolton	Central Nashua River Valley
Boston	Rumney Marshes
	Fowl Meadow and Ponkapoag Bog
	Neponset River Estuary
Bourne	Pocasset River
	Bourne Back River
	Herring River Watershed
Braintree	Cranberry Brook Watershed
Brewster	Pleasant Bay
	Inner Cape Cod Bay
Bridgewater	Hockomock Swamp
Canton	Fowl Meadow and Ponkapoag Bog
Chatham	Pleasant Bay
Cohasset	Weir River
Dalton	Hinsdale Flats Watershed
Dedham	Fowl Meadow and Ponkapoag Bog
Dighton	Three Mile River Watershed
Dunstable	Petapawag
Eastham	Inner Cape Cod Bay
	Wellfleet Harbor
Easton	Canoe River Aquifer
	Hockomock Swamp
Egremont	Karner Brook Watershed
Essex	Great Marsh
Falmouth	Waquoit Bay
Foxborough	Canoe River Aquifer
Gloucester	Great Marsh
Grafton	Miscoe-Warren-Whitehall Watersheds
Groton	Petapawag
	Squannassit
Harvard	Central Nashua River Valley
	Squannassit
Harwich	Pleasant Bay
Hingham	Weir River
	Weymouth Back River
Hinsdale	Hinsdale Flats Watershed
Holbrook	Cranberry Brook Watershed
Hopkinton	Miscoe-Warren-Whitehall Watersheds
	Cedar Swamp
Hull	Weir River
Ipswich	Great Marsh
Lancaster	Central Nashua River Valley
	Squannassit
Lee	Kampoosa Bog Drainage Basin
	Upper Housatonic River
Lenox	Upper Housatonic River
Leominster	Central Nashua River Valley
Lunenburg	Squannassit
Lynn	Rumney Marshes
Mansfield	Canoe River Aquifer
Mashpee	Waquoit Bay
Melrose	Golden Hills
Milton	Fowl Meadow and Ponkapoag Bog
	Neponset River Estuary
Mt. Washington	Karner Brook Watershed
	Schenob Brook
Newbury	Great Marsh
Norton	Hockomock Swamp
	Canoe River Aquifer
	Three Mile River Watershed
Norwood	Fowl Meadow and Ponkapoag Bog
Orleans	Inner Cape Cod Bay
	Pleasant Bay
Pepperell	Petapawag
	Squannassit
Peru	Hinsdale Flats Watershed
Pittsfield	Upper Housatonic River
Plymouth	Herring River Watershed
	Ellisville Harbor
Quincy	Neponset River Estuary
Randolph	Fowl Meadow and Ponkapoag Bog
Raynham	Hockomock Swamp
Revere	Rumney Marshes
Rowley	Great Marsh
Sandwich	Sandy Neck Barrier Beach System
Saugus	Rumney Marshes
	Golden Hills
Sharon	Canoe River Aquifer
	Fowl Meadow and Ponkapoag Bog
Sheffield	Schenob Brook
Shirley	Squannassit
Stockbridge	Kampoosa Bog Drainage Basin
Taunton	Hockomock Swamp
	Canoe River Aquifer
	Three Mile River Watershed
Truro	Wellfleet Harbor
Townsend	Squannassit
Tyngsborough	Petapawag
Upton	Miscoe-Warren-Whitehall Watersheds
Wakefield	Golden Hills
Washington	Hinsdale Flats Watershed
	Upper Housatonic River
Wellfleet	Wellfleet Harbor
W Bridgewater	Hockomock Swamp
Westborough	Cedar Swamp
Westwood	Fowl Meadow and Ponkapoag Bog
Weymouth	Weymouth Back River
Winthrop	Rumney Marshes

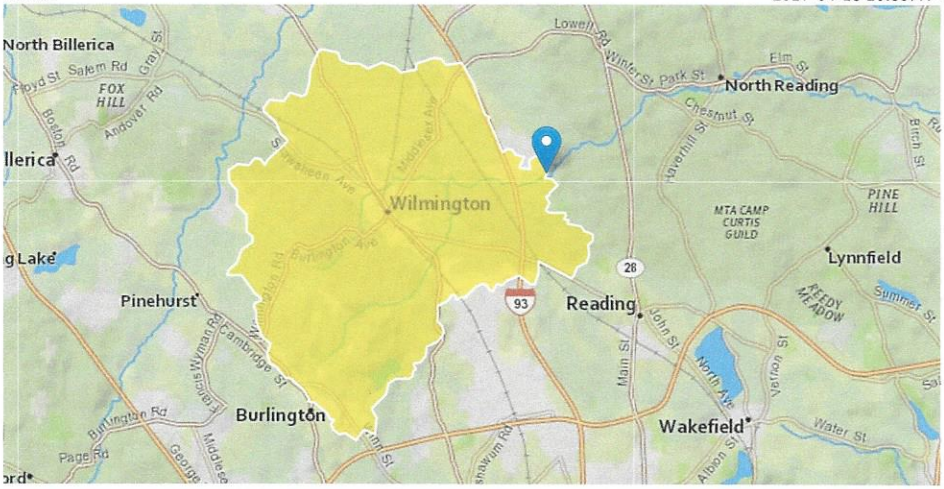
.

ATTACHMENT C

Streamstats Report for 7Q10 Flow and Dilution Factor Calculation

StreamStats Report

Region ID: MA
Workspace ID: MA20170413083920941000
Clicked Point (Latitude, Longitude): 42.55471, -71.12851
Time: 2017-04-13 10:39:47 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	16.8	square miles
DRFTPERSTR	Area of stratified drift per unit of stream length	0.47	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless
BSLDEM250	Mean basin slope computed from 1:250K DEM	0.895	percent

Low-Flow Statistics Parameters [100 Percent (16.8 square miles) Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	16.8	square miles	1.61	149
DRFTPERSTR	Stratified Drift per Stream Length	0.47	square mile per mile	0	1.29
BSLDEM250	Mean Basin Slope from 250K DEM	0.895	percent	0.32	24.6
MAREGION	Massachusetts Region	0	dimensionless	0	1

Low-Flow Statistics Flow Report [100 Percent (16.8 square miles) Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit	Average standard error (of either estimate or prediction)	Lower Prediction Interval	Upper Prediction Interval
7 Day 2 Year Low Flow	2.51	ft^3/s	49.5	0.681	8.93
7 Day 10 Year Low Flow	1.06	ft^3/s	70.8	0.232	4.48

Low-Flow Statistics Citations

Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (http://pubs.usgs.gov/wri/wri004135/)

Enter number values in green boxes below

Enter values in the units specified

↓

1.06	Q_R = Enter upstream flow in **MGD**
0.0576	Q_P = Enter discharge flow in **MGD**
0	Downstream 7Q10

Enter a dilution factor, if other than zero

↓

12.9

Enter values in the units specified

↓

370	C_d = Enter influent hardness in **mg/L** $CaCO_3$
69	C_s = Enter receiving water hardness in **mg/L** $CaCO_3$

Enter **receiving water** concentrations in the units specified

↓

6.05	pH in **Standard Units**
12.7	Temperature in **^oC**
0.1	Ammonia in **mg/L**
69	Hardness in **mg/L** $CaCO_3$
0	Salinity in **ppt**
0	Antimony in **µg/L**
0	Arsenic in **µg/L**
0	Cadmium in **µg/L**
0	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
0	Copper in **µg/L**
0	Iron in **µg/L**
0	Lead in **µg/L**
0	Mercury in **µg/L**
0	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
0.1	Zinc in **µg/L**

Enter **influent** concentrations in the units specified

↓

0	TRC in **µg/L**
0	Ammonia in **mg/L**
0	Antimony in **µg/L**
0	Arsenic in **µg/L**
0	Cadmium in **µg/L**
0	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
0	Copper in **µg/L**
0	Iron in **µg/L**
0	Lead in **µg/L**
0	Mercury in **µg/L**
0	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
23	Zinc in **µg/L**
0	Cyanide in **µg/L**
0	Phenol in **µg/L**
0	Carbon Tetrachloride in **µg/L**
96	Tetrachloroethylene in **µg/L**
0	Total Phthalates in **µg/L**
0	Diethylhexylphthalate in **µg/L**
0	Benzo(a)anthracene in **µg/L**
0	Benzo(a)pyrene in **µg/L**
0	Benzo(b)fluoranthene in **µg/L**
0	Benzo(k)fluoranthene in **µg/L**
0	Chrysene in **µg/L**
0	Dibenzo(a,h)anthracene in **µg/L**
0	Indeno(1,2,3-cd)pyrene in **µg/L**
0	Methyl-tert butyl ether in **µg/L**

Notes:

Freshwater: critical low flow equal to the 7Q10; enter alternate low flow if approved by the State
Saltwater (estuarine and marine): enter critical low flow if approved by the State; enter 0 if no entry
Discharge flow is equal to the design flow or 1 MGD, whichever is less
Optional entry for Q_r; leave 0 if no entry

Saltwater (estuarine and marine): only if approved by the State
Leave 0 if no entry

pH, temperature, and ammonia required for all discharges
Hardness required for freshwater
Salinity required for saltwater (estuarine and marine)
Metals required for all discharges if present and if dilution factor is > 1
Enter 0 if non-detect or testing not required

if >1 sample, enter maximum
if >10 samples, may enter 95th percentile
Enter 0 if non-detect or testing not required

I. Dilution Factor Calculation Method

A. 7Q10

Refer to Appendix V for determining critical low flow; must be approved by State before use in calculations.

B. Dilution Factor

Calculated as follows:

$$Df = \frac{Q_R + Q_P}{Q_P}$$

Q_R = 7Q10 in MGD

Q_P = Discharge flow, in MGD

II. Effluent Limitation Calculation Method

A. Calculate Water Quality Criterion:

Step 1. Downstream hardness, calculated as follows:

$$C_r = \frac{Q_d C_d + Q_s C_s}{Q_r}$$

C_r = Downstream hardness in mg/L

Q_d = Discharge flow in MGD

C_d = Discharge hardness in mg/L

Q_s = Upstream flow (7Q10) in MGD

C_s = Upstream (receiving water) hardness in mg/L

Q_r = Downstream receiving water flow in MGD

Step 2. Total recoverable water quality criteria for hardness-dependent metals, calculated as follows:

Total Recoverable Criteria = $\exp\{m_c [\ln(h)] + b_c\}$

m_c = Pollutant-specific coefficient (m_a for silver)

b_c = Pollutant-specific coefficient (b_a for silver)

ln = Natural logarithm

h = Hardness calculated in Step 1

Step 3. Total recoverable water quality criteria for non-hardness-dependent metals, calculated as follows:

$$\text{WQC in µg/L} = \frac{\text{dissolved WQC in µg/L}}{\text{dissolved to total recoverable factor}}$$

B. Calculate WQBEL:

Step 1. WQBEL calculated as follows for parameter sampled in and detected in the receiving water:

$$C_d = \frac{Q_r C_r - Q_s C_s}{Q_d}$$

C_r = Water quality criterion in µg/L

Q_d = Discharge flow in MGD

C_d = WQBEL in µg/L

Q_s = Upstream flow (7Q10) in MGD

C_s = Ustream (receiving water) concentration in µg/L

Q_r = Downstream receiving water flow in MGD

Step 2. WQBEL calculated as follows for parameter not sampled in or not detected in receiving water:

$$C_d = (Q_r/Q_d) \times C_r$$

C_r = Water quality criterion in µg/L

Q_d = Discharge flow in MGD

Q_r = Downstream receiving water flow in MGD

C. Determine if a WQBEL applies:

Step 1. For parameter sampled in and detected in receiving water, downstream concentrations calculated as fc

$$C_r = \frac{Q_d C_d + Q_s C_s}{Q_r}$$

C_r = Downstream concentration in µg/L

Q_d = Discharge flow in MGD

C_d = Influent concentration in µg/L

Q_s = Upstream flow (7Q10) in MGD

C_s = Upstream (receiving water) concentration in µg/L

Q_r = Downstream receiving water flow in MGD

The WQBEL applies if:

1) the projected downstream concentration calculated in accordance with St
and the discharge concentration of a parameter are greater than the WQC ca
that parameter in accordance with II.A, above

AND

2) the WQBEL determined for that parameter in accordance with II.B, abov
the TBEL in Part 2.1.1 of the RGP for that parameter. Otherwise, the TBEL

of the RGP for that parameter applies.

Step 2. For a parameter not sampled in or not detected in receiving water, the WQBEL applies if:

1) the discharge concentration of a parameter is greater than the WQBEL de
that parameter in accordance with II.A or II.B, above;

AND

2) the WQBEL determined for that parameter in accordance with II.A or II.
less than the TBEL in Part 2.1.1 of the RGP for that parameter. Otherwise, t

Part 2.1.1 of the RGP for that parameter applies.

ollows:

:ep 1, above,
ılculated for

'e, is less than
. in Part 2.1.1

etermined for

B, above is
the TBEL in

Dilution Factor	19.4					
A. Inorganics	TBEL applies if bolded		WQBEL applies if bolded		Compliance Level applies if shown	
Ammonia	**Report**	mg/L	---			
Chloride	**Report**	µg/L	---			
Total Residual Chlorine	**0.2**	mg/L	213	µg/L	---	µg/L
Total Suspended Solids	**30**	mg/L	---			
Antimony	**206**	µg/L	12418	µg/L		
Arsenic	**104**	µg/L	194	µg/L		
Cadmium	**10.2**	µg/L	4.6354	µg/L		
Chromium III	**323**	µg/L	1456.9	µg/L		
Chromium VI	**323**	µg/L	221.9	µg/L		
Copper	**242**	µg/L	156.8	µg/L		
Iron	**5000**	µg/L	19403	µg/L		
Lead	**160**	µg/L	49.83	µg/L		
Mercury	**0.739**	µg/L	17.58	µg/L		
Nickel	**1450**	µg/L	877.8	µg/L		
Selenium	**235.8**	µg/L	97.0	µg/L		
Silver	**35.1**	µg/L	55.0	µg/L		
Zinc	**420**	µg/L	2014.0	µg/L		
Cyanide	**178**	mg/L	100.9	µg/L	---	µg/L
B. Non-Halogenated VOCs						
Total BTEX	**100**	µg/L	---			
Benzene	**5.0**	µg/L	---			
1,4 Dioxane	**200**	µg/L	---			
Acetone	**7970**	µg/L	---			
Phenol	**1,080**	µg/L	5821	µg/L		
C. Halogenated VOCs						
Carbon Tetrachloride	**4.4**	µg/L	31.0	µg/L		
1,2 Dichlorobenzene	**600**	µg/L	---			
1,3 Dichlorobenzene	**320**	µg/L	---			
1,4 Dichlorobenzene	**5.0**	µg/L	---			
Total dichlorobenzene	**---**	µg/L	---			
1,1 Dichloroethane	**70**	µg/L	---			
1,2 Dichloroethane	**5.0**	µg/L	---			
1,1 Dichloroethylene	**3.2**	µg/L	---			
Ethylene Dibromide	**0.05**	µg/L	---			
Methylene Chloride	**4.6**	µg/L	---			
1,1,1 Trichloroethane	**200**	µg/L	---			
1,1,2 Trichloroethane	**5.0**	µg/L	---			
Trichloroethylene	**5.0**	µg/L	---			
Tetrachloroethylene	**5.0**	µg/L	64.0	µg/L		
cis-1,2 Dichloroethylene	**70**	µg/L	---			
Vinyl Chloride	**2.0**	µg/L	---			
D. Non-Halogenated SVOCs						
Total Phthalates	190	µg/L	---	µg/L		
Diethylhexyl phthalate	**101**	µg/L	42.7	µg/L		
Total Group I Polycyclic Aromatic Hydrocarbons	**1.0**	µg/L	---			
Benzo(a)anthracene	**1.0**	µg/L	0.0737	µg/L	---	µg/L
Benzo(a)pyrene	**1.0**	µg/L	0.0737	µg/L	---	µg/L
Benzo(b)fluoranthene	**1.0**	µg/L	0.0737	µg/L	---	µg/L
Benzo(k)fluoranthene	**1.0**	µg/L	0.0737	µg/L	---	µg/L
Chrysene	**1.0**	µg/L	0.0737	µg/L	---	µg/L

Dibenzo(a,h)anthracene	**1.0**	µg/L	0.0737	µg/L	---	µg/L
Indeno(1,2,3-cd)pyrene	**1.0**	µg/L	0.0737	µg/L	---	µg/L
Total Group II Polycyclic Aromatic Hydrocarbons	**100**	µg/L	---			
Naphthalene	**20**	µg/L	---			
E. Halogenated SVOCs						
Total Polychlorinated Biphenyls	**0.000064**	µg/L	---		0.5	µg/L
Pentachlorophenol	**1.0**	µg/L	---			
F. Fuels Parameters						
Total Petroleum Hydrocarbons	**5.0**	mg/L	---			
Ethanol	**Report**	mg/L	---			
Methyl-tert-Butyl Ether	**70**	µg/L	388	µg/L		
tert-Butyl Alcohol	**120**	µg/L	---			
tert-Amyl Methyl Ether	**90**	µg/L	---			

ATTACHMENT D

Influent, Effluent and Receiving Water Sampling Results

Summary of Effluent Analytical Data

VOCs – All below laboratory detection limits

Ammonia as nitrogen – <1.0 mg/L

Zinc – 22ug/L

Haxavalent chromium - <0.01 mg/L

Chlorine, total residual - <0.1 mg/L

pH – 7.85

Temperature – 12.9 C

Hardness – 280 mg/L

Summary of Receiving Water Analytical

Hardness – 69 mg/L

pH – 6.05

Temperature – 12.7 C

Hardness – 69 mg/L

Hexavalent chromium - <0.01 mg/L

Ammonia as nitrogen - <1.0 mg/L

AMRO Environmental Laboratories Corporation

111 Herrick Street, Merrimack, NH 03054
TEL: (603) 424-2022 • FAX: (603) 429-8496
www.amrolabs.com

January 11, 2017

ANALYTICAL TEST RESULTS

Charles Castelluccio
Charles Castelluccio Consulting, LLC
62 Wescroft Road
Reading, MA 01867
TEL: (978) 505-1123
FAX:

Subject: YRC North Reading Workorder No.: 1612041

Dear Charles Castelluccio:

AMRO Environmental Laboratories Corp. received 3 samples on 12/22/2016 for the analyses presented in the following report.

AMRO is accredited in accordance with NELAC and certifies that these test results meet all the requirements of NELAC, where applicable, unless otherwise noted in the case narrative.

The enclosed Sample Receipt Checklist details the condition of your sample(s) upon receipt. Please be advised that any unused sample volume and sample extracts will be stored for a period of 60 days from sample receipt date (90 days for samples from New York). After this time, AMRO will properly dispose of the remaining sample(s). If you require further analysis, or need the samples held for a longer period, please contact us immediately.

This report consists of a total of 29 pages. This letter is an integral part of your data report. All results in this project relate only to the sample(s) as received by the laboratory and documented in the Chain-of-Custody. This report shall not be reproduced except in full, without the written approval of the laboratory. If you have any questions regarding this project in the future, please refer to the Workorder Number above.

Sincerely,

Nancy Stewart
Vice President

State Certifications: NH (NELAC): 1001, MA: M-NH012, CT: PH-0758, NY: 11278 (NELAC), ME: NH012 and 1001.

Hard copy of the State Certification is available upon request

AMRO Environmental Laboratories Corp.

Date: *05-Jan-17*

CLIENT: Charles Castelluccio Consulting, LLC
Project: YRC North Reading
Lab Order: 1612041
Date Received: 12/22/2016

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Collection Date	Collection Time
1612041-01A	Influent	12/22/2016	10:17 AM
1612041-01B	Influent	12/22/2016	10:17 AM
1612041-02A	Effluent	12/22/2016	10:25 AM
1612041-02B	Effluent	12/22/2016	10:25 AM
1612041-03A	Midfluent	12/22/2016	10:15 AM

AMRO Environmental Laboratories Corp.

05-Jan-17

Lab Order: 1612041
Client: Charles Castelluccio Consulting, LLC
Project: YRC North Reading

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
1612041-01A	Influent	12/22/2016 10:17:00 AM	Aqueous	MCP VOCs 8260C, EPA 5030C		12/27/2016	
				EPA 5030B	12/22/2016	R59121	
1612041-01B				Ion Chromatography, EPA 300		1/4/2017	
						R59145	
				Standard Methods - pH, Water		12/23/2016	
						R59120	
1612041-02A	Effluent	12/22/2016 10:25:00 AM		MCP VOCs 8260C, EPA 5030C		12/27/2016	
				EPA 5030B	12/22/2016	R59121	
1612041-02B				Ion Chromatography, EPA 300		1/4/2017	
						R59145	
				Standard Methods - pH, Water		12/23/2016	
						R59120	
1612041-03A	Midfluent	12/22/2016 10:15:00 AM		EPA 200.7 ICP METALS, TOTAL		12/27/2016	
				200 Series Prep: ICP/GFAA	12/27/2016	27124	
				EPA 245.1 MERCURY, Total		12/28/2016	
				MERCURY PREP: EPA 245.1/7040	12/28/2016	27127	

AMRO Environmental Laboratories Corporation
111 Herrick Street
Merrimack, NH 03054

CHAIN-OF-CUSTODY RECORD

NO: 66839

Office: (603) 424-2022
Fax: (603) 429-8496
web: www.amrolabs.com

Project No.:	Project Name: YRC North Reading	Project State: MA	Project Manager: C Castelluccio	Samplers (Signature):	AMRO Project No.: 1612041
P.O.#:	Results Needed by: Standard turn.				
QUOTE #:	Seal Intact? Yes No N/A				

Sample ID.:	Date/Time Sampled	Matrix	Total # of Cont. & Size	Comp.	Grab	VOC + TBA	pH + Chloride	Total Iron + mercury	Remarks
Influent	12/22/16 1017	A	3		X	2	1		
Effluent	12/22/16 1025	A	3		X	2	1		
midfluent	12/22/16 1015	A	2		X			2	

REQUESTED ANALYSES

Preservative: Cl-HCl, MeOH, N-HN03, S-H2SO4, Na-NaOH, O- Other

Send Results To: Charles.Castelluccio@gza.com

PHONE #: 978-305-1123 FAX #:

E-mail:

PRIORITY TURNAROUND TIME AUTHORIZATION
Before submitting samples for expedited TAT, you must *have a coded AUTHORIZATION NUMBER*
AUTHORIZATION No.: BY:

METALS 8 RCRA ☐ 13 PP ☐ 23 TAL ☐ 14 MCP ☐
Method: 6010 ☐ 200.7 ☐ Other Metals:

Dissolved Metals Field Filtered? YES ☐ NO ☐

MCP Presumptive Certainty Required? YES ☒ NO ☐

MCP Methods Needed: YES ☐ NO ☒

Required Reporting Limits: S-1 ☐ GW-1 ☒ S-2 ☐ GW-2 ☐ S-3 ☐ GW-3 ☐

AMRO report package level needed:

EDD required:

Other:

Relinquished By:	Date/Time	Received By
	12/22/16 1326	
	12/22/16 1700	

Please print clearly, legibly and completely. Samples can not be logged in and the turnaround time clock will not start until any ambiguities are resolved.

Samples arriving after 12:00 noon will be tracked and billed as received on the following day.

AMRO policy requires notification in writing to the laboratory in cases where the samples were collected from highly contaminated sites.

KNOWN SITE CONTAMINATION: VOC

White: Lab Copy Yellow: Client Copy

SHEET 1 OF 1

AMROCOC2004, Rev.3 08/18/04

Merrimack, NH 03054
(603) 424-2022

Client: Charter Castellucio
Project Name: YRC North Reading
Ship via: (circle one) Fed Ex., UPS, AMRO Courier,
Hand Del., Other Courier, Other:

AMRO ID: 161242
Date Rec.: 12/22/16
Date Due: 12/30/16

Items to be Checked Upon Receipt	Yes	No	NA	Comments
1. Army Samples received in individual plastic bags?			✓	
2. Custody Seals present?			✓	
3. Custody Seals Intact?			✓	
4. Air Bill included in folder if received?			✓	
5. Is COC included with samples?	✓			
6. Is COC signed and dated by client?	✓			
7. Laboratory receipt temperature. TEMP = 4°C Samples rec. with ice ✓ ice packs___ neither___				
8. Were samples received the same day they were sampled? Is client temperature = or <6°C ? **If no obtain authorization from the client for the analyses.** **Client authorization from: Date: Obtained by:**	✓			
9. Is the COC filled out correctly and completely?	✓			
10. Does the info on the COC match the samples?	✓			
11. Were samples rec. within holding time?	✓			
12. Were all samples properly labeled?	✓			
13. Were all samples properly preserved?	✓			
14. Were proper sample containers used?	✓			
15. Were all samples received intact? (none broken or leaking)	✓			
16. Were VOA vials rec. with no air bubbles?	✓			
17. Were the sample volumes sufficient for requested analysis?	✓			
18. Were all samples received?	✓			
19. VPH and VOA Soils only:			✓	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container)				
Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCore, B=Bulk, D= DI water				
If M, SB, DI:				
Does preservative cover the soil?				
Does preservation level come close to the fill line on the vial?				
Date/Time DI Preserved vials Frozen on:				
Frozen by Client?				
Were vials provided by AMRO?				
If NO then weights MUST be obtained from client				
Was dry weight aliquot provided?				
If NO then notified client and inform the VOA lab ASAP.				
20. Subcontracted Samples:			✓	
What samples sent:				
Where sent:				
Date:				
Analysis:				
TAT:				
21. Information entered into:				
Internal Tracking Log?	✓			
Dry Weight Log?			✓	
Client Log?			✓	
Composite Log?			✓	
Filtration Log?			✓	

Received By: KS Date: 12/22/16
Labeled By: MNB Date: 12/23/16
Logged in By: 12/23/16 Date: MNB
Checked By: (SW) Date: 12/27/16

NA= Not Applicable

Laboratories Corporation

Merrimack, NH 03054
(603) 424-2022

Please Circle if:
Sample= Soil
Sample= Waste

AMRO ID: 1612041

Sample ID	Analysis	Volume Sample	Preserv. Listed	Initial pH*	Acceptable? Y or N	List Preserv. Added by AMRO	Solution ID # of Preserv.	Volume Preservative Added	Final adjusted pH	Final adjusted pH (after 16 or 24 hours)
-01A, 02A	VOC	2x40	HCl	—	—					
-01B, 02B	PH, Chlorid	1x500	—	7	y					
03A	Metals	1x500	HNO_3	<2	y					

Sample ID	Analysis	Volume Sample	Preserv. Listed	Initial TRC	Acceptable? Y or N	List Preserv. Added by AMRO	Solution ID # of Preserv.	Volume Preservative Added	Final adjusted TRC	Acceptable? Y or N

** = If the laboratory preserves the drinking water sample (s) for EPA Method 200 series, sample (s) should be held at least 16 hours prior to analysis or 24 hours for water sample (s).*

pH Checked By: MNH Date: 12/23/16 pH adjusted By: _____ Date: _____

pH Checked By: _____ Date: _____ pH adj.(16 or 24hrs)By: _____ Date: _____

GC/MS VOLATILES- 8260C:

1. A quadratic regression was used for Chloroethane and Bromomethane in the Initial Calibration analyzed on V-3 12/06/16.

2. 1,2,4-Trichlorobenzene, 1,3,5-Trichlorobenzene,Dichlorodifluoromethane, Hexachlorobutadiene and sec-Butylbenzene recovered outside the control limits (+/-20%) in the Continuing Calibration Verification Standard analyzed on V-3 12/27/16.

3. A Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were performed on 12/27/16 on V-3 (Batch ID: R59121). All %Rs and RPDs were within the laboratory control limits with the following exception(s):

3.1 The %R for 2 analytes out of 71 analytes in the LCS were outside the control limits.
3.2 The %R for 1 analyte out of 71 analytes in the LCSD was outside the control limits.

4. No analytical or quality issues were noted, other than those described above or in the Data Comment page.

METALS:

1. Iron and Mercury were analyzed using EPA 200 methods at the request of the client.

2. No analytical or quality issues were noted, other than those described in the Data Comment page.

WET CHEMISTRY:

1. The samples for pH were received past the 15-min holding time.

2. No analytical or quality issues were noted, other than those described above or in the Data Comment page.

MassDEP Analytical Protocol Certification Form

Laboratory Name: AMRO Environmental Lab. Corp. Project #:

Project Location: YRC North Reading RTN:

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

161204-01-03

Matrices: ☒ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

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 ☐	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	VPH, EPH, APH, and TO-15 only: 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). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No N/A ☐ 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[1]

***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[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 laboratory 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: Vice President

Printed Name: Nancy Stewart Date: 1-11-17

DATA COMMENT PAGE

Organic Data Qualifiers

ND	Indicates compound was analyzed for, but not detected at or above the reporting limit.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than the method detection limit.
H	Method prescribed holding time exceeded.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
B	This flag is used when the analyte is found in the associated blank as well as in the sample.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
#	See Case Narrative
Q	RPD between signal 1 and signal 2 >40%.

Micro Data Qualifiers

TNTC	Too numerous to count

Inorganic Data Qualifiers

ND or U	Indicates element was analyzed for, but not detected at or above the reporting limit.
J	Indicates a value greater than or equal to the method detection limit, but less than the quantitation limit.
H	Indicates analytical holding time exceedance.
B	Indicates that the analyte is found in the associated blank, as well as in the sample.
MSA	Indicates value determined by the Method of Standard Addition
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
PS	The analyte was below the Reporting Limit but has significant matrix interference as noted by the poor recovery of the Post Digestion Spike.
#	See Case Narrative
*	MCL Exceeded

Report Comments:

1. Soil, sediment and sludge sample results are reported on a "dry weight" basis.
2. Reporting limits are adjusted for sample size used, dilutions and moisture content, if applicable.

AMRO Environmental Laboratories Corp.

Date: *05-Jan-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Influent
Lab Order:	1612041	**Collection Date:**	12/22/2016 10:17:00 AM
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1612041-01A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY MCP MET SW8260C						Analyst: JK
Acetone	ND	10		µg/L	1	12/27/2016 5:26:00 PM
Tertiary Amyl Methyl Ether	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Benzene	ND	1.0		µg/L	1	12/27/2016 5:26:00 PM
Bromobenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Bromochloromethane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Bromoform	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Bromomethane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
sec-Butylbenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
n-Butylbenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
tert-Butylbenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Carbon disulfide	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Chlorobenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Dibromochloromethane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Chloroethane	ND	5.0		µg/L	1	12/27/2016 5:26:00 PM
Chloroform	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Chloromethane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
2-Chlorotoluene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	12/27/2016 5:26:00 PM
1,2-Dibromoethane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Dibromomethane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,3-Dichlorobenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	1	12/27/2016 5:26:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2016 5:26:00 PM
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2016 5:26:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2016 5:26:00 PM
Diethyl ether	ND	5.0		µg/L	1	12/27/2016 5:26:00 PM

AMRO Environmental Laboratories Corp.

Date: *05-Jan-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Influent
Lab Order:	1612041	**Collection Date:**	12/22/2016 10:17:00 AM
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1612041-01A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diisopropyl ether	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,4-Dioxane	ND	50		µg/L	1	12/27/2016 5:26:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Ethylbenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
2-Hexanone	ND	10		µg/L	1	12/27/2016 5:26:00 PM
Isopropylbenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
2-Butanone	ND	10		µg/L	1	12/27/2016 5:26:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2016 5:26:00 PM
Methyl tert-butyl ether	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Methylene chloride	ND	5.0		µg/L	1	12/27/2016 5:26:00 PM
Naphthalene	ND	5.0		µg/L	1	12/27/2016 5:26:00 PM
n-Propylbenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Styrene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Tetrachloroethene	62	2.0		µg/L	1	12/27/2016 5:26:00 PM
Tetrahydrofuran	ND	10		µg/L	1	12/27/2016 5:26:00 PM
Toluene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,2,4-Trichlorobenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,2,3-Trichlorobenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Trichloroethene	6.8	2.0		µg/L	1	12/27/2016 5:26:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Vinyl chloride	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
o-Xylene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
m,p-Xylene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Surr: Dibromofluoromethane	104	70-130		%REC	1	12/27/2016 5:26:00 PM
Surr: 1,2-Dichloroethane-d4	111	70-130		%REC	1	12/27/2016 5:26:00 PM
Surr: Toluene-d8	103	70-130		%REC	1	12/27/2016 5:26:00 PM
Surr: 4-Bromofluorobenzene	97.5	70-130		%REC	1	12/27/2016 5:26:00 PM

AMRO Environmental Laboratories Corp.

Date: *05-Jan-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Effluent
Lab Order:	1612041	**Collection Date:**	12/22/2016 10:25:00 AM
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1612041-02A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY MCP MET SW8260C						Analyst: JK
Acetone	ND	10		µg/L	1	12/27/2016 6:05:00 PM
Tertiary Amyl Methyl Ether	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Benzene	ND	1.0		µg/L	1	12/27/2016 6:05:00 PM
Bromobenzene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Bromochloromethane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Bromoform	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Bromomethane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
sec-Butylbenzene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
n-Butylbenzene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
tert-Butylbenzene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Carbon disulfide	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Chlorobenzene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Dibromochloromethane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Chloroethane	ND	5.0		µg/L	1	12/27/2016 6:05:00 PM
Chloroform	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Chloromethane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
2-Chlorotoluene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	12/27/2016 6:05:00 PM
1,2-Dibromoethane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Dibromomethane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,3-Dichlorobenzene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	1	12/27/2016 6:05:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2016 6:05:00 PM
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2016 6:05:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2016 6:05:00 PM
Diethyl ether	ND	5.0		µg/L	1	12/27/2016 6:05:00 PM

AMRO Environmental Laboratories Corp.

Date: *05-Jan-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Effluent
Lab Order:	1612041	**Collection Date:**	12/22/2016 10:25:00 AM
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1612041-02A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diisopropyl ether	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,4-Dioxane	ND	50		µg/L	1	12/27/2016 6:05:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Ethylbenzene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
2-Hexanone	ND	10		µg/L	1	12/27/2016 6:05:00 PM
Isopropylbenzene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
2-Butanone	ND	10		µg/L	1	12/27/2016 6:05:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2016 6:05:00 PM
Methyl tert-butyl ether	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Methylene chloride	ND	5.0		µg/L	1	12/27/2016 6:05:00 PM
Naphthalene	ND	5.0		µg/L	1	12/27/2016 6:05:00 PM
n-Propylbenzene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Styrene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Tetrachloroethene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Tetrahydrofuran	ND	10		µg/L	1	12/27/2016 6:05:00 PM
Toluene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,2,4-Trichlorobenzene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,2,3-Trichlorobenzene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Trichloroethene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Vinyl chloride	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
o-Xylene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
m,p-Xylene	ND	2.0		µg/L	1	12/27/2016 6:05:00 PM
Surr: Dibromofluoromethane	106	70-130		%REC	1	12/27/2016 6:05:00 PM
Surr: 1,2-Dichloroethane-d4	118	70-130		%REC	1	12/27/2016 6:05:00 PM
Surr: Toluene-d8	107	70-130		%REC	1	12/27/2016 6:05:00 PM
Surr: 4-Bromofluorobenzene	94.1	70-130		%REC	1	12/27/2016 6:05:00 PM

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1612041
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

Sample ID: mb-12/27/16 **Batch ID:** R59121 **Test Code:** SW8260C **Units:** µg/L **Analysis Date:** 12/27/2016 3:26:00 PM **Prep Date:** 12/27/2016
Client ID: **Run ID:** V-3_161227A **SeqNo:** 992377

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	ND	10	µg/L									
Tertiary Amyl Methyl Ether	ND	2.0	µg/L									
Benzene	ND	1.0	µg/L									
Bromobenzene	ND	2.0	µg/L									
Bromochloromethane	ND	2.0	µg/L									
Bromodichloromethane	ND	2.0	µg/L									
Bromoform	ND	2.0	µg/L									
Bromomethane	ND	2.0	µg/L									
sec-Butylbenzene	ND	2.0	µg/L									
n-Butylbenzene	ND	2.0	µg/L									
tert-Butylbenzene	ND	2.0	µg/L									
Carbon disulfide	ND	2.0	µg/L									
Carbon tetrachloride	ND	2.0	µg/L									
Chlorobenzene	ND	2.0	µg/L									
Dibromochloromethane	ND	2.0	µg/L									
Chloroethane	ND	5.0	µg/L									
Chloroform	ND	2.0	µg/L									
Chloromethane	ND	2.0	µg/L									
2-Chlorotoluene	ND	2.0	µg/L									
4-Chlorotoluene	ND	2.0	µg/L									
1,2-Dibromo-3-chloropropane	ND	5.0	µg/L									
1,2-Dibromoethane	ND	2.0	µg/L									
Dibromomethane	ND	2.0	µg/L									
1,3-Dichlorobenzene	ND	2.0	µg/L									
1,2-Dichlorobenzene	ND	2.0	µg/L									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1612041
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

1,4-Dichlorobenzene	ND	2.0	µg/L
Dichlorodifluoromethane	ND	5.0	µg/L
1,1-Dichloroethane	ND	2.0	µg/L
1,2-Dichloroethane	ND	2.0	µg/L
1,1-Dichloroethene	ND	1.0	µg/L
cis-1,2-Dichloroethene	ND	2.0	µg/L
trans-1,2-Dichloroethene	ND	2.0	µg/L
1,2-Dichloropropane	ND	2.0	µg/L
1,3-Dichloropropane	ND	2.0	µg/L
2,2-Dichloropropane	ND	2.0	µg/L
1,1-Dichloropropene	ND	2.0	µg/L
cis-1,3-Dichloropropene	ND	1.0	µg/L
trans-1,3-Dichloropropene	ND	1.0	µg/L
Diethyl ether	ND	5.0	µg/L
Diisopropyl ether	ND	2.0	µg/L
1,4-Dioxane	ND	50	µg/L
Ethyl Tertiary Butyl Ether	ND	2.0	µg/L
Ethylbenzene	ND	2.0	µg/L
Hexachlorobutadiene	ND	2.0	µg/L
2-Hexanone	ND	10	µg/L
Isopropylbenzene	ND	2.0	µg/L
4-Isopropyltoluene	ND	2.0	µg/L
2-Butanone	ND	10	µg/L
4-Methyl-2-pentanone	ND	10	µg/L
Methyl tert-butyl ether	ND	2.0	µg/L
Methylene chloride	ND	5.0	µg/L
Naphthalene	ND	5.0	µg/L
n-Propylbenzene	ND	2.0	µg/L
Styrene	ND	2.0	µg/L
1,1,1,2-Tetrachloroethane	ND	2.0	µg/L
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1612041
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

Tetrachloroethene	ND	2.0	µg/L						
Tetrahydrofuran	ND	10	µg/L						
Toluene	ND	2.0	µg/L						
1,2,4-Trichlorobenzene	ND	2.0	µg/L						
1,2,3-Trichlorobenzene	ND	2.0	µg/L						
1,1,1-Trichloroethane	ND	2.0	µg/L						
1,1,2-Trichloroethane	ND	2.0	µg/L						
Trichloroethene	ND	2.0	µg/L						
Trichlorofluoromethane	ND	2.0	µg/L						
1,2,3-Trichloropropane	ND	2.0	µg/L						
1,2,4-Trimethylbenzene	ND	2.0	µg/L						
1,3,5-Trimethylbenzene	ND	2.0	µg/L						
Vinyl chloride	ND	2.0	µg/L						
o-Xylene	ND	2.0	µg/L						
m,p-Xylene	ND	2.0	µg/L						
Surr: Dibromofluoromethane	25.61	2.0	µg/L	25	0	102	70	130	0
Surr: 1,2-Dichloroethane-d4	29.26	2.0	µg/L	25	0	117	70	130	0
Surr: Toluene-d8	26.72	2.0	µg/L	25	0	107	70	130	0
Surr: 4-Bromofluorobenzene	24.07	2.0	µg/L	25	0	96.3	70	130	0

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *10-Jan-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1612041
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: lcs-12/27/16 **Batch ID:** R59121 **Test Code:** SW8260C **Units:** µg/L **Analysis Date:** 12/27/2016 1:25:00 PM **Prep Date:** 12/27/2016
Client ID: **Run ID:** V-3_161227A **SeqNo:** 992379

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	53.5	10	µg/L	40	0	134	40	160	0			
Tertiary Amyl Methyl Ether	20.64	2.0	µg/L	20	0	103	70	130	0			
Benzene	20.09	1.0	µg/L	20	0	100	70	130	0			
Bromobenzene	17.91	2.0	µg/L	20	0	89.6	70	130	0			
Bromochloromethane	18.62	2.0	µg/L	20	0	93.1	70	130	0			
Bromodichloromethane	21.56	2.0	µg/L	20	0	108	70	130	0			
Bromoform	17.39	2.0	µg/L	20	0	87	70	130	0			
Bromomethane	21.63	2.0	µg/L	20	0	108	40	160	0			
sec-Butylbenzene	14.03	2.0	µg/L	20	0	70.2	70	130	0			
n-Butylbenzene	15.5	2.0	µg/L	20	0	77.5	70	130	0			
tert-Butylbenzene	15.36	2.0	µg/L	20	0	76.8	70	130	0			
Carbon disulfide	15.69	2.0	µg/L	20	0	78.5	70	130	0			
Carbon tetrachloride	19.4	2.0	µg/L	20	0	97	70	130	0			
Chlorobenzene	17.01	2.0	µg/L	20	0	85	70	130	0			
Dibromochloromethane	16.49	2.0	µg/L	20	0	82.5	70	130	0			
Chloroethane	15.33	5.0	µg/L	20	0	76.7	70	130	0			
Chloroform	19.89	2.0	µg/L	20	0	99.4	70	130	0			
Chloromethane	16	2.0	µg/L	20	0	80	40	160	0			
2-Chlorotoluene	16.6	2.0	µg/L	20	0	83	70	130	0			
4-Chlorotoluene	17.26	2.0	µg/L	20	0	86.3	70	130	0			
1,2-Dibromo-3-chloropropane	20.5	5.0	µg/L	20	0	103	70	130	0			
1,2-Dibromoethane	20.01	2.0	µg/L	20	0	100	70	130	0			
Dibromomethane	19.05	2.0	µg/L	20	0	95.2	70	130	0			
1,3-Dichlorobenzene	16.11	2.0	µg/L	20	0	80.6	70	130	0			
1,2-Dichlorobenzene	16.95	2.0	µg/L	20	0	84.8	70	130	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1612041
Project: YRC North Reading

QC SUMMARY REPORT

Laboratory Control Spike

1,4-Dichlorobenzene	15.97	2.0	µg/L	20	0	79.8	70	130	0
Dichlorodifluoromethane	19.15	5.0	µg/L	20	0	95.8	40	160	0
1,1-Dichloroethane	19.19	2.0	µg/L	20	0	96	70	130	0
1,2-Dichloroethane	21.16	2.0	µg/L	20	0	106	70	130	0
1,1-Dichloroethene	20.55	1.0	µg/L	20	0	103	70	130	0
cis-1,2-Dichloroethene	20.35	2.0	µg/L	20	0	102	70	130	0
trans-1,2-Dichloroethene	21.22	2.0	µg/L	20	0	106	70	130	0
1,2-Dichloropropane	18.46	2.0	µg/L	20	0	92.3	70	130	0
1,3-Dichloropropane	17.07	2.0	µg/L	20	0	85.4	70	130	0
2,2-Dichloropropane	22.48	2.0	µg/L	20	0	112	70	130	0
1,1-Dichloropropene	19.31	2.0	µg/L	20	0	96.6	70	130	0
cis-1,3-Dichloropropene	17.93	1.0	µg/L	20	0	89.7	70	130	0
trans-1,3-Dichloropropene	18.06	1.0	µg/L	20	0	90.3	70	130	0
Diethyl ether	17.68	5.0	µg/L	20	0	88.4	70	130	0
Diisopropyl ether	18.73	2.0	µg/L	20	0	93.6	70	130	0
1,4-Dioxane	122.5	50	µg/L	100	0	122	40	160	0
Ethyl Tertiary Butyl Ether	20.42	2.0	µg/L	20	0	102	70	130	0
Ethylbenzene	16.93	2.0	µg/L	20	0	84.6	70	130	0
Hexachlorobutadiene	11.21	2.0	µg/L	20	0	56	70	130	0
2-Hexanone	46.49	10	µg/L	40	0	116	40	160	0
Isopropylbenzene	16.13	2.0	µg/L	20	0	80.6	70	130	0
4-Isopropyltoluene	15.38	2.0	µg/L	20	0	76.9	70	130	0
2-Butanone	55.82	10	µg/L	40	0	140	40	160	0
4-Methyl-2-pentanone	46.57	10	µg/L	40	0	116	40	160	0
Methyl tert-butyl ether	20.8	2.0	µg/L	20	0	104	70	130	0
Methylene chloride	18.6	5.0	µg/L	20	0	93	70	130	0
Naphthalene	17.06	5.0	µg/L	20	0	85.3	70	130	0
n-Propylbenzene	16.56	2.0	µg/L	20	0	82.8	70	130	0
Styrene	15.83	2.0	µg/L	20	0	79.2	70	130	0
1,1,1,2-Tetrachloroethane	17.07	2.0	µg/L	20	0	85.4	70	130	0
1,1,2,2-Tetrachloroethane	18.02	2.0	µg/L	20	0	90.1	70	130	0

S

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1612041
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Tetrachloroethene	17.24	2.0	µg/L	20	0	86.2	70	130	0	
Tetrahydrofuran	20.86	10	µg/L	20	0	104	70	130	0	
Toluene	19.63	2.0	µg/L	20	0	98.2	70	130	0	
1,2,4-Trichlorobenzene	13.65	2.0	µg/L	20	0	68.2	70	130	0	S
1,2,3-Trichlorobenzene	14.28	2.0	µg/L	20	0	71.4	70	130	0	
1,1,1-Trichloroethane	22.42	2.0	µg/L	20	0	112	70	130	0	
1,1,2-Trichloroethane	19	2.0	µg/L	20	0	95	70	130	0	
Trichloroethene	20.05	2.0	µg/L	20	0	100	70	130	0	
Trichlorofluoromethane	24	2.0	µg/L	20	0	120	70	130	0	
1,2,3-Trichloropropane	17.5	2.0	µg/L	20	0	87.5	70	130	0	
1,2,4-Trimethylbenzene	16.67	2.0	µg/L	20	0	83.4	70	130	0	
1,3,5-Trimethylbenzene	16.22	2.0	µg/L	20	0	81.1	70	130	0	
Vinyl chloride	20.56	2.0	µg/L	20	0	103	70	130	0	
o-Xylene	15.9	2.0	µg/L	20	0	79.5	70	130	0	
m,p-Xylene	32.2	2.0	µg/L	40	0	80.5	70	130	0	
Surr: Dibromofluoromethane	25.04	2.0	µg/L	25	0	100	70	130	0	
Surr: 1,2-Dichloroethane-d4	27.21	2.0	µg/L	25	0	109	70	130	0	
Surr: Toluene-d8	25.97	2.0	µg/L	25	0	104	70	130	0	
Surr: 4-Bromofluorobenzene	23.4	2.0	µg/L	25	0	93.6	70	130	0	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *10-Jan-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1612041
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: lcsd-12/27/16 **Batch ID:** R59121 **Test Code:** SW8260C **Units:** µg/L **Analysis Date:** 12/27/2016 2:05:00 PM **Prep Date:** 12/27/2016
Client ID: **Run ID:** V-3_161227A **SeqNo:** 992378

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	52.15	10	µg/L	40	0	130	40	160	53.5	2.56	20	
Tertiary Amyl Methyl Ether	20.27	2.0	µg/L	20	0	101	70	130	20.64	1.81	20	
Benzene	19.18	1.0	µg/L	20	0	95.9	70	130	20.09	4.63	20	
Bromobenzene	17.24	2.0	µg/L	20	0	86.2	70	130	17.91	3.81	20	
Bromochloromethane	18.54	2.0	µg/L	20	0	92.7	70	130	18.62	0.431	20	
Bromodichloromethane	20.63	2.0	µg/L	20	0	103	70	130	21.56	4.41	20	
Bromoform	17.54	2.0	µg/L	20	0	87.7	70	130	17.39	0.859	20	
Bromomethane	20.5	2.0	µg/L	20	0	103	40	160	21.63	5.36	20	
sec-Butylbenzene	14.18	2.0	µg/L	20	0	70.9	70	130	14.03	1.06	20	
n-Butylbenzene	15.23	2.0	µg/L	20	0	76.2	70	130	15.5	1.76	20	
tert-Butylbenzene	15.56	2.0	µg/L	20	0	77.8	70	130	15.36	1.29	20	
Carbon disulfide	14.51	2.0	µg/L	20	0	72.6	70	130	15.69	7.81	20	
Carbon tetrachloride	19.33	2.0	µg/L	20	0	96.7	70	130	19.4	0.361	20	
Chlorobenzene	16.72	2.0	µg/L	20	0	83.6	70	130	17.01	1.72	20	
Dibromochloromethane	16.79	2.0	µg/L	20	0	84	70	130	16.49	1.8	20	
Chloroethane	14.25	5.0	µg/L	20	0	71.3	70	130	15.33	7.3	20	
Chloroform	19.52	2.0	µg/L	20	0	97.6	70	130	19.89	1.88	20	
Chloromethane	14.89	2.0	µg/L	20	0	74.4	40	160	16	7.19	20	
2-Chlorotoluene	16.92	2.0	µg/L	20	0	84.6	70	130	16.6	1.91	20	
4-Chlorotoluene	17.04	2.0	µg/L	20	0	85.2	70	130	17.26	1.28	20	
1,2-Dibromo-3-chloropropane	19.94	5.0	µg/L	20	0	99.7	70	130	20.5	2.77	20	
1,2-Dibromoethane	20.23	2.0	µg/L	20	0	101	70	130	20.01	1.09	20	
Dibromomethane	19.44	2.0	µg/L	20	0	97.2	70	130	19.05	2.03	20	
1,3-Dichlorobenzene	16.2	2.0	µg/L	20	0	81	70	130	16.11	0.557	20	
1,2-Dichlorobenzene	17.15	2.0	µg/L	20	0	85.8	70	130	16.95	1.17	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1612041
Project: YRC North Reading

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

1,4-Dichlorobenzene	16.5	2.0	µg/L	20	0	82.5	70	130	15.97	3.26	20	
Dichlorodifluoromethane	18.85	5.0	µg/L	20	0	94.2	40	160	19.15	1.58	20	
1,1-Dichloroethane	19.37	2.0	µg/L	20	0	96.8	70	130	19.19	0.934	20	
1,2-Dichloroethane	21.16	2.0	µg/L	20	0	106	70	130	21.16	0	20	
1,1-Dichloroethene	20.4	1.0	µg/L	20	0	102	70	130	20.55	0.733	20	
cis-1,2-Dichloroethene	19.93	2.0	µg/L	20	0	99.7	70	130	20.35	2.09	20	
trans-1,2-Dichloroethene	18.52	2.0	µg/L	20	0	92.6	70	130	21.22	13.6	20	
1,2-Dichloropropane	18.16	2.0	µg/L	20	0	90.8	70	130	18.46	1.64	20	
1,3-Dichloropropane	17.57	2.0	µg/L	20	0	87.8	70	130	17.07	2.89	20	
2,2-Dichloropropane	22.08	2.0	µg/L	20	0	110	70	130	22.48	1.8	20	
1,1-Dichloropropene	17.98	2.0	µg/L	20	0	89.9	70	130	19.31	7.13	20	
cis-1,3-Dichloropropene	17.7	1.0	µg/L	20	0	88.5	70	130	17.93	1.29	20	
trans-1,3-Dichloropropene	17.74	1.0	µg/L	20	0	88.7	70	130	18.06	1.79	20	
Diethyl ether	16.97	5.0	µg/L	20	0	84.8	70	130	17.68	4.1	20	
Diisopropyl ether	18.05	2.0	µg/L	20	0	90.2	70	130	18.73	3.7	20	
1,4-Dioxane	124	50	µg/L	100	0	124	40	160	122.5	1.23	20	
Ethyl Tertiary Butyl Ether	19.38	2.0	µg/L	20	0	96.9	70	130	20.42	5.23	20	
Ethylbenzene	16.38	2.0	µg/L	20	0	81.9	70	130	16.93	3.3	20	
Hexachlorobutadiene	11.67	2.0	µg/L	20	0	58.4	70	130	11.21	4.02	20	S
2-Hexanone	45.23	10	µg/L	40	0	113	40	160	46.49	2.75	20	
Isopropylbenzene	15.63	2.0	µg/L	20	0	78.2	70	130	16.13	3.15	20	
4-Isopropyltoluene	15.18	2.0	µg/L	20	0	75.9	70	130	15.38	1.31	20	
2-Butanone	51.98	10	µg/L	40	0	130	40	160	55.82	7.12	20	
4-Methyl-2-pentanone	46.58	10	µg/L	40	0	116	40	160	46.57	0.0215	20	
Methyl tert-butyl ether	20.64	2.0	µg/L	20	0	103	70	130	20.8	0.772	20	
Methylene chloride	19.46	5.0	µg/L	20	0	97.3	70	130	18.6	4.52	20	
Naphthalene	17.67	5.0	µg/L	20	0	88.4	70	130	17.06	3.51	20	
n-Propylbenzene	15.49	2.0	µg/L	20	0	77.4	70	130	16.56	6.68	20	
Styrene	15.22	2.0	µg/L	20	0	76.1	70	130	15.83	3.93	20	
1,1,1,2-Tetrachloroethane	17.02	2.0	µg/L	20	0	85.1	70	130	17.07	0.293	20	
1,1,2,2-Tetrachloroethane	18.3	2.0	µg/L	20	0	91.5	70	130	18.02	1.54	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1612041
Project: YRC North Reading

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Tetrachloroethene	16.84	2.0	µg/L	20	0	84.2	70	130	17.24	2.35	20
Tetrahydrofuran	17.69	10	µg/L	20	0	88.4	70	130	20.86	16.4	20
Toluene	18.77	2.0	µg/L	20	0	93.8	70	130	19.63	4.48	20
1,2,4-Trichlorobenzene	14.59	2.0	µg/L	20	0	73	70	130	13.65	6.66	20
1,2,3-Trichlorobenzene	15.19	2.0	µg/L	20	0	76	70	130	14.28	6.18	20
1,1,1-Trichloroethane	21.4	2.0	µg/L	20	0	107	70	130	22.42	4.66	20
1,1,2-Trichloroethane	18.73	2.0	µg/L	20	0	93.6	70	130	19	1.43	20
Trichloroethene	19.77	2.0	µg/L	20	0	98.8	70	130	20.05	1.41	20
Trichlorofluoromethane	24.02	2.0	µg/L	20	0	120	70	130	24	0.0833	20
1,2,3-Trichloropropane	21.26	2.0	µg/L	20	0	106	70	130	17.5	19.4	20
1,2,4-Trimethylbenzene	16.76	2.0	µg/L	20	0	83.8	70	130	16.67	0.538	20
1,3,5-Trimethylbenzene	15.68	2.0	µg/L	20	0	78.4	70	130	16.22	3.39	20
Vinyl chloride	18.35	2.0	µg/L	20	0	91.8	70	130	20.56	11.4	20
o-Xylene	15.49	2.0	µg/L	20	0	77.4	70	130	15.9	2.61	20
m,p-Xylene	31.7	2.0	µg/L	40	0	79.2	70	130	32.2	1.56	20
Surr: Dibromofluoromethane	25.58	2.0	µg/L	25	0	102	70	130	0	0	0
Surr: 1,2-Dichloroethane-d4	26.02	2.0	µg/L	25	0	104	70	130	0	0	0
Surr: Toluene-d8	26.12	2.0	µg/L	25	0	104	70	130	0	0	0
Surr: 4-Bromofluorobenzene	23.94	2.0	µg/L	25	0	95.8	70	130	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: *05-Jan-17*

CLIENT: Charles Castelluccio Consulting, LLC
Project: YRC North Reading
Lab Order: 1612041

Lab ID: 1612041-01 **Collection Date:** 12/22/2016 10:17:00 AM
Collection Time:
Client Sample ID: Influent **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ION CHROMATOGRAPHY		**E300**				Analyst: **REB**
Chloride	390	10		mg/L	20	1/4/2017 10:49:18 AM
PH		**SM4500-H, B**				Analyst: **MB**
pH	6.5	0	H	pH Units	1	12/23/2016 10:05:00 AM

Lab ID: 1612041-02 **Collection Date:** 12/22/2016 10:25:00 AM
Collection Time:
Client Sample ID: Effluent **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ION CHROMATOGRAPHY		**E300**				Analyst: **REB**
Chloride	390	10		mg/L	20	1/4/2017 10:49:18 AM
PH		**SM4500-H, B**				Analyst: **MB**
pH	7.7	0	H	pH Units	1	12/23/2016 10:05:00 AM

Lab ID: 1612041-03 **Collection Date:** 12/22/2016 10:15:00 AM
Collection Time:
Client Sample ID: Midfluent **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: **AL**
Iron	ND	100		µg/L	1	12/27/2016 7:28:04 PM
MERCURY, TOTAL		**E245.1**				Analyst: **BZM**
Mercury	ND	0.20		µg/L	1	12/28/2016 5:33:29 PM

AMRO Environmental Laboratories Corp.

Date: *10-Jan-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1612041
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

Sample ID: mb-27124 **Batch ID:** 27124 **Test Code:** E200.7 **Units:** µg/L **Analysis Date:** 12/27/2016 7:16:53 PM **Prep Date:** 12/27/2016
Client ID: **Run ID:** ICP-OPTIMA_161227A **SeqNo:** 992296

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Iron	ND	100	µg/L									

Sample ID: MB-010417 **Batch ID:** R59145 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 1/4/2017 10:49:18 AM **Prep Date:**
Client ID: **Run ID:** DIONEX_170104A **SeqNo:** 992747

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	ND	0.50	mg/L									

Sample ID: mb-27127 **Batch ID:** 27127 **Test Code:** E245.1 **Units:** µg/L **Analysis Date:** 12/28/2016 5:22:12 PM **Prep Date:** 12/28/2016
Client ID: **Run ID:** HG-FIMS_161228A **SeqNo:** 992501

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	ND	0.20	µg/L									

Qualifiers:
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RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *10-Jan-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1612041
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: lcs-27124 **Batch ID:** 27124 **Test Code:** E200.7 **Units:** µg/L **Analysis Date:** 12/27/2016 7:21:28 PM **Prep Date:** 12/27/2016
Client ID: **Run ID:** ICP-OPTIMA_161227A **SeqNo:** 992297

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Iron	4111	100	µg/L	4004	0	103	85	115	0			

Sample ID: LCS-010417 **Batch ID:** R59145 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 1/4/2017 10:49:18 AM **Prep Date:**
Client ID: **Run ID:** DIONEX_170104A **SeqNo:** 992748

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	12.16	0.50	mg/L	12.5	0	97.3	89	110	0			

Sample ID: LCSD-010417 **Batch ID:** R59145 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 1/4/2017 10:49:18 AM **Prep Date:**
Client ID: **Run ID:** DIONEX_170104A **SeqNo:** 992753

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	12.13	0.50	mg/L	12.5	0	97	89	110	12.16	0.255	20	

Sample ID: lcs-27127 **Batch ID:** 27127 **Test Code:** E245.1 **Units:** µg/L **Analysis Date:** 12/28/2016 5:25:57 PM **Prep Date:** 12/28/2016
Client ID: **Run ID:** HG-FIMS_161228A **SeqNo:** 992502

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.214	0.20	µg/L	4	0	105	85	115	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *10-Jan-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1612041
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: lcsd-27127 **Batch ID:** 27127 **Test Code:** E245.1 **Units:** µg/L **Analysis Date:** 12/28/2016 5:29:43 PM **Prep Date:** 12/28/2016
Client ID: **Run ID:** HG-FIMS_161228A **SeqNo:** 992503

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.338	0.20	µg/L	4	0	108	85	115	4.214	2.88	20	

Sample ID: LCS-R59120 **Batch ID:** R59120 **Test Code:** SM4500-H, B **Units:** pH Units **Analysis Date:** 12/23/2016 10:05:00 A **Prep Date:**
Client ID: **Run ID:** ING-WET_161223A **SeqNo:** 992353

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
pH	6.02	0	pH Units	6	0	100	99	101	0			

Sample ID: LCSD-R59120 **Batch ID:** R59120 **Test Code:** SM4500-H, B **Units:** pH Units **Analysis Date:** 12/23/2016 10:05:00 A **Prep Date:**
Client ID: **Run ID:** ING-WET_161223A **SeqNo:** 992356

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
pH	6.01	0	pH Units	6	0	100	99	101	6.02	0.166	5	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *10-Jan-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1612041
Project: YRC North Reading

QC SUMMARY REPORT
Sample Duplicate

Sample ID: 1612041-03ad **Batch ID:** 27124 **Test Code:** E200.7 **Units:** µg/L **Analysis Date:** 12/27/2016 7:59:21 PM **Prep Date:** 12/27/2016
Client ID: Midfluent **Run ID:** ICP-OPTIMA_161227A **SeqNo:** 992303

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Iron	10.38	100	µg/L	0	0	0	0	0	12.34	17.2	20	J

Sample ID: 1612041-01BD **Batch ID:** R59145 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 1/4/2017 10:49:18 AM **Prep Date:**
Client ID: Influent **Run ID:** DIONEX_170104A **SeqNo:** 992754

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	387.2	10	mg/L	0	0	0	0	0	387	0.0542	20	

Sample ID: 1612041-03ad **Batch ID:** 27127 **Test Code:** E245.1 **Units:** µg/L **Analysis Date:** 12/28/2016 5:37:15 PM **Prep Date:** 12/28/2016
Client ID: Midfluent **Run ID:** HG-FIMS_161228A **SeqNo:** 992505

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	ND	0.20	µg/L	0	0	0	0	0	0	0	20	

Sample ID: 1612041-01BD **Batch ID:** R59120 **Test Code:** SM4500-H, B **Units:** pH Units **Analysis Date:** 12/23/2016 10:05:00 A **Prep Date:**
Client ID: Influent **Run ID:** ING-WET_161223A **SeqNo:** 992357

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
pH	6.51	0	pH Units	0	0	0	0	0	6.5	0.154	5	H

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *10-Jan-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1612041
Project: YRC North Reading

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID: 1612041-03ams **Batch ID:** 27124 **Test Code:** E200.7 **Units:** µg/L **Analysis Date:** 12/27/2016 8:06:00 PM **Prep Date:** 12/27/2016
Client ID: Midfluent **Run ID:** ICP-OPTIMA_161227A **SeqNo:** 992304

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Iron	3789	100	µg/L	4004	12.34	94.3	70	130	0			

Sample ID: 1612041-03amsd **Batch ID:** 27124 **Test Code:** E200.7 **Units:** µg/L **Analysis Date:** 12/27/2016 8:12:42 PM **Prep Date:** 12/27/2016
Client ID: Midfluent **Run ID:** ICP-OPTIMA_161227A **SeqNo:** 992305

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Iron	4094	100	µg/L	4004	12.34	102	70	130	3789	7.73	20	

Sample ID: 1612041-01BMS **Batch ID:** R59145 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 1/4/2017 10:49:18 AM **Prep Date:**
Client ID: Influent **Run ID:** DIONEX_170104A **SeqNo:** 992755

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	655.3	10	mg/L	250	387	107	65	134	0			

Sample ID: 1612041-03ams **Batch ID:** 27127 **Test Code:** E245.1 **Units:** µg/L **Analysis Date:** 12/28/2016 5:41:03 PM **Prep Date:** 12/28/2016
Client ID: Midfluent **Run ID:** HG-FIMS_161228A **SeqNo:** 992506

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.385	0.20	µg/L	4	0	110	70	130	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *10-Jan-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1612041
Project: YRC North Reading

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

Sample ID: 1612041-03amsd **Batch ID:** 27127 **Test Code:** E245.1 **Units:** µg/L **Analysis Date:** 12/28/2016 5:44:51 PM **Prep Date:** 12/28/2016
Client ID: Midfluent **Run ID:** HG-FIMS_161228A **SeqNo:** 992507

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.362	0.20	µg/L	4	0	109	70	130	4.385	0.532	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corporation

111 Herrick Street, Merrimack, NH 03054
TEL: (603) 424-2022 • FAX: (603) 429-8496
www.amrolabs.com

February 08, 2017

ANALYTICAL TEST RESULTS

Charles Castelluccio
Charles Castelluccio Consulting, LLC
62 Wescroft Road
Reading, MA 01867
TEL: (978) 505-1123
FAX:

Subject: YRC North Reading

Workorder No.: 1701022

Dear Charles Castelluccio:

AMRO Environmental Laboratories Corp. received 3 samples on 1/24/2017 for the analyses presented in the following report.

AMRO is accredited in accordance with NELAC and certifies that these test results meet all the requirements of NELAC, where applicable, unless otherwise noted in the case narrative.

The enclosed Sample Receipt Checklist details the condition of your sample(s) upon receipt. Please be advised that any unused sample volume and sample extracts will be stored for a period of 60 days from sample receipt date (90 days for samples from New York). After this time, AMRO will properly dispose of the remaining sample(s). If you require further analysis, or need the samples held for a longer period, please contact us immediately.

This report consists of a total of 28 pages. This letter is an integral part of your data report. All results in this project relate only to the sample(s) as received by the laboratory and documented in the Chain-of-Custody. This report shall not be reproduced except in full, without the written approval of the laboratory. If you have any questions regarding this project in the future, please refer to the Workorder Number above.

Sincerely,

Nancy Stewart
Vice President

State Certifications: NH (NELAC): 1001, MA: M-NH012, CT: PH-0758, NY: 11278 (NELAC), ME: NH012 and 1001.

Hard copy of the State Certification is available upon request.

AMRO Environmental Laboratories Corp.

Date: *08-Feb-17*

CLIENT: Charles Castelluccio Consulting, LLC
Project: YRC North Reading
Lab Order: 1701022
Date Received: 1/24/2017

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Collection Date	Collection Time
1701022-01A	Effluent	1/24/2017	10:15 AM
1701022-01B	Effluent	1/24/2017	10:15 AM
1701022-02A	Influent	1/24/2017	10:40 AM
1701022-02B	Influent	1/24/2017	10:40 AM
1701022-03A	Trip Blank	1/24/2017	12:00 AM

Lab Order: 1701022
Client: Charles Castelluccio Consulting, LLC
Project: YRC North Reading

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
1701022-01A	Effluent	1/24/2017 10:15:00 AM	Aqueous	MCP VOCs 8260C, EPA 5030C		1/24/2017	
				EPA 5030B	1/24/2017	R59212	
1701022-01B				Ion Chromatography, EPA 300		2/2/2017	
						R59249	
				Standard Methods - pH, Water		1/24/2017	
						R59207	
1701022-02A	Influent	1/24/2017 10:40:00 AM		MCP VOCs 8260C, EPA 5030C		1/24/2017	
				EPA 5030B	1/24/2017	R59212	
1701022-02B				Ion Chromatography, EPA 300		2/2/2017	
3						R59249	
				Standard Methods - pH, Water		1/24/2017	
						R59207	
1701022-03A	Trip Blank	1/24/2017		MCP VOCs 8260C, EPA 5030C		1/24/2017	
				EPA 5030B	1/24/2017	R59212	

AMRO Environmental Laboratories Corporation
111 Herrick Street
Merrimack, NH 03054

CHAIN-OF-CUSTODY RECORD

NO: 66900

Office: (603) 424-2022
Fax: (603) 429-8496
web: www.amrolabs.com

Project No.: YRC	Project Name: North Reading	Project State: MA	Project Manager: Charles Cottell	Samplers (Signature):	AMRO Project No.: 1701022
P.O.#:	Results Needed by: Standard				
QUOTE #:	Seal Intact? Yes No N/A				

Sample ID.:	Date/Time Sampled	Matrix	Total # of Cont. & Size	Comp.	Grab	VOC	pH Cl	Remarks
Effluent	1/24/17 1015	A	3		X	2	1	
Influent	1/24/17 1140	A	3		X	2	1	
trip blank		A	2			2		
4								

Preservative: Cl-HCl, MeOH, N-HN03, S-H2SO4, Na-NaOH, O- Other

Send Results To: charles.cottell.xc.id@gmail.com

PHONE #: 978-505-1123 FAX #:

E-mail:

PRIORITY TURNAROUND TIME AUTHORIZATION
Before submitting samples for expedited TAT, you must *have a coded AUTHORIZATION NUMBER*
AUTHORIZATION No.: BY:

METALS 8 RCRA ☐ 13 PP ☐ 23 TAL ☐ 14 MCP ☐
Method: 6010 ☐ 200.7 ☐ Other Metals:
Dissolved Metals Field Filtered? YES ☐ NO ☐

MCP Presumptive Certainty Required? YES ☒ NO ☐
MCP Methods Needed: YES ☐ NO ☒

Required Reporting Limits: S-1 ☐ GW-1 ☒ S-2 ☐ GW-2 ☐ S-3 ☐ GW-3 ☐ Other:

Relinquished By	Date/Time	Received By
	1/24/17 1210	
	1/24/17 1300	

AMRO report package level needed:
EDD required:

Please print clearly, legibly and completely. Samples can not be logged in and the turnaround time clock will not start until any ambiguities are resolved.

Samples arriving after 12:00 noon will be tracked and billed as received on the following day.

AMRO policy requires notification in writing to the laboratory in cases where the samples were collected from highly contaminated sites.

KNOWN SITE CONTAMINATION:

White: Lab Copy Yellow: Client Copy

SHEET 1 OF 1

AMRO Environmental Laboratories Corporation

SAMPLE RECEIPT CHECKLIST

111 Herrick Street
Merrimack, NH 03054
(603) 424-2022

Client: Charles Castelluccio
Project Name: YRC North Reading
Ship via: (circle one) Fed Ex., UPS, AMRO Courier,
Hand Del., Other Courier, Other:

AMRO ID: 1701022
Date Rec.: 1-24-17
Date Due: 1-31-17

Items to be Checked Upon Receipt	Yes	No	NA	Comments
1. Army Samples received in individual plastic bags?			✓	
2. Custody Seals present?			✓	
3. Custody Seals Intact?			✓	
4. Air Bill included in folder if received?				
5. Is COC included with samples?	✓			
6. Is COC signed and dated by client?	✓			
7. Laboratory receipt temperature. TEMP = 5°C Samples rec. with ice ✓ ice packs___ neither___				
8. Were samples received the same day they were sampled? Is client temperature = or <6°C ? **If no obtain authorization from the client for the analyses.** **Client authorization from: Date: Obtained by:**	✓ ✓			
9. Is the COC filled out correctly and completely?	✓			
10. Does the info on the COC match the samples?	✓			
11. Were samples rec. within holding time?	✓			
12. Were all samples properly labeled?	✓			
13. Were all samples properly preserved?	✓			
14. Were proper sample containers used?	✓			
15. Were all samples received intact? (none broken or leaking)	✓			
16. Were VOA vials rec. with no air bubbles?	✓			
17. Were the sample volumes sufficient for requested analysis?	✓			
18. Were all samples received?	✓			
19. VPH and VOA Soils only:			✓	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container)				
Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCore, B=Bulk, D= DI water				
If M , SB, DI:				
Does preservative cover the soil?				
Does preservation level come close to the fill line on the vial?				
Date/Time DI Preserved vials Frozen on: _____				
Frozen by Client?				
Were vials provided by AMRO?				
If NO then weights MUST be obtained from client				
Was dry weight aliquot provided?				
If NO then notified client and inform the VOA lab ASAP.				
20. Subcontracted Samples:			✓	
What samples sent:				
Where sent:				
Date:				
Analysis:				
TAT:				
21. Information entered into:				
Internal Tracking Log?	✓			
Dry Weight Log?			✓	
Client Log?			✓	
Composite Log?			✓	
Filtration Log?			✓	

Received By: [illegible] Date: 1-24-17 Logged in By: [illegible] Date: 1-24-17
Labeled By: [illegible] Date: 1-24-17 Checked By: SM Date: 1/25/17

NA= Not Applicable

AMRO Environmental
Laboratories Corporation

111 Herrick Street
Merrimack, NH 03054
(603) 424-2022

Please Circle if:
Sample= Soil
Sample= Waste

AMRO ID: 1701022

Sample ID	Analysis	Volume Sample	Preserv. Listed	Initial pH*	Acceptable? Y or N	List Preserv. Added by AMRO	Solution ID # of Preserv.	Volume Preservative Added	Final adjusted pH	Final adjusted pH (after 16 or 24 hours)
01A → 03A	VOC	2x40ml	HCl	—	—					
01B → 02B	pH, Cl⁻	500ml	none	analyst checked						

Sample ID	Analysis	Volume Sample	Preserv. Listed	Initial TRC	Acceptable? Y or N	List Preserv. Added by AMRO	Solution ID # of Preserv.	Volume Preservative Added	Final adjusted TRC	Acceptable? Y or N

***** = If the laboratory preserves the drinking water sample (s) for EPA Method 200 series, sample (s) should be held at least 16 hours prior to analysis or 24 hours for water sample (s).*

pH Checked By: Q Date: 1/24/17 pH adjusted By: ________ Date: ________

pH Checked By: ________ Date: ________ pH adj.(16 or 24hrs)By: ________ Date: ________

GC/MS VOLATILES- 8260C:

1. A quadratic regression was used for Chloroethane in the Initial Calibration analyzed on V-3 12/05/16.

2. 2-Hexanone recovered outside the control limits (+/-20%) in the Continuing Calibration Verification Standard analyzed on V-3 01/24/17.

3. A Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were performed on 01/24/17 on V-3 (Batch ID: R59212). All %Rs and RPDs were within the laboratory control limits with the following exception(s):

3.1 The %R for 1 analyte out of 71 analytes in the LCSD was outside the control limits.

4. No analytical or quality issues were noted, other than those described above or in the Data Comment page.

WET CHEMISTRY:

1. The samples for pH analysis were received outside the method recommended holding time (15-minutes).

2. No analytical or quality issues were noted, other than those described above or in the Data Comment page.

MassDEP Analytical Protocol Certification Form

Laboratory Name: AMRO Environmental Lab. Corp. Project #:

Project Location: YRC North Reading RTN:

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

1701022-01-03

Matrices: ☒ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

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 ☐	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	VPH, EPH, APH, and TO-15 only: 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). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No N/A ☐ 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[1]

***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[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 laboratory 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:** Vice President

Printed Name: Nancy Stewart **Date:** 2-8-17

DATA COMMENT PAGE

Organic Data Qualifiers

ND	Indicates compound was analyzed for, but not detected at or above the reporting limit.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than the method detection limit.
H	Method prescribed holding time exceeded.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
B	This flag is used when the analyte is found in the associated blank as well as in the sample.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
#	See Case Narrative
Q	RPD between signal 1 and signal 2 >40%.

Micro Data Qualifiers

TNTC	Too numerous to count

Inorganic Data Qualifiers

ND or U	Indicates element was analyzed for, but not detected at or above the reporting limit.
J	Indicates a value greater than or equal to the method detection limit, but less than the quantitation limit.
H	Indicates analytical holding time exceedance.
B	Indicates that the analyte is found in the associated blank, as well as in the sample.
MSA	Indicates value determined by the Method of Standard Addition
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
PS	The analyte was below the Reporting Limit but has significant matrix interference as noted by the poor recovery of the Post Digestion Spike.
#	See Case Narrative
*	MCL Exceeded

Report Comments:

1. Soil, sediment and sludge sample results are reported on a "dry weight" basis.
2. Reporting limits are adjusted for sample size used, dilutions and moisture content, if applicable.

AMRO Environmental Laboratories Corp.

Date: *08-Feb-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Effluent
Lab Order:	1701022	**Collection Date:**	1/24/2017 10:15:00 AM
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1701022-01A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY MCP MET SW8260C						Analyst: JK
Acetone	ND	10		µg/L	1	1/24/2017 5:39:00 PM
Tertiary Amyl Methyl Ether	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Benzene	ND	1.0		µg/L	1	1/24/2017 5:39:00 PM
Bromobenzene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Bromochloromethane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Bromoform	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Bromomethane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
sec-Butylbenzene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
n-Butylbenzene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
tert-Butylbenzene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Carbon disulfide	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Chlorobenzene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Dibromochloromethane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Chloroethane	ND	5.0		µg/L	1	1/24/2017 5:39:00 PM
Chloroform	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Chloromethane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
2-Chlorotoluene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	1/24/2017 5:39:00 PM
1,2-Dibromoethane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Dibromomethane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,3-Dichlorobenzene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	1	1/24/2017 5:39:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/24/2017 5:39:00 PM
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/24/2017 5:39:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/24/2017 5:39:00 PM
Diethyl ether	ND	5.0		µg/L	1	1/24/2017 5:39:00 PM

AMRO Environmental Laboratories Corp.

Date: *08-Feb-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Effluent
Lab Order:	1701022	**Collection Date:**	1/24/2017 10:15:00 AM
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1701022-01A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diisopropyl ether	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,4-Dioxane	ND	50		µg/L	1	1/24/2017 5:39:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Ethylbenzene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
2-Hexanone	ND	10		µg/L	1	1/24/2017 5:39:00 PM
Isopropylbenzene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
2-Butanone	ND	10		µg/L	1	1/24/2017 5:39:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/24/2017 5:39:00 PM
Methyl tert-butyl ether	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Methylene chloride	ND	5.0		µg/L	1	1/24/2017 5:39:00 PM
Naphthalene	ND	5.0		µg/L	1	1/24/2017 5:39:00 PM
n-Propylbenzene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Styrene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Tetrachloroethene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Tetrahydrofuran	ND	10		µg/L	1	1/24/2017 5:39:00 PM
Toluene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,2,4-Trichlorobenzene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,2,3-Trichlorobenzene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Trichloroethene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Vinyl chloride	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
o-Xylene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
m,p-Xylene	ND	2.0		µg/L	1	1/24/2017 5:39:00 PM
Surr: Dibromofluoromethane	96.2	70-130		%REC	1	1/24/2017 5:39:00 PM
Surr: 1,2-Dichloroethane-d4	112	70-130		%REC	1	1/24/2017 5:39:00 PM
Surr: Toluene-d8	92.2	70-130		%REC	1	1/24/2017 5:39:00 PM
Surr: 4-Bromofluorobenzene	89.4	70-130		%REC	1	1/24/2017 5:39:00 PM

AMRO Environmental Laboratories Corp.

Date: *08-Feb-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Influent
Lab Order:	1701022	**Collection Date:**	1/24/2017 10:40:00 AM
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1701022-02A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY MCP MET SW8260C						Analyst: JK
Acetone	ND	10		µg/L	1	1/24/2017 6:19:00 PM
Tertiary Amyl Methyl Ether	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Benzene	ND	1.0		µg/L	1	1/24/2017 6:19:00 PM
Bromobenzene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Bromochloromethane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Bromoform	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
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Chloroethane	ND	5.0		µg/L	1	1/24/2017 6:19:00 PM
Chloroform	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Chloromethane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
2-Chlorotoluene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
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1,3-Dichlorobenzene	2.4	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	1	1/24/2017 6:19:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/24/2017 6:19:00 PM
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/24/2017 6:19:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/24/2017 6:19:00 PM
Diethyl ether	ND	5.0		µg/L	1	1/24/2017 6:19:00 PM

AMRO Environmental Laboratories Corp.

Date: *08-Feb-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Influent
Lab Order:	1701022	**Collection Date:**	1/24/2017 10:40:00 AM
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1701022-02A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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1,4-Dioxane	ND	50		µg/L	1	1/24/2017 6:19:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Ethylbenzene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
2-Hexanone	ND	10		µg/L	1	1/24/2017 6:19:00 PM
Isopropylbenzene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
2-Butanone	ND	10		µg/L	1	1/24/2017 6:19:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/24/2017 6:19:00 PM
Methyl tert-butyl ether	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Methylene chloride	ND	5.0		µg/L	1	1/24/2017 6:19:00 PM
Naphthalene	ND	5.0		µg/L	1	1/24/2017 6:19:00 PM
n-Propylbenzene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Styrene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Tetrachloroethene	150	2.0		µg/L	1	1/24/2017 6:19:00 PM
Tetrahydrofuran	ND	10		µg/L	1	1/24/2017 6:19:00 PM
Toluene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,2,4-Trichlorobenzene	2.3	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,2,3-Trichlorobenzene	5.8	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Trichloroethene	6.6	2.0		µg/L	1	1/24/2017 6:19:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Vinyl chloride	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
o-Xylene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
m,p-Xylene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Surr: Dibromofluoromethane	93.8	70-130		%REC	1	1/24/2017 6:19:00 PM
Surr: 1,2-Dichloroethane-d4	109	70-130		%REC	1	1/24/2017 6:19:00 PM
Surr: Toluene-d8	94.4	70-130		%REC	1	1/24/2017 6:19:00 PM
Surr: 4-Bromofluorobenzene	87.9	70-130		%REC	1	1/24/2017 6:19:00 PM

AMRO Environmental Laboratories Corp.

Date: *08-Feb-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Trip Blank
Lab Order:	1701022	**Collection Date:**	1/24/2017
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1701022-03A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY MCP MET SW8260C						Analyst: JK
Acetone	ND	10		µg/L	1	1/24/2017 4:59:00 PM
Tertiary Amyl Methyl Ether	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Benzene	ND	1.0		µg/L	1	1/24/2017 4:59:00 PM
Bromobenzene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Bromochloromethane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Bromoform	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Bromomethane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
sec-Butylbenzene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
n-Butylbenzene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
tert-Butylbenzene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Carbon disulfide	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Chlorobenzene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Dibromochloromethane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Chloroethane	ND	5.0		µg/L	1	1/24/2017 4:59:00 PM
Chloroform	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Chloromethane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
2-Chlorotoluene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	1/24/2017 4:59:00 PM
1,2-Dibromoethane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Dibromomethane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,3-Dichlorobenzene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	1	1/24/2017 4:59:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	1/24/2017 4:59:00 PM
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/24/2017 4:59:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/24/2017 4:59:00 PM
Diethyl ether	ND	5.0		µg/L	1	1/24/2017 4:59:00 PM

AMRO Environmental Laboratories Corp.

Date: *08-Feb-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Trip Blank
Lab Order:	1701022	**Collection Date:**	1/24/2017
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1701022-03A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diisopropyl ether	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,4-Dioxane	ND	50		µg/L	1	1/24/2017 4:59:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Ethylbenzene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
2-Hexanone	ND	10		µg/L	1	1/24/2017 4:59:00 PM
Isopropylbenzene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
2-Butanone	ND	10		µg/L	1	1/24/2017 4:59:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/24/2017 4:59:00 PM
Methyl tert-butyl ether	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Methylene chloride	ND	5.0		µg/L	1	1/24/2017 4:59:00 PM
Naphthalene	ND	5.0		µg/L	1	1/24/2017 4:59:00 PM
n-Propylbenzene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Styrene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Tetrachloroethene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Tetrahydrofuran	ND	10		µg/L	1	1/24/2017 4:59:00 PM
Toluene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,2,4-Trichlorobenzene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,2,3-Trichlorobenzene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Trichloroethene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Vinyl chloride	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
o-Xylene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
m,p-Xylene	ND	2.0		µg/L	1	1/24/2017 4:59:00 PM
Surr: Dibromofluoromethane	94.1	70-130		%REC	1	1/24/2017 4:59:00 PM
Surr: 1,2-Dichloroethane-d4	109	70-130		%REC	1	1/24/2017 4:59:00 PM
Surr: Toluene-d8	95.3	70-130		%REC	1	1/24/2017 4:59:00 PM
Surr: 4-Bromofluorobenzene	89.0	70-130		%REC	1	1/24/2017 4:59:00 PM

AMRO Environmental Laboratories Corp.

Date: *26-Jan-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1701022
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

Sample ID: mb-01/24/17 **Batch ID:** R59212 **Test Code:** SW8260C **Units:** µg/L **Analysis Date:** 1/24/2017 4:19:00 PM **Prep Date:** 1/24/2017

Client ID: **Run ID:** V-3_170124A **SeqNo:** 993638

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	ND	10	µg/L									
Tertiary Amyl Methyl Ether	ND	2.0	µg/L									
Benzene	ND	1.0	µg/L									
Bromobenzene	ND	2.0	µg/L									
Bromochloromethane	ND	2.0	µg/L									
Bromodichloromethane	ND	2.0	µg/L									
Bromoform	ND	2.0	µg/L									
Bromomethane	ND	2.0	µg/L									
sec-Butylbenzene	ND	2.0	µg/L									
n-Butylbenzene	ND	2.0	µg/L									
tert-Butylbenzene	ND	2.0	µg/L									
Carbon disulfide	ND	2.0	µg/L									
Carbon tetrachloride	ND	2.0	µg/L									
Chlorobenzene	ND	2.0	µg/L									
Dibromochloromethane	ND	2.0	µg/L									
Chloroethane	ND	5.0	µg/L									
Chloroform	ND	2.0	µg/L									
Chloromethane	ND	2.0	µg/L									
2-Chlorotoluene	ND	2.0	µg/L									
4-Chlorotoluene	ND	2.0	µg/L									
1,2-Dibromo-3-chloropropane	ND	5.0	µg/L									
1,2-Dibromoethane	ND	2.0	µg/L									
Dibromomethane	ND	2.0	µg/L									
1,3-Dichlorobenzene	ND	2.0	µg/L									
1,2-Dichlorobenzene	ND	2.0	µg/L									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1701022
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

1,4-Dichlorobenzene	ND	2.0	µg/L
Dichlorodifluoromethane	ND	5.0	µg/L
1,1-Dichloroethane	ND	2.0	µg/L
1,2-Dichloroethane	ND	2.0	µg/L
1,1-Dichloroethene	ND	1.0	µg/L
cis-1,2-Dichloroethene	ND	2.0	µg/L
trans-1,2-Dichloroethene	ND	2.0	µg/L
1,2-Dichloropropane	ND	2.0	µg/L
1,3-Dichloropropane	ND	2.0	µg/L
2,2-Dichloropropane	ND	2.0	µg/L
1,1-Dichloropropene	ND	2.0	µg/L
cis-1,3-Dichloropropene	ND	1.0	µg/L
trans-1,3-Dichloropropene	ND	1.0	µg/L
Diethyl ether	ND	5.0	µg/L
Diisopropyl ether	ND	2.0	µg/L
1,4-Dioxane	ND	50	µg/L
Ethyl Tertiary Butyl Ether	ND	2.0	µg/L
Ethylbenzene	ND	2.0	µg/L
Hexachlorobutadiene	ND	2.0	µg/L
2-Hexanone	ND	10	µg/L
Isopropylbenzene	ND	2.0	µg/L
4-Isopropyltoluene	ND	2.0	µg/L
2-Butanone	ND	10	µg/L
4-Methyl-2-pentanone	ND	10	µg/L
Methyl tert-butyl ether	ND	2.0	µg/L
Methylene chloride	ND	5.0	µg/L
Naphthalene	ND	5.0	µg/L
n-Propylbenzene	ND	2.0	µg/L
Styrene	ND	2.0	µg/L
1,1,1,2-Tetrachloroethane	ND	2.0	µg/L
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1701022
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

Tetrachloroethene	ND	2.0	µg/L						
Tetrahydrofuran	ND	10	µg/L						
Toluene	ND	2.0	µg/L						
1,2,4-Trichlorobenzene	ND	2.0	µg/L						
1,2,3-Trichlorobenzene	ND	2.0	µg/L						
1,1,1-Trichloroethane	ND	2.0	µg/L						
1,1,2-Trichloroethane	ND	2.0	µg/L						
Trichloroethene	ND	2.0	µg/L						
Trichlorofluoromethane	ND	2.0	µg/L						
1,2,3-Trichloropropane	ND	2.0	µg/L						
1,2,4-Trimethylbenzene	ND	2.0	µg/L						
1,3,5-Trimethylbenzene	ND	2.0	µg/L						
Vinyl chloride	ND	2.0	µg/L						
o-Xylene	ND	2.0	µg/L						
m,p-Xylene	ND	2.0	µg/L						
Surr: Dibromofluoromethane	25.03	2.0	µg/L	25	0	100	70	130	0
Surr: 1,2-Dichloroethane-d4	29.81	2.0	µg/L	25	0	119	70	130	0
Surr: Toluene-d8	24.63	2.0	µg/L	25	0	98.5	70	130	0
Surr: 4-Bromofluorobenzene	23.48	2.0	µg/L	25	0	93.9	70	130	0

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: *26-Jan-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1701022
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: lcs-01/24/17 **Batch ID:** R59212 **Test Code:** SW8260C **Units:** µg/L **Analysis Date:** 1/24/2017 2:19:00 PM **Prep Date:** 1/24/2017

Client ID: **Run ID:** V-3_170124A **SeqNo:** 993640

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	43.79	10	µg/L	40	0	109	40	160	0			
Tertiary Amyl Methyl Ether	19.84	2.0	µg/L	20	0	99.2	70	130	0			
Benzene	19.23	1.0	µg/L	20	0	96.2	70	130	0			
Bromobenzene	21.59	2.0	µg/L	20	0	108	70	130	0			
Bromochloromethane	17.95	2.0	µg/L	20	0	89.8	70	130	0			
Bromodichloromethane	19.23	2.0	µg/L	20	0	96.2	70	130	0			
Bromoform	18.92	2.0	µg/L	20	0	94.6	70	130	0			
Bromomethane	16.97	2.0	µg/L	20	0	84.8	40	160	0			
sec-Butylbenzene	18.53	2.0	µg/L	20	0	92.6	70	130	0			
n-Butylbenzene	20.88	2.0	µg/L	20	0	104	70	130	0			
tert-Butylbenzene	20.24	2.0	µg/L	20	0	101	70	130	0			
Carbon disulfide	14.29	2.0	µg/L	20	0	71.5	70	130	0			
Carbon tetrachloride	18.43	2.0	µg/L	20	0	92.2	70	130	0			
Chlorobenzene	20.68	2.0	µg/L	20	0	103	70	130	0			
Dibromochloromethane	19.06	2.0	µg/L	20	0	95.3	70	130	0			
Chloroethane	14.02	5.0	µg/L	20	0	70.1	70	130	0			
Chloroform	18.87	2.0	µg/L	20	0	94.4	70	130	0			
Chloromethane	19.44	2.0	µg/L	20	0	97.2	40	160	0			
2-Chlorotoluene	21.4	2.0	µg/L	20	0	107	70	130	0			
4-Chlorotoluene	21.64	2.0	µg/L	20	0	108	70	130	0			
1,2-Dibromo-3-chloropropane	23	5.0	µg/L	20	0	115	70	130	0			
1,2-Dibromoethane	19.08	2.0	µg/L	20	0	95.4	70	130	0			
Dibromomethane	18.5	2.0	µg/L	20	0	92.5	70	130	0			
1,3-Dichlorobenzene	20.44	2.0	µg/L	20	0	102	70	130	0			
1,2-Dichlorobenzene	22.39	2.0	µg/L	20	0	112	70	130	0			

Qualifiers: ND - Not Detected at the Reporting Limit
S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1701022
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike

1,4-Dichlorobenzene	20.9	2.0	µg/L	20	0	104	70	130	0
Dichlorodifluoromethane	18.65	5.0	µg/L	20	0	93.3	40	160	0
1,1-Dichloroethane	18.79	2.0	µg/L	20	0	94	70	130	0
1,2-Dichloroethane	19.53	2.0	µg/L	20	0	97.6	70	130	0
1,1-Dichloroethene	18.3	1.0	µg/L	20	0	91.5	70	130	0
cis-1,2-Dichloroethene	18.62	2.0	µg/L	20	0	93.1	70	130	0
trans-1,2-Dichloroethene	18.94	2.0	µg/L	20	0	94.7	70	130	0
1,2-Dichloropropane	17.77	2.0	µg/L	20	0	88.8	70	130	0
1,3-Dichloropropane	20.82	2.0	µg/L	20	0	104	70	130	0
2,2-Dichloropropane	22.75	2.0	µg/L	20	0	114	70	130	0
1,1-Dichloropropene	18.3	2.0	µg/L	20	0	91.5	70	130	0
cis-1,3-Dichloropropene	17.43	1.0	µg/L	20	0	87.2	70	130	0
trans-1,3-Dichloropropene	17.29	1.0	µg/L	20	0	86.5	70	130	0
Diethyl ether	16.44	5.0	µg/L	20	0	82.2	70	130	0
Diisopropyl ether	18.51	2.0	µg/L	20	0	92.6	70	130	0
1,4-Dioxane	101.6	50	µg/L	100	0	102	40	160	0
Ethyl Tertiary Butyl Ether	19.99	2.0	µg/L	20	0	100	70	130	0
Ethylbenzene	20.43	2.0	µg/L	20	0	102	70	130	0
Hexachlorobutadiene	16.71	2.0	µg/L	20	0	83.6	70	130	0
2-Hexanone	49.61	10	µg/L	40	0	124	40	160	0
Isopropylbenzene	20.78	2.0	µg/L	20	0	104	70	130	0
4-Isopropyltoluene	20.77	2.0	µg/L	20	0	104	70	130	0
2-Butanone	48.23	10	µg/L	40	0	121	40	160	0
4-Methyl-2-pentanone	43.43	10	µg/L	40	0	109	40	160	0
Methyl tert-butyl ether	19.6	2.0	µg/L	20	0	98	70	130	0
Methylene chloride	20.93	5.0	µg/L	20	0	105	70	130	0
Naphthalene	21.2	5.0	µg/L	20	0	106	70	130	0
n-Propylbenzene	21.19	2.0	µg/L	20	0	106	70	130	0
Styrene	18.97	2.0	µg/L	20	0	94.8	70	130	0
1,1,1,2-Tetrachloroethane	19.96	2.0	µg/L	20	0	99.8	70	130	0
1,1,2,2-Tetrachloroethane	21.1	2.0	µg/L	20	0	106	70	130	0

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
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CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1701022
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Tetrachloroethene	20.93	2.0	µg/L	20	0	105	70	130	0
Tetrahydrofuran	17.58	10	µg/L	20	0	87.9	70	130	0
Toluene	19.48	2.0	µg/L	20	0	97.4	70	130	0
1,2,4-Trichlorobenzene	18.4	2.0	µg/L	20	0	92	70	130	0
1,2,3-Trichlorobenzene	21.27	2.0	µg/L	20	0	106	70	130	0
1,1,1-Trichloroethane	20.66	2.0	µg/L	20	0	103	70	130	0
1,1,2-Trichloroethane	18.58	2.0	µg/L	20	0	92.9	70	130	0
Trichloroethene	19.38	2.0	µg/L	20	0	96.9	70	130	0
Trichlorofluoromethane	21.67	2.0	µg/L	20	0	108	70	130	0
1,2,3-Trichloropropane	24.04	2.0	µg/L	20	0	120	70	130	0
1,2,4-Trimethylbenzene	21.73	2.0	µg/L	20	0	109	70	130	0
1,3,5-Trimethylbenzene	20.69	2.0	µg/L	20	0	103	70	130	0
Vinyl chloride	18.05	2.0	µg/L	20	0	90.2	70	130	0
o-Xylene	19.33	2.0	µg/L	20	0	96.7	70	130	0
m,p-Xylene	39.64	2.0	µg/L	40	0	99.1	70	130	0
Surr: Dibromofluoromethane	23.73	2.0	µg/L	25	0	94.9	70	130	0
Surr: 1,2-Dichloroethane-d4	24.84	2.0	µg/L	25	0	99.4	70	130	0
Surr: Toluene-d8	24.3	2.0	µg/L	25	0	97.2	70	130	0
Surr: 4-Bromofluorobenzene	23.03	2.0	µg/L	25	0	92.1	70	130	0

Qualifiers: ND - Not Detected at the Reporting Limit
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B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur
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CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1701022
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: lcsd-01/24/17 **Batch ID:** R59212 **Test Code:** SW8260C **Units:** µg/L **Analysis Date:** 1/24/2017 2:59:00 PM **Prep Date:** 1/24/2017
Client ID: **Run ID:** V-3_170124A **SeqNo:** 993639

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	43.36	10	µg/L	40	0	108	40	160	43.79	0.987	20	
Tertiary Amyl Methyl Ether	18.51	2.0	µg/L	20	0	92.6	70	130	19.84	6.94	20	
Benzene	18.12	1.0	µg/L	20	0	90.6	70	130	19.23	5.94	20	
Bromobenzene	20.88	2.0	µg/L	20	0	104	70	130	21.59	3.34	20	
Bromochloromethane	16.93	2.0	µg/L	20	0	84.6	70	130	17.95	5.85	20	
Bromodichloromethane	18.82	2.0	µg/L	20	0	94.1	70	130	19.23	2.16	20	
Bromoform	18.12	2.0	µg/L	20	0	90.6	70	130	18.92	4.32	20	
Bromomethane	15.6	2.0	µg/L	20	0	78	40	160	16.97	8.41	20	
sec-Butylbenzene	16.72	2.0	µg/L	20	0	83.6	70	130	18.53	10.3	20	
n-Butylbenzene	18.66	2.0	µg/L	20	0	93.3	70	130	20.88	11.2	20	
tert-Butylbenzene	19.09	2.0	µg/L	20	0	95.4	70	130	20.24	5.85	20	
Carbon disulfide	14.1	2.0	µg/L	20	0	70.5	70	130	14.29	1.34	20	
Carbon tetrachloride	18.26	2.0	µg/L	20	0	91.3	70	130	18.43	0.927	20	
Chlorobenzene	19.26	2.0	µg/L	20	0	96.3	70	130	20.68	7.11	20	
Dibromochloromethane	18.21	2.0	µg/L	20	0	91	70	130	19.06	4.56	20	
Chloroethane	12.29	5.0	µg/L	20	0	61.4	70	130	14.02	13.2	20	S
Chloroform	17.86	2.0	µg/L	20	0	89.3	70	130	18.87	5.5	20	
Chloromethane	18.75	2.0	µg/L	20	0	93.8	40	160	19.44	3.61	20	
2-Chlorotoluene	19.85	2.0	µg/L	20	0	99.2	70	130	21.4	7.52	20	
4-Chlorotoluene	20.25	2.0	µg/L	20	0	101	70	130	21.64	6.64	20	
1,2-Dibromo-3-chloropropane	20.44	5.0	µg/L	20	0	102	70	130	23	11.8	20	
1,2-Dibromoethane	18	2.0	µg/L	20	0	90	70	130	19.08	5.83	20	
Dibromomethane	17.58	2.0	µg/L	20	0	87.9	70	130	18.5	5.1	20	
1,3-Dichlorobenzene	18.87	2.0	µg/L	20	0	94.4	70	130	20.44	7.99	20	
1,2-Dichlorobenzene	20.24	2.0	µg/L	20	0	101	70	130	22.39	10.1	20	

Qualifiers: ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1701022
Project: YRC North Reading

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

1,4-Dichlorobenzene	19.29	2.0	µg/L	20	0	96.5	70	130	20.9	8.01	20
Dichlorodifluoromethane	17.04	5.0	µg/L	20	0	85.2	40	160	18.65	9.02	20
1,1-Dichloroethane	17.72	2.0	µg/L	20	0	88.6	70	130	18.79	5.86	20
1,2-Dichloroethane	18.82	2.0	µg/L	20	0	94.1	70	130	19.53	3.7	20
1,1-Dichloroethene	18.34	1.0	µg/L	20	0	91.7	70	130	18.3	0.218	20
cis-1,2-Dichloroethene	17.69	2.0	µg/L	20	0	88.4	70	130	18.62	5.12	20
trans-1,2-Dichloroethene	17.28	2.0	µg/L	20	0	86.4	70	130	18.94	9.17	20
1,2-Dichloropropane	17.21	2.0	µg/L	20	0	86	70	130	17.77	3.2	20
1,3-Dichloropropane	19.93	2.0	µg/L	20	0	99.7	70	130	20.82	4.37	20
2,2-Dichloropropane	20.51	2.0	µg/L	20	0	103	70	130	22.75	10.4	20
1,1-Dichloropropene	16.46	2.0	µg/L	20	0	82.3	70	130	18.3	10.6	20
cis-1,3-Dichloropropene	16.32	1.0	µg/L	20	0	81.6	70	130	17.43	6.58	20
trans-1,3-Dichloropropene	16.13	1.0	µg/L	20	0	80.6	70	130	17.29	6.94	20
Diethyl ether	15.98	5.0	µg/L	20	0	79.9	70	130	16.44	2.84	20
Diisopropyl ether	17.23	2.0	µg/L	20	0	86.2	70	130	18.51	7.16	20
1,4-Dioxane	113.6	50	µg/L	100	0	114	40	160	101.6	11.1	20
Ethyl Tertiary Butyl Ether	18.97	2.0	µg/L	20	0	94.8	70	130	19.99	5.24	20
Ethylbenzene	19.17	2.0	µg/L	20	0	95.8	70	130	20.43	6.36	20
Hexachlorobutadiene	14.13	2.0	µg/L	20	0	70.6	70	130	16.71	16.7	20
2-Hexanone	45.44	10	µg/L	40	0	114	40	160	49.61	8.77	20
Isopropylbenzene	19.06	2.0	µg/L	20	0	95.3	70	130	20.78	8.63	20
4-Isopropyltoluene	18.62	2.0	µg/L	20	0	93.1	70	130	20.77	10.9	20
2-Butanone	40.94	10	µg/L	40	0	102	40	160	48.23	16.4	20
4-Methyl-2-pentanone	39.33	10	µg/L	40	0	98.3	40	160	43.43	9.91	20
Methyl tert-butyl ether	18.95	2.0	µg/L	20	0	94.8	70	130	19.6	3.37	20
Methylene chloride	19.25	5.0	µg/L	20	0	96.2	70	130	20.93	8.36	20
Naphthalene	19.96	5.0	µg/L	20	0	99.8	70	130	21.2	6.03	20
n-Propylbenzene	19.37	2.0	µg/L	20	0	96.8	70	130	21.19	8.97	20
Styrene	17.81	2.0	µg/L	20	0	89	70	130	18.97	6.31	20
1,1,1,2-Tetrachloroethane	19.04	2.0	µg/L	20	0	95.2	70	130	19.96	4.72	20
1,1,2,2-Tetrachloroethane	20.55	2.0	µg/L	20	0	103	70	130	21.1	2.64	20

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
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CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1701022
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Tetrachloroethene	19.58	2.0	µg/L	20	0	97.9	70	130	20.93	6.67	20
Tetrahydrofuran	17.05	10	µg/L	20	0	85.2	70	130	17.58	3.06	20
Toluene	17.6	2.0	µg/L	20	0	88	70	130	19.48	10.1	20
1,2,4-Trichlorobenzene	16.81	2.0	µg/L	20	0	84	70	130	18.4	9.03	20
1,2,3-Trichlorobenzene	18.49	2.0	µg/L	20	0	92.5	70	130	21.27	14	20
1,1,1-Trichloroethane	19.18	2.0	µg/L	20	0	95.9	70	130	20.66	7.43	20
1,1,2-Trichloroethane	17.12	2.0	µg/L	20	0	85.6	70	130	18.58	8.18	20
Trichloroethene	18.1	2.0	µg/L	20	0	90.5	70	130	19.38	6.83	20
Trichlorofluoromethane	20.55	2.0	µg/L	20	0	103	70	130	21.67	5.31	20
1,2,3-Trichloropropane	22.82	2.0	µg/L	20	0	114	70	130	24.04	5.21	20
1,2,4-Trimethylbenzene	20.03	2.0	µg/L	20	0	100	70	130	21.73	8.14	20
1,3,5-Trimethylbenzene	18.85	2.0	µg/L	20	0	94.2	70	130	20.69	9.31	20
Vinyl chloride	15.26	2.0	µg/L	20	0	76.3	70	130	18.05	16.8	20
o-Xylene	17.94	2.0	µg/L	20	0	89.7	70	130	19.33	7.46	20
m,p-Xylene	36.92	2.0	µg/L	40	0	92.3	70	130	39.64	7.11	20
Surr: Dibromofluoromethane	24.05	2.0	µg/L	25	0	96.2	70	130	0	0	0
Surr: 1,2-Dichloroethane-d4	27.25	2.0	µg/L	25	0	109	70	130	0	0	0
Surr: Toluene-d8	23.48	2.0	µg/L	25	0	93.9	70	130	0	0	0
Surr: 4-Bromofluorobenzene	23.07	2.0	µg/L	25	0	92.3	70	130	0	0	0

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AMRO Environmental Laboratories Corp.

Date: *08-Feb-17*

CLIENT: Charles Castelluccio Consulting, LLC
Project: YRC North Reading
Lab Order: 1701022

Lab ID: 1701022-01
Collection Date: 1/24/2017 10:15:00 AM
Collection Time:
Client Sample ID: Effluent
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ION CHROMATOGRAPHY		**E300**				Analyst: **AL**
Chloride	330	10		mg/L	20	2/2/2017
PH		**SM4500-H, B**				Analyst: **BZM**
pH	7.8	0	H	pH Units	1	1/24/2017 1:10:00 PM

Lab ID: 1701022-02
Collection Date: 1/24/2017 10:40:00 AM
Collection Time:
Client Sample ID: Influent
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ION CHROMATOGRAPHY		**E300**				Analyst: **AL**
Chloride	320	10		mg/L	20	2/2/2017
PH		**SM4500-H, B**				Analyst: **BZM**
pH	6.8	0	H	pH Units	1	1/24/2017 1:10:00 PM

AMRO Environmental Laboratories Corp.

Date: *08-Feb-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1701022
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

Sample ID: MB-R59249 **Batch ID:** R59249 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 2/2/2017 **Prep Date:**
Client ID: **Run ID:** DIONEX_170202A **SeqNo:** 994129

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	ND	0.50	mg/L									

Qualifiers:
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1701022
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: LCS-R59249 **Batch ID:** R59249 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 2/2/2017 **Prep Date:**
Client ID: **Run ID:** DIONEX_170202A **SeqNo:** 994130

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	12.45	0.50	mg/L	12.5	0	99.6	89	110	0			

Sample ID: lcsd-r59249 **Batch ID:** R59249 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 2/2/2017 **Prep Date:**
Client ID: **Run ID:** DIONEX_170202A **SeqNo:** 994144

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	12.44	0.50	mg/L	12.5	0	99.5	89	110	12.45	0.0715	20	

Sample ID: LCS-R59207 **Batch ID:** R59207 **Test Code:** SM4500-H, B **Units:** pH Units **Analysis Date:** 1/24/2017 1:10:00 PM **Prep Date:**
Client ID: **Run ID:** ING-WET_170124A **SeqNo:** 993597

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
pH	6.04	0	pH Units	6	0	101	99	101	0			

Sample ID: LCSD-R59207 **Batch ID:** R59207 **Test Code:** SM4500-H, B **Units:** pH Units **Analysis Date:** 1/24/2017 1:10:00 PM **Prep Date:**
Client ID: **Run ID:** ING-WET_170124A **SeqNo:** 993598

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
pH	6.05	0	pH Units	6	0	101	99	101	6.04	0.165	5	

Qualifiers:
ND - Not Detected at the Reporting Limit
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RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *08-Feb-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1701022
Project: YRC North Reading

QC SUMMARY REPORT
Sample Duplicate

Sample ID: 1701022-01BD **Batch ID:** R59207 **Test Code:** SM4500-H, B **Units:** pH Units **Analysis Date:** 1/24/2017 1:10:00 PM **Prep Date:**
Client ID: Effluent **Run ID:** ING-WET_170124A **SeqNo:** 993600

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
pH	7.89	0	pH Units	0	0	0	0	0	7.83	0.763	5	H

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corporation

111 Herrick Street, Merrimack, NH 03054
TEL: (603) 424-2022 • FAX: (603) 429-8496
www.amrolabs.com

March 13, 2017

ANALYTICAL TEST RESULTS

Charles Castelluccio
Charles Castelluccio Consulting, LLC
62 Wescroft Road
Reading, MA 01867
TEL: (978) 505-1123
FAX:

Subject: YRC North Reading

Workorder No.: 1702023

Dear Charles Castelluccio:

AMRO Environmental Laboratories Corp. received 3 samples on 2/22/2017 for the analyses presented in the following report.

AMRO is accredited in accordance with NELAC and certifies that these test results meet all the requirements of NELAC, where applicable, unless otherwise noted in the case narrative.

The enclosed Sample Receipt Checklist details the condition of your sample(s) upon receipt. Please be advised that any unused sample volume and sample extracts will be stored for a period of 60 days from sample receipt date (90 days for samples from New York). After this time, AMRO will properly dispose of the remaining sample(s). If you require further analysis, or need the samples held for a longer period, please contact us immediately.

This report consists of a total of 28 pages. This letter is an integral part of your data report. All results in this project relate only to the sample(s) as received by the laboratory and documented in the Chain-of-Custody. This report shall not be reproduced except in full, without the written approval of the laboratory. If you have any questions regarding this project in the future, please refer to the Workorder Number above.

Sincerely,

Nancy Stewart
Vice President

State Certifications: NH (NELAC): 1001, MA: M-NH012, CT: PH-0758, NY: 11278 (NELAC), ME: NH012 and 1001.

Hard copy of the State Certification is available upon request.

AMRO Environmental Laboratories Corp.

Date: *06-Mar-17*

CLIENT: Charles Castelluccio Consulting, LLC
Project: YRC North Reading
Lab Order: 1702023
Date Received: 2/22/2017

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Collection Date	Collection Time
1702023-01A	Effluent	2/22/2017	9:05 AM
1702023-01B	Effluent	2/22/2017	9:05 AM
1702023-02A	Influent	2/22/2017	9:20 AM
1702023-02B	Influent	2/22/2017	9:20 AM
1702023-03A	Trip Blank	2/22/2017	12:00 AM

AMRO Environmental Laboratories Corp.

06-Mar-17

Lab Order: 1702023
Client: Charles Castelluccio Consulting, LLC
Project: YRC North Reading

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
1702023-01A	Effluent	2/22/2017 9:05:00 AM	Aqueous	MCP VOCs 8260C, EPA 5030C		2/22/2017	
				EPA 5030B	2/22/2017	R59306	
1702023-01B				Ion Chromatography, EPA 300		2/22/2017	
						R59305	
				Standard Methods - pH, Water		2/22/2017	
						R59318	
1702023-02A	Influent	2/22/2017 9:20:00 AM		MCP VOCs 8260C, EPA 5030C		2/22/2017	
				EPA 5030B	2/22/2017	R59306	
1702023-02B				Ion Chromatography, EPA 300		2/22/2017	
						R59305	
				Standard Methods - pH, Water		2/22/2017	
						R59318	
1702023-03A	Trip Blank	2/22/2017		MCP VOCs 8260C, EPA 5030C		2/22/2017	
				EPA 5030B	2/22/2017	R59306	

AMRO Environmental Laboratories Corporation
111 Herrick Street
Merrimack, NH 03054

CHAIN-OF-CUSTODY RECORD

NO: 66901

Office: (603) 424-2022
Fax: (603) 429-8496
web: www.amrolabs.com

Project No.:	Project Name: YRC North Reading	Project State: MA	Project Manager: C Castellucio	Samplers (Signature):	AMRO Project No.: 1702023
P.O.#:	Results Needed by: Standard				
QUOTE #:	Seal Intact? Yes No N/A				

Sample ID.:	Date/Time Sampled	Matrix	Total # of Cont. & Size	Comp.	Grab	REQUESTED ANALYSES: VOC	8260 CL	Remarks
Effluent	2/22/17 905	WW	3		X	2	1	
Influent	2/22/17 920	WW	3		X	2	1	
trip blank						2		

Preservative: Cl-HCl, MeOH, N-HN03, S-H2SO4, Na-NaOH, O- Other — HCl

Send Results To: Chris.Castellucio@gmail.com

PHONE #: 978 505 1123 FAX #:

E-mail:

PRIORITY TURNAROUND TIME AUTHORIZATION
Before submitting samples for expedited TAT, you must *have a coded AUTHORIZATION NUMBER*
AUTHORIZATION No.: BY:

METALS 8 RCRA ☐ 13 PP ☐ 23 TAL ☐ 14 MCP ☐
Method: 6010 ☐ 200.7 ☐ Other Metals:
Dissolved Metals Field Filtered? YES ☐ NO ☐

MCP Presumptive Certainty Required? YES ☒ NO ☐

MCP Methods Needed: YES ☐ NO ☒

Required Reporting Limits: S-1 ☐ GW-1 ☒ S-2 ☐ GW-2 ☐ S-3 ☐ GW-3 ☐ Other:

AMRO report package level needed:

EDD required:

Relinquished By	Date/Time	Received By
	2/22/17 1215	W N Dawson
W N Dawson	2/23/17 1305	

Please print clearly, legibly and completely. Samples can not be logged in and the turnaround time clock will not start until any ambiguities are resolved.

Samples arriving after 12:00 noon will be tracked and billed as received on the following day.

AMRO policy requires notification in writing to the laboratory in cases where the samples were collected from highly contaminated sites.

KNOWN SITE CONTAMINATION: VOC

White: Lab Copy Yellow: Client Copy

SHEET 1 OF

AMROCOC2004, Rev.3 08/18/04

Laboratories Corporation

SAMPLE RECEIPT CHECKLIST

111 Herrick Street
Merrimack, NH 03054
(603) 424-2022

Client: CHC
Project Name: VRC North Reading
Ship via: (circle one) Fed Ex., UPS, AMRO Courier, Hand Del., Other Courier, Other:

AMRO ID: 17U2023
Date Rec.: 2/22/17
Date Due: 2/27/17

Items to be Checked Upon Receipt	Yes	No	NA	Comments
1. Army Samples received in individual plastic bags?			✓	
2. Custody Seals present?			✓	
3. Custody Seals Intact?			✓	
4. Air Bill included in folder if received?			✓	
5. Is COC included with samples?			✓	
6. Is COC signed and dated by client?	✓			
7. Laboratory receipt temperature. TEMP = 3°C	✓			
Samples rec. with ice ✓ ice packs ___ neither ___				
8. Were samples received the same day they were sampled?				
Is client temperature = or <6°C ?	✓			
If no obtain authorization from the client for the analyses.				
Client authorization from: Date: Obtained by:				
9. Is the COC filled out correctly and completely?	✓			
10. Does the info on the COC match the samples?	✓			
11. Were samples rec. within holding time?	✓			
12. Were all samples properly labeled?	✓			
13. Were all samples properly preserved?	✓			
14. Were proper sample containers used?	✓			
15. Were all samples received intact? (none broken or leaking)	✓			
16. Were VOA vials rec. with no air bubbles?	✓			
17. Were the sample volumes sufficient for requested analysis?	✓			
18. Were all samples received?	✓			
19. VPH and VOA Soils only:			✓	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container)				
Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCore, B=Bulk, D= DI water				
If M , SB, DI:				
Does preservative cover the soil?				
Does preservation level come close to the fill line on the vial?				
Date/Time DI Preserved vials Frozen on:				
Frozen by Client?				
Were vials provided by AMRO?				
If NO then weights MUST be obtained from client				
Was dry weight aliquot provided?				
If NO then notified client and inform the VOA lab ASAP.				
20. Subcontracted Samples:			✓	
What samples sent:				
Where sent:				
Date:				
Analysis:				
TAT:				
21. Information entered into:				
Internal Tracking Log?	✓			
Dry Weight Log?			✓	
Client Log?			✓	
Composite Log?			✓	
Filtration Log?			✓	

Received By: NS Date: 2/22/17
Labeled By: NS Date: 2/22/17
Logged in By: NS Date: 2/22/17
Checked By: MNB Date: 2/23/17

NA= Not Applicable

AMRO Environmental Laboratories Corporation

111 Herrick Street
Merrimack, NH 03054
(603) 424-2022

Please Circle if:
Sample= Soil
Sample= Waste

AMRO ID: 1702023

Sample ID	Analysis	Volume Sample	Preserv. Listed	Initial pH*	Acceptable? Y or N	List Preserv. Added by AMRO	Solution ID # of Preserv.	Volume Preservative Added	Final adjusted pH	Final adjusted pH (after 16 or 24 hours)
01A-03A	VOC	2x40ml	HCl	—	—					
01B-02b	Chlor.4	pH 1 x500	—	2	y					

Sample ID	Analysis	Volume Sample	Preserv. Listed	Initial TRC	Acceptable? Y or N	List Preserv. Added by AMRO	Solution ID # of Preserv.	Volume Preservative Added	Final adjusted TRC	Acceptable? Y or N

** = If the laboratory preserves the drinking water sample (s) for EPA Method 200 series, sample (s) should be held at least 16 hours prior to analysis or 24 hours for water sample (s).*

pH Checked By: MMB Date: 2/22/17 pH adjusted By: _____ Date: _____

pH Checked By: _____ Date: _____ pH adj.(16 or 24hrs)By: _____ Date: _____

GC/MS VOLATILES- 8260C:

1. A quadratic regression was used for Acetone and Bromomethane in the Initial Calibration analyzed on V-3 02/21/17.

2. 1,1,1-Trichloroethane recovered outside the control limits (+/-20%) in the Continuing Calibration Verification Standard analyzed on V-3 02/22/17.

3. A Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were performed on 02/22/17 on V-3 (Batch ID: R59306). All %Rs and RPDs were within the laboratory control limits with the following exception(s):

3.1 The RPD for 2 analytes out of 71 analytes were outside the control limits.

4. No analytical or quality issues were noted, other than those described above or in the Data Comment page.

WET CHEMISTRY:

1. The samples for pH were received past 15 minutes holding time.

2. No analytical or quality issues were noted, other than those described above or in the Data Comment page.

MassDEP Analytical Protocol Certification Form

Laboratory Name: AMRO Environmental Lab. Corp. Project #:

Project Location: YRC North Reading RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
1702023-01-03

Matrices: [X] Groundwater/Surface Water [ ] Soil/Sediment [ ] Drinking Water [ ] Air [ ] Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A [X]	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 [ ]	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?	[X] Yes [ ] No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	[X] 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?	[X] 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"?	[X] Yes [ ] No
E	VPH, EPH, APH, and TO-15 only: 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). 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)?	[X] 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)?	[X] Yes [ ] No[1]

***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 [X] No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	[X] Yes [ ] No[1]

[1] *All negative responses must be addressed in an attached laboratory 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: [signature] Position: Vice President

Printed Name: Nancy Stewart

Date: 3-13-17

DATA COMMENT PAGE

Organic Data Qualifiers

ND	Indicates compound was analyzed for, but not detected at or above the reporting limit.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than the method detection limit.
H	Method prescribed holding time exceeded.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
B	This flag is used when the analyte is found in the associated blank as well as in the sample.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
#	See Case Narrative
Q	RPD between signal 1 and signal 2 >40%.

Micro Data Qualifiers

TNTC	Too numerous to count

Inorganic Data Qualifiers

ND or U	Indicates element was analyzed for, but not detected at or above the reporting limit.
J	Indicates a value greater than or equal to the method detection limit, but less than the quantitation limit.
H	Indicates analytical holding time exceedance.
B	Indicates that the analyte is found in the associated blank, as well as in the sample.
MSA	Indicates value determined by the Method of Standard Addition
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
PS	The analyte was below the Reporting Limit but has significant matrix interference as noted by the poor recovery of the Post Digestion Spike.
#	See Case Narrative
*	MCL Exceeded

Report Comments:

1. Soil, sediment and sludge sample results are reported on a "dry weight" basis.
2. Reporting limits are adjusted for sample size used, dilutions and moisture content, if applicable.

AMRO Environmental Laboratories Corp.

Date: *06-Mar-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Effluent
Lab Order:	1702023	**Collection Date:**	2/22/2017 9:05:00 AM
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1702023-01A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY MCP MET SW8260C						Analyst: JK
Acetone	ND	10		µg/L	1	2/22/2017 7:07:00 PM
Tertiary Amyl Methyl Ether	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Benzene	ND	1.0		µg/L	1	2/22/2017 7:07:00 PM
Bromobenzene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Bromochloromethane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Bromoform	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Bromomethane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
sec-Butylbenzene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
n-Butylbenzene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
tert-Butylbenzene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Carbon disulfide	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Chlorobenzene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Dibromochloromethane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Chloroethane	ND	5.0		µg/L	1	2/22/2017 7:07:00 PM
Chloroform	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Chloromethane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
2-Chlorotoluene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	2/22/2017 7:07:00 PM
1,2-Dibromoethane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Dibromomethane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,3-Dichlorobenzene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	1	2/22/2017 7:07:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/22/2017 7:07:00 PM
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2017 7:07:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2017 7:07:00 PM
Diethyl ether	ND	5.0		µg/L	1	2/22/2017 7:07:00 PM

AMRO Environmental Laboratories Corp.

Date: *06-Mar-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Effluent
Lab Order:	1702023	**Collection Date:**	2/22/2017 9:05:00 AM
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1702023-01A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diisopropyl ether	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,4-Dioxane	ND	50		µg/L	1	2/22/2017 7:07:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Ethylbenzene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
2-Hexanone	ND	10		µg/L	1	2/22/2017 7:07:00 PM
Isopropylbenzene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
2-Butanone	ND	10		µg/L	1	2/22/2017 7:07:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/22/2017 7:07:00 PM
Methyl tert-butyl ether	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Methylene chloride	ND	5.0		µg/L	1	2/22/2017 7:07:00 PM
Naphthalene	ND	5.0		µg/L	1	2/22/2017 7:07:00 PM
n-Propylbenzene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Styrene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Tetrachloroethene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Tetrahydrofuran	ND	10		µg/L	1	2/22/2017 7:07:00 PM
Toluene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,2,4-Trichlorobenzene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,2,3-Trichlorobenzene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Trichloroethene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Vinyl chloride	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
o-Xylene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
m,p-Xylene	ND	2.0		µg/L	1	2/22/2017 7:07:00 PM
Surr: Dibromofluoromethane	93.4	70-130		%REC	1	2/22/2017 7:07:00 PM
Surr: 1,2-Dichloroethane-d4	93.2	70-130		%REC	1	2/22/2017 7:07:00 PM
Surr: Toluene-d8	97.4	70-130		%REC	1	2/22/2017 7:07:00 PM
Surr: 4-Bromofluorobenzene	89.0	70-130		%REC	1	2/22/2017 7:07:00 PM

AMRO Environmental Laboratories Corp.

Date: *06-Mar-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Influent
Lab Order:	1702023	**Collection Date:**	2/22/2017 9:20:00 AM
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1702023-02A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY MCP MET SW8260C						Analyst: JK
Acetone	ND	10		µg/L	1	2/22/2017 7:44:00 PM
Tertiary Amyl Methyl Ether	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Benzene	ND	1.0		µg/L	1	2/22/2017 7:44:00 PM
Bromobenzene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Bromochloromethane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Bromoform	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Bromomethane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
sec-Butylbenzene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
n-Butylbenzene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
tert-Butylbenzene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Carbon disulfide	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Chlorobenzene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Dibromochloromethane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Chloroethane	ND	5.0		µg/L	1	2/22/2017 7:44:00 PM
Chloroform	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Chloromethane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
2-Chlorotoluene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	2/22/2017 7:44:00 PM
1,2-Dibromoethane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Dibromomethane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,3-Dichlorobenzene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	1	2/22/2017 7:44:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/22/2017 7:44:00 PM
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2017 7:44:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2017 7:44:00 PM
Diethyl ether	ND	5.0		µg/L	1	2/22/2017 7:44:00 PM

AMRO Environmental Laboratories Corp.

Date: *06-Mar-17*

CLIENT: Charles Castelluccio Consulting, LLC
Lab Order: 1702023
Project: YRC North Reading
Lab ID: 1702023-02A

Client Sample ID: Influent
Collection Date: 2/22/2017 9:20:00 AM
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diisopropyl ether	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,4-Dioxane	ND	50		µg/L	1	2/22/2017 7:44:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Ethylbenzene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
2-Hexanone	ND	10		µg/L	1	2/22/2017 7:44:00 PM
Isopropylbenzene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
2-Butanone	ND	10		µg/L	1	2/22/2017 7:44:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/22/2017 7:44:00 PM
Methyl tert-butyl ether	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Methylene chloride	ND	5.0		µg/L	1	2/22/2017 7:44:00 PM
Naphthalene	ND	5.0		µg/L	1	2/22/2017 7:44:00 PM
n-Propylbenzene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Styrene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Tetrachloroethene	71	2.0		µg/L	1	2/22/2017 7:44:00 PM
Tetrahydrofuran	ND	10		µg/L	1	2/22/2017 7:44:00 PM
Toluene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,2,4-Trichlorobenzene	2.0	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,2,3-Trichlorobenzene	2.3	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Trichloroethene	7.0	2.0		µg/L	1	2/22/2017 7:44:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Vinyl chloride	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
o-Xylene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
m,p-Xylene	ND	2.0		µg/L	1	2/22/2017 7:44:00 PM
Surr: Dibromofluoromethane	95.6	70-130		%REC	1	2/22/2017 7:44:00 PM
Surr: 1,2-Dichloroethane-d4	100	70-130		%REC	1	2/22/2017 7:44:00 PM
Surr: Toluene-d8	97.7	70-130		%REC	1	2/22/2017 7:44:00 PM
Surr: 4-Bromofluorobenzene	91.1	70-130		%REC	1	2/22/2017 7:44:00 PM

AMRO Environmental Laboratories Corp.

Date: *06-Mar-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Trip Blank
Lab Order:	1702023	**Collection Date:**	2/22/2017
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1702023-03A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY MCP MET SW8260C						Analyst: JK
Acetone	ND	10		µg/L	1	2/22/2017 6:30:00 PM
Tertiary Amyl Methyl Ether	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Benzene	ND	1.0		µg/L	1	2/22/2017 6:30:00 PM
Bromobenzene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Bromochloromethane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Bromoform	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Bromomethane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
sec-Butylbenzene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
n-Butylbenzene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
tert-Butylbenzene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Carbon disulfide	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Chlorobenzene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Dibromochloromethane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Chloroethane	ND	5.0		µg/L	1	2/22/2017 6:30:00 PM
Chloroform	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Chloromethane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
2-Chlorotoluene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	2/22/2017 6:30:00 PM
1,2-Dibromoethane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Dibromomethane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,3-Dichlorobenzene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	1	2/22/2017 6:30:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/22/2017 6:30:00 PM
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2017 6:30:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2017 6:30:00 PM
Diethyl ether	ND	5.0		µg/L	1	2/22/2017 6:30:00 PM

AMRO Environmental Laboratories Corp.

Date: *06-Mar-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Trip Blank
Lab Order:	1702023	**Collection Date:**	2/22/2017
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1702023-03A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diisopropyl ether	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,4-Dioxane	ND	50		µg/L	1	2/22/2017 6:30:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Ethylbenzene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
2-Hexanone	ND	10		µg/L	1	2/22/2017 6:30:00 PM
Isopropylbenzene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
2-Butanone	ND	10		µg/L	1	2/22/2017 6:30:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/22/2017 6:30:00 PM
Methyl tert-butyl ether	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Methylene chloride	ND	5.0		µg/L	1	2/22/2017 6:30:00 PM
Naphthalene	ND	5.0		µg/L	1	2/22/2017 6:30:00 PM
n-Propylbenzene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Styrene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Tetrachloroethene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Tetrahydrofuran	ND	10		µg/L	1	2/22/2017 6:30:00 PM
Toluene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,2,4-Trichlorobenzene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,2,3-Trichlorobenzene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Trichloroethene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Vinyl chloride	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
o-Xylene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
m,p-Xylene	ND	2.0		µg/L	1	2/22/2017 6:30:00 PM
Surr: Dibromofluoromethane	95.2	70-130		%REC	1	2/22/2017 6:30:00 PM
Surr: 1,2-Dichloroethane-d4	95.8	70-130		%REC	1	2/22/2017 6:30:00 PM
Surr: Toluene-d8	98.8	70-130		%REC	1	2/22/2017 6:30:00 PM
Surr: 4-Bromofluorobenzene	89.8	70-130		%REC	1	2/22/2017 6:30:00 PM

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1702023
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

Sample ID: mb-02/22/17 Batch ID: R59306 Test Code: SW8260C Units: µg/L Analysis Date: 2/22/2017 5:52:00 PM Prep Date: 2/22/2017
Client ID: Run ID: V-3_170222A SeqNo: 994904

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	ND	10	µg/L									
Tertiary Amyl Methyl Ether	ND	2.0	µg/L									
Benzene	ND	1.0	µg/L									
Bromobenzene	ND	2.0	µg/L									
Bromochloromethane	ND	2.0	µg/L									
Bromodichloromethane	ND	2.0	µg/L									
Bromoform	ND	2.0	µg/L									
Bromomethane	ND	2.0	µg/L									
sec-Butylbenzene	ND	2.0	µg/L									
n-Butylbenzene	ND	2.0	µg/L									
tert-Butylbenzene	ND	2.0	µg/L									
Carbon disulfide	ND	2.0	µg/L									
Carbon tetrachloride	ND	2.0	µg/L									
Chlorobenzene	ND	2.0	µg/L									
Dibromochloromethane	ND	2.0	µg/L									
Chloroethane	ND	5.0	µg/L									
Chloroform	ND	2.0	µg/L									
Chloromethane	ND	2.0	µg/L									
2-Chlorotoluene	ND	2.0	µg/L									
4-Chlorotoluene	ND	2.0	µg/L									
1,2-Dibromo-3-chloropropane	ND	5.0	µg/L									
1,2-Dibromoethane	ND	2.0	µg/L									
Dibromomethane	ND	2.0	µg/L									
1,3-Dichlorobenzene	ND	2.0	µg/L									
1,2-Dichlorobenzene	ND	2.0	µg/L									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1702023
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

1,4-Dichlorobenzene	ND	2.0	µg/L
Dichlorodifluoromethane	ND	5.0	µg/L
1,1-Dichloroethane	ND	2.0	µg/L
1,2-Dichloroethane	ND	2.0	µg/L
1,1-Dichloroethene	ND	1.0	µg/L
cis-1,2-Dichloroethene	ND	2.0	µg/L
trans-1,2-Dichloroethene	ND	2.0	µg/L
1,2-Dichloropropane	ND	2.0	µg/L
1,3-Dichloropropane	ND	2.0	µg/L
2,2-Dichloropropane	ND	2.0	µg/L
1,1-Dichloropropene	ND	2.0	µg/L
cis-1,3-Dichloropropene	ND	1.0	µg/L
trans-1,3-Dichloropropene	ND	1.0	µg/L
Diethyl ether	ND	5.0	µg/L
Diisopropyl ether	ND	2.0	µg/L
1,4-Dioxane	ND	50	µg/L
Ethyl Tertiary Butyl Ether	ND	2.0	µg/L
Ethylbenzene	ND	2.0	µg/L
Hexachlorobutadiene	ND	2.0	µg/L
2-Hexanone	ND	10	µg/L
Isopropylbenzene	ND	2.0	µg/L
4-Isopropyltoluene	ND	2.0	µg/L
2-Butanone	ND	10	µg/L
4-Methyl-2-pentanone	ND	10	µg/L
Methyl tert-butyl ether	ND	2.0	µg/L
Methylene chloride	ND	5.0	µg/L
Naphthalene	ND	5.0	µg/L
n-Propylbenzene	ND	2.0	µg/L
Styrene	ND	2.0	µg/L
1,1,1,2-Tetrachloroethane	ND	2.0	µg/L
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1702023
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

Tetrachloroethene	ND	2.0	µg/L						
Tetrahydrofuran	ND	10	µg/L						
Toluene	ND	2.0	µg/L						
1,2,4-Trichlorobenzene	ND	2.0	µg/L						
1,2,3-Trichlorobenzene	ND	2.0	µg/L						
1,1,1-Trichloroethane	ND	2.0	µg/L						
1,1,2-Trichloroethane	ND	2.0	µg/L						
Trichloroethene	ND	2.0	µg/L						
Trichlorofluoromethane	ND	2.0	µg/L						
1,2,3-Trichloropropane	ND	2.0	µg/L						
1,2,4-Trimethylbenzene	ND	2.0	µg/L						
1,3,5-Trimethylbenzene	ND	2.0	µg/L						
Vinyl chloride	ND	2.0	µg/L						
o-Xylene	ND	2.0	µg/L						
m,p-Xylene	ND	2.0	µg/L						
Surr: Dibromofluoromethane	23.31	2.0	µg/L	25	0	93.2	70	130	0
Surr: 1,2-Dichloroethane-d4	23.39	2.0	µg/L	25	0	93.6	70	130	0
Surr: Toluene-d8	24.68	2.0	µg/L	25	0	98.7	70	130	0
Surr: 4-Bromofluorobenzene	23.03	2.0	µg/L	25	0	92.1	70	130	0

Qualifiers: ND - Not Detected at the Reporting Limit
S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1702023
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: **lcs-02/22/17** Batch ID: **R59306** Test Code: **SW8260C** Units: **µg/L** Analysis Date: **2/22/2017 3:56:00 PM** Prep Date: **2/22/2017**
Client ID: Run ID: **V-3_170222A** SeqNo: **994906**

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	40.99	10	µg/L	40	0	102	40	160	0			
Tertiary Amyl Methyl Ether	17.78	2.0	µg/L	20	0	88.9	70	130	0			
Benzene	18.55	1.0	µg/L	20	0	92.8	70	130	0			
Bromobenzene	19.26	2.0	µg/L	20	0	96.3	70	130	0			
Bromochloromethane	15.45	2.0	µg/L	20	0	77.2	70	130	0			
Bromodichloromethane	17.76	2.0	µg/L	20	0	88.8	70	130	0			
Bromoform	16.11	2.0	µg/L	20	0	80.6	70	130	0			
Bromomethane	15.86	2.0	µg/L	20	0	79.3	40	160	0			
sec-Butylbenzene	18.26	2.0	µg/L	20	0	91.3	70	130	0			
n-Butylbenzene	18.5	2.0	µg/L	20	0	92.5	70	130	0			
tert-Butylbenzene	19.17	2.0	µg/L	20	0	95.8	70	130	0			
Carbon disulfide	14.57	2.0	µg/L	20	0	72.8	70	130	0			
Carbon tetrachloride	15.5	2.0	µg/L	20	0	77.5	70	130	0			
Chlorobenzene	17.3	2.0	µg/L	20	0	86.5	70	130	0			
Dibromochloromethane	17.22	2.0	µg/L	20	0	86.1	70	130	0			
Chloroethane	18.92	5.0	µg/L	20	0	94.6	70	130	0			
Chloroform	16.85	2.0	µg/L	20	0	84.2	70	130	0			
Chloromethane	16.41	2.0	µg/L	20	0	82	40	160	0			
2-Chlorotoluene	18.23	2.0	µg/L	20	0	91.2	70	130	0			
4-Chlorotoluene	18.37	2.0	µg/L	20	0	91.8	70	130	0			
1,2-Dibromo-3-chloropropane	20.06	5.0	µg/L	20	0	100	70	130	0			
1,2-Dibromoethane	17.7	2.0	µg/L	20	0	88.5	70	130	0			
Dibromomethane	17.56	2.0	µg/L	20	0	87.8	70	130	0			
1,3-Dichlorobenzene	18.74	2.0	µg/L	20	0	93.7	70	130	0			
1,2-Dichlorobenzene	18.47	2.0	µg/L	20	0	92.4	70	130	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1702023
Project: YRC North Reading

QC SUMMARY REPORT

Laboratory Control Spike

1,4-Dichlorobenzene	18.21	2.0	µg/L	20	0	91	70	130	0
Dichlorodifluoromethane	14.12	5.0	µg/L	20	0	70.6	40	160	0
1,1-Dichloroethane	17.24	2.0	µg/L	20	0	86.2	70	130	0
1,2-Dichloroethane	16.81	2.0	µg/L	20	0	84	70	130	0
1,1-Dichloroethene	18.22	1.0	µg/L	20	0	91.1	70	130	0
cis-1,2-Dichloroethene	16.97	2.0	µg/L	20	0	84.8	70	130	0
trans-1,2-Dichloroethene	17.71	2.0	µg/L	20	0	88.6	70	130	0
1,2-Dichloropropane	17.6	2.0	µg/L	20	0	88	70	130	0
1,3-Dichloropropane	17.93	2.0	µg/L	20	0	89.7	70	130	0
2,2-Dichloropropane	18	2.0	µg/L	20	0	90	70	130	0
1,1-Dichloropropene	17.94	2.0	µg/L	20	0	89.7	70	130	0
cis-1,3-Dichloropropene	18.59	1.0	µg/L	20	0	93	70	130	0
trans-1,3-Dichloropropene	16.26	1.0	µg/L	20	0	81.3	70	130	0
Diethyl ether	18.69	5.0	µg/L	20	0	93.4	70	130	0
Diisopropyl ether	17.66	2.0	µg/L	20	0	88.3	70	130	0
1,4-Dioxane	111.9	50	µg/L	100	0	112	40	160	0
Ethyl Tertiary Butyl Ether	17.63	2.0	µg/L	20	0	88.2	70	130	0
Ethylbenzene	18.45	2.0	µg/L	20	0	92.2	70	130	0
Hexachlorobutadiene	17.42	2.0	µg/L	20	0	87.1	70	130	0
2-Hexanone	41.76	10	µg/L	40	0	104	40	160	0
Isopropylbenzene	19.29	2.0	µg/L	20	0	96.5	70	130	0
4-Isopropyltoluene	18.89	2.0	µg/L	20	0	94.4	70	130	0
2-Butanone	42.79	10	µg/L	40	0	107	40	160	0
4-Methyl-2-pentanone	36.78	10	µg/L	40	0	92	40	160	0
Methyl tert-butyl ether	19.22	2.0	µg/L	20	0	96.1	70	130	0
Methylene chloride	14.35	5.0	µg/L	20	0	71.8	70	130	0
Naphthalene	19.94	5.0	µg/L	20	0	99.7	70	130	0
n-Propylbenzene	19.43	2.0	µg/L	20	0	97.2	70	130	0
Styrene	17.99	2.0	µg/L	20	0	90	70	130	0
1,1,1,2-Tetrachloroethane	16.89	2.0	µg/L	20	0	84.4	70	130	0
1,1,2,2-Tetrachloroethane	19.03	2.0	µg/L	20	0	95.2	70	130	0

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1702023
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Tetrachloroethene	18.09	2.0	µg/L	20	0	90.4	70	130	0
Tetrahydrofuran	16.98	10	µg/L	20	0	84.9	70	130	0
Toluene	17.63	2.0	µg/L	20	0	88.2	70	130	0
1,2,4-Trichlorobenzene	18.64	2.0	µg/L	20	0	93.2	70	130	0
1,2,3-Trichlorobenzene	17.63	2.0	µg/L	20	0	88.2	70	130	0
1,1,1-Trichloroethane	15.91	2.0	µg/L	20	0	79.6	70	130	0
1,1,2-Trichloroethane	17.11	2.0	µg/L	20	0	85.6	70	130	0
Trichloroethene	17.68	2.0	µg/L	20	0	88.4	70	130	0
Trichlorofluoromethane	16.8	2.0	µg/L	20	0	84	70	130	0
1,2,3-Trichloropropane	21.78	2.0	µg/L	20	0	109	70	130	0
1,2,4-Trimethylbenzene	19.25	2.0	µg/L	20	0	96.2	70	130	0
1,3,5-Trimethylbenzene	19.24	2.0	µg/L	20	0	96.2	70	130	0
Vinyl chloride	14.11	2.0	µg/L	20	0	70.6	70	130	0
o-Xylene	17.46	2.0	µg/L	20	0	87.3	70	130	0
m,p-Xylene	34.45	2.0	µg/L	40	0	86.1	70	130	0
Surr: Dibromofluoromethane	22.87	2.0	µg/L	25	0	91.5	70	130	0
Surr: 1,2-Dichloroethane-d4	24.78	2.0	µg/L	25	0	99.1	70	130	0
Surr: Toluene-d8	25.29	2.0	µg/L	25	0	101	70	130	0
Surr: 4-Bromofluorobenzene	23.62	2.0	µg/L	25	0	94.5	70	130	0

Qualifiers: ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1702023
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: lcsd-02/22/17 **Batch ID:** R59306 **Test Code:** SW8260C **Units:** µg/L **Analysis Date:** 2/22/2017 4:35:00 PM **Prep Date:** 2/22/2017
Client ID: **Run ID:** V-3_170222A **SeqNo:** 994905

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	40.53	10	µg/L	40	0	101	40	160	40.99	1.13	20	
Tertiary Amyl Methyl Ether	19.7	2.0	µg/L	20	0	98.5	70	130	17.78	10.2	20	
Benzene	21.07	1.0	µg/L	20	0	105	70	130	18.55	12.7	20	
Bromobenzene	20.97	2.0	µg/L	20	0	105	70	130	19.26	8.5	20	
Bromochloromethane	18.78	2.0	µg/L	20	0	93.9	70	130	15.45	19.5	20	
Bromodichloromethane	20.39	2.0	µg/L	20	0	102	70	130	17.76	13.8	20	
Bromoform	18.77	2.0	µg/L	20	0	93.8	70	130	16.11	15.3	20	
Bromomethane	17.63	2.0	µg/L	20	0	88.2	40	160	15.86	10.6	20	
sec-Butylbenzene	20.58	2.0	µg/L	20	0	103	70	130	18.26	11.9	20	
n-Butylbenzene	20.48	2.0	µg/L	20	0	102	70	130	18.5	10.2	20	
tert-Butylbenzene	21.9	2.0	µg/L	20	0	110	70	130	19.17	13.3	20	
Carbon disulfide	15.41	2.0	µg/L	20	0	77	70	130	14.57	5.6	20	
Carbon tetrachloride	18.91	2.0	µg/L	20	0	94.6	70	130	15.5	19.8	20	
Chlorobenzene	20.26	2.0	µg/L	20	0	101	70	130	17.3	15.8	20	
Dibromochloromethane	19.54	2.0	µg/L	20	0	97.7	70	130	17.22	12.6	20	
Chloroethane	23.45	5.0	µg/L	20	0	117	70	130	18.92	21.4	20	R
Chloroform	19.09	2.0	µg/L	20	0	95.4	70	130	16.85	12.5	20	
Chloromethane	16.49	2.0	µg/L	20	0	82.5	40	160	16.41	0.486	20	
2-Chlorotoluene	20.7	2.0	µg/L	20	0	104	70	130	18.23	12.7	20	
4-Chlorotoluene	20.52	2.0	µg/L	20	0	103	70	130	18.37	11.1	20	
1,2-Dibromo-3-chloropropane	20.79	5.0	µg/L	20	0	104	70	130	20.06	3.57	20	
1,2-Dibromoethane	19.97	2.0	µg/L	20	0	99.8	70	130	17.7	12.1	20	
Dibromomethane	19.77	2.0	µg/L	20	0	98.8	70	130	17.56	11.8	20	
1,3-Dichlorobenzene	20.65	2.0	µg/L	20	0	103	70	130	18.74	9.7	20	
1,2-Dichlorobenzene	20.4	2.0	µg/L	20	0	102	70	130	18.47	9.93	20	

Qualifiers: ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1702023
Project: YRC North Reading

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

1,4-Dichlorobenzene	20.49	2.0	µg/L	20	0	102	70	130	18.21	11.8	20
Dichlorodifluoromethane	14.9	5.0	µg/L	20	0	74.5	40	160	14.12	5.38	20
1,1-Dichloroethane	19.73	2.0	µg/L	20	0	98.6	70	130	17.24	13.5	20
1,2-Dichloroethane	19.04	2.0	µg/L	20	0	95.2	70	130	16.81	12.4	20
1,1-Dichloroethene	19.26	1.0	µg/L	20	0	96.3	70	130	18.22	5.55	20
cis-1,2-Dichloroethene	19.34	2.0	µg/L	20	0	96.7	70	130	16.97	13.1	20
trans-1,2-Dichloroethene	20.75	2.0	µg/L	20	0	104	70	130	17.71	15.8	20
1,2-Dichloropropane	19.29	2.0	µg/L	20	0	96.5	70	130	17.6	9.16	20
1,3-Dichloropropane	20.1	2.0	µg/L	20	0	100	70	130	17.93	11.4	20
2,2-Dichloropropane	21.14	2.0	µg/L	20	0	106	70	130	18	16	20
1,1-Dichloropropene	20.63	2.0	µg/L	20	0	103	70	130	17.94	13.9	20
cis-1,3-Dichloropropene	20.66	1.0	µg/L	20	0	103	70	130	18.59	10.5	20
trans-1,3-Dichloropropene	18.56	1.0	µg/L	20	0	92.8	70	130	16.26	13.2	20
Diethyl ether	20.15	5.0	µg/L	20	0	101	70	130	18.69	7.52	20
Diisopropyl ether	20.03	2.0	µg/L	20	0	100	70	130	17.66	12.6	20
1,4-Dioxane	105	50	µg/L	100	0	105	40	160	111.9	6.42	20
Ethyl Tertiary Butyl Ether	19.4	2.0	µg/L	20	0	97	70	130	17.63	9.56	20
Ethylbenzene	21.38	2.0	µg/L	20	0	107	70	130	18.45	14.7	20
Hexachlorobutadiene	18.98	2.0	µg/L	20	0	94.9	70	130	17.42	8.57	20
2-Hexanone	45.49	10	µg/L	40	0	114	40	160	41.76	8.55	20
Isopropylbenzene	22.18	2.0	µg/L	20	0	111	70	130	19.29	13.9	20
4-Isopropyltoluene	21.44	2.0	µg/L	20	0	107	70	130	18.89	12.6	20
2-Butanone	47.18	10	µg/L	40	0	118	40	160	42.79	9.76	20
4-Methyl-2-pentanone	41.28	10	µg/L	40	0	103	40	160	36.78	11.5	20
Methyl tert-butyl ether	20.87	2.0	µg/L	20	0	104	70	130	19.22	8.23	20
Methylene chloride	14.58	5.0	µg/L	20	0	72.9	70	130	14.35	1.59	20
Naphthalene	21.58	5.0	µg/L	20	0	108	70	130	19.94	7.9	20
n-Propylbenzene	22.29	2.0	µg/L	20	0	111	70	130	19.43	13.7	20
Styrene	20.29	2.0	µg/L	20	0	101	70	130	17.99	12	20
1,1,1,2-Tetrachloroethane	18.99	2.0	µg/L	20	0	95	70	130	16.89	11.7	20
1,1,2,2-Tetrachloroethane	21.04	2.0	µg/L	20	0	105	70	130	19.03	10	20

Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1702023
Project: YRC North Reading

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Tetrachloroethene	20.65	2.0	µg/L	20	0	103	70	130	18.09	13.2	20	
Tetrahydrofuran	22.99	10	µg/L	20	0	115	70	130	16.98	30.1	20	R
Toluene	20.39	2.0	µg/L	20	0	102	70	130	17.63	14.5	20	
1,2,4-Trichlorobenzene	20.38	2.0	µg/L	20	0	102	70	130	18.64	8.92	20	
1,2,3-Trichlorobenzene	19.56	2.0	µg/L	20	0	97.8	70	130	17.63	10.4	20	
1,1,1-Trichloroethane	18.71	2.0	µg/L	20	0	93.6	70	130	15.91	16.2	20	
1,1,2-Trichloroethane	19.57	2.0	µg/L	20	0	97.8	70	130	17.11	13.4	20	
Trichloroethene	19.96	2.0	µg/L	20	0	99.8	70	130	17.68	12.1	20	
Trichlorofluoromethane	19.46	2.0	µg/L	20	0	97.3	70	130	16.8	14.7	20	
1,2,3-Trichloropropane	23.58	2.0	µg/L	20	0	118	70	130	21.78	7.94	20	
1,2,4-Trimethylbenzene	21.76	2.0	µg/L	20	0	109	70	130	19.25	12.2	20	
1,3,5-Trimethylbenzene	21.85	2.0	µg/L	20	0	109	70	130	19.24	12.7	20	
Vinyl chloride	17.12	2.0	µg/L	20	0	85.6	70	130	14.11	19.3	20	
o-Xylene	20.12	2.0	µg/L	20	0	101	70	130	17.46	14.2	20	
m,p-Xylene	40.06	2.0	µg/L	40	0	100	70	130	34.45	15.1	20	
Surr: Dibromofluoromethane	23.65	2.0	µg/L	25	0	94.6	70	130	0	0	0	
Surr: 1,2-Dichloroethane-d4	23.66	2.0	µg/L	25	0	94.6	70	130	0	0	0	
Surr: Toluene-d8	24.51	2.0	µg/L	25	0	98	70	130	0	0	0	
Surr: 4-Bromofluorobenzene	23.24	2.0	µg/L	25	0	93	70	130	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *06-Mar-17*

CLIENT: Charles Castelluccio Consulting, LLC
Project: YRC North Reading
Lab Order: 1702023

Lab ID: 1702023-01
Collection Date: 2/22/2017 9:05:00 AM
Collection Time:
Client Sample ID: Effluent
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ION CHROMATOGRAPHY		**E300**				Analyst: AL
Chloride	400	5.0		mg/L	10	2/22/2017
PH		**SM4500-H, B**				Analyst: AL
pH	8.1	0	H	pH Units	1	2/22/2017 3:39:00 PM

Lab ID: 1702023-02
Collection Date: 2/22/2017 9:20:00 AM
Collection Time:
Client Sample ID: Influent
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ION CHROMATOGRAPHY		**E300**				Analyst: AL
Chloride	380	5.0		mg/L	10	2/22/2017
PH		**SM4500-H, B**				Analyst: AL
pH	6.8	0	H	pH Units	1	2/22/2017 3:47:00 PM

AMRO Environmental Laboratories Corp.

Date: *06-Mar-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1702023
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

Sample ID: MB-R59305 **Batch ID:** R59305 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 2/22/2017 **Prep Date:**
Client ID: **Run ID:** DIONEX_170222A **SeqNo:** 994882

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	ND	0.50	mg/L									

Qualifiers:
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *06-Mar-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1702023
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: LCS-R59305 **Batch ID:** R59305 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 2/22/2017 **Prep Date:**
Client ID: **Run ID:** DIONEX_170222A **SeqNo:** 994883

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	12.13	0.50	mg/L	12.5	0	97.1	89	110	0			

Sample ID: lcsd-r59305 **Batch ID:** R59305 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 2/22/2017 **Prep Date:**
Client ID: **Run ID:** DIONEX_170222A **SeqNo:** 994892

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	12.18	0.50	mg/L	12.5	0	97.4	89	110	12.13	0.342	20	

Sample ID: LCS-R59318 **Batch ID:** R59318 **Test Code:** SM4500-H, B **Units:** pH Units **Analysis Date:** 2/22/2017 3:29:00 PM **Prep Date:**
Client ID: **Run ID:** ING-WET_170222A **SeqNo:** 995015

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
pH	6.04	0	pH Units	6	0	101	99	101	0			

Sample ID: LCSD-R59318 **Batch ID:** R59318 **Test Code:** SM4500-H, B **Units:** pH Units **Analysis Date:** 2/22/2017 3:35:00 PM **Prep Date:**
Client ID: **Run ID:** ING-WET_170222A **SeqNo:** 995019

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
pH	6.05	0	pH Units	6	0	101	99	101	6.04	0.165	5	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *06-Mar-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1702023
Project: YRC North Reading

QC SUMMARY REPORT
Sample Duplicate

Sample ID: 1702023-01BD Batch ID: R59318 Test Code: SM4500-H, B Units: pH Units Analysis Date: 2/22/2017 3:43:00 PM Prep Date:
Client ID: Effluent Run ID: ING-WET_170222A SeqNo: 995018

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
pH	8.08	0	pH Units	0	0	0	0	0	8.06	0.248	5	H

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corporation

111 Herrick Street, Merrimack, NH 03054
TEL: (603) 424-2022 • FAX: (603) 429-8496
www.amrolabs.com

April 15, 2017

ANALYTICAL TEST RESULTS

Charles Castelluccio
Charles Castelluccio Consulting, LLC
62 Wescroft Road
Reading, MA 01867
TEL: (978) 505-1123
FAX:

Subject: YRC North Reading

Workorder No.: 1703027

Dear Charles Castelluccio:

AMRO Environmental Laboratories Corp. received 3 samples on 3/22/2017 for the analyses presented in the following report.

AMRO is accredited in accordance with NELAC and certifies that these test results meet all the requirements of NELAC, where applicable, unless otherwise noted in the case narrative.

The enclosed Sample Receipt Checklist details the condition of your sample(s) upon receipt. Please be advised that any unused sample volume and sample extracts will be stored for a period of 60 days from sample receipt date (90 days for samples from New York). After this time, AMRO will properly dispose of the remaining sample(s). If you require further analysis, or need the samples held for a longer period, please contact us immediately.

This report consists of a total of 30 pages. This letter is an integral part of your data report. All results in this project relate only to the sample(s) as received by the laboratory and documented in the Chain-of-Custody. This report shall not be reproduced except in full, without the written approval of the laboratory. If you have any questions regarding this project in the future, please refer to the Workorder Number above.

Sincerely,

Nancy Stewart
Vice President

State Certifications: NH (NELAC): 1001, MA: M-NH012, CT: PH-0758, NY: 11278 (NELAC), ME: NH012 and 1001.

Hard copy of the State Certification is available upon request.

AMRO Environmental Laboratories Corp.

Date: *10-Apr-17*

CLIENT: Charles Castelluccio Consulting, LLC
Project: YRC North Reading
Lab Order: 1703027
Date Received: 3/22/2017

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Collection Date	Collection Time
1703027-01A	Influent	3/22/2017	9:40 AM
1703027-01B	Influent	3/22/2017	9:40 AM
1703027-01C	Influent	3/22/2017	9:40 AM
1703027-02A	Effluent	3/22/2017	9:10 AM
1703027-02B	Effluent	3/22/2017	9:10 AM
1703027-02C	Effluent	3/22/2017	9:10 AM
1703027-03A	Trip Blank	3/22/2017	12:00 AM

Lab Order: 1703027
Client: Charles Castelluccio Consulting, LLC
Project: YRC North Reading

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
1703027-01A	Influent	3/22/2017 9:40:00 AM	Aqueous	MCP VOCs 8260C, EPA 5030C		3/22/2017	
				EPA 5030B	3/22/2017	R59395	
1703027-01B				Ion Chromatography, EPA 300		4/5/2017	
						R59448	
				Standard Methods - pH, Water		3/22/2017	
						R59415	
1703027-01C				EPA 200.7 ICP METALS, TOTAL		3/27/2017	
				200 Series Prep: ICP/GFAA	3/22/2017	27235	
				EPA 245.1 MERCURY, Total		3/28/2017	
3				MERCURY PREP: EPA 245.1/7040	3/28/2017	27239	
1703027-02A	Effluent	3/22/2017 9:10:00 AM		MCP VOCs 8260C, EPA 5030C		3/22/2017	
				EPA 5030B	3/22/2017	R59395	
1703027-02B				Ion Chromatography, EPA 300		4/5/2017	
						R59448	
				Standard Methods - pH, Water		3/22/2017	
						R59415	
1703027-02C				EPA 200.7 ICP METALS, TOTAL		3/27/2017	
				200 Series Prep: ICP/GFAA	3/22/2017	27235	
				EPA 245.1 MERCURY, Total		3/28/2017	
				MERCURY PREP: EPA 245.1/7040	3/28/2017	27239	
1703027-03A	Trip Blank	3/22/2017		MCP VOCs 8260C, EPA 5030C		3/22/2017	
				EPA 5030B	3/22/2017	R59395	

AMRO Environmental Laboratories Corporation
111 Herrick Street
Merrimack, NH 03054

CHAIN-OF-CUSTODY RECORD

NO: 66496

Office: (603) 424-2022
Fax: (603) 429-8496
web: www.amrolabs.com

Project No.: YRC | Project Name: North Reading | Project State: MA | Project Manager: C Castelluccio | Samplers (Signature): [signature] | AMRO Project No.: 1703027

P.O.#:

Results Needed by: Standard

QUOTE #:

Seal Intact? Yes No N/A

Sample ID.:	Date/Time Sampled	Matrix	Total # of Cont. & Size	Comp.	Grab	VOC	pH + Cl⁻	Iron + mercury	Remarks
Influent	3/22/17 940	A	4		X	2	1	1	
Effluent	3/22/17 910	A	4		X	2	1	1	
Trip Blank		A	2			2			

4

Preservative: Cl-HCl, MeOH, N-HN03, S-H2SO4, Na-NaOH, O- Other

Send Results To: Charles.Castelluccio@gmail.com

PRIORITY TURNAROUND TIME AUTHORIZATION
Before submitting samples for expedited TAT, you must *have a coded AUTHORIZATION NUMBER*
AUTHORIZATION No.: BY:

METALS 8 RCRA ☐ 13 PP ☐ 23 TAL ☐ 14 MCP ☐
Method: 6010 ☐ 200.7 ☐ Other Metals:
Dissolved Metals Field Filtered? YES ☐ NO ☒

PHONE #: 978 505 1123. FAX #:
E-mail: Charles.Castelluccio@gmail.com.

MCP Presumptive Certainty Required? YES ☒ NO ☐

MCP Methods Needed: YES ☐ NO ☒

Required Reporting Limits: S-1 ☐ GW-1 ☒ S-2 ☐ GW-2 ☐ S-3 ☐ GW-3 ☐ Other:

Relinquished by:	Date/Time	Received By
[signature]	3/22/17 1220	W. Dawson
W. Dawson	3/22/17 1330	[signature]

AMRO report package level needed:

EDD required:

Please print clearly, legibly and completely. Samples can not be logged in and the turnaround time clock will not start until any ambiguities are resolved.

Samples arriving after 12:00 noon will be tracked and billed as received on the following day.

AMRO policy requires notification in writing to the laboratory in cases where the samples were collected from highly contaminated sites.

KNOWN SITE CONTAMINATION: VOC

White: Lab Copy Yellow: Client Copy

SHEET 1 OF 1

AMROCOC2004, Rev.3 08/18/04

AMRO Environmental
Laboratories Corporation

SAMPLE RECEIPT CHECKLIST

111 Herrick Street
Merrimack, NH 03054
(603) 424-2022

Client: Charles Castelluccio
Project Name: YRC North Reading
Ship via: (circle one) Fed Ex., UPS, (AMRO Courier), Hand Del., Other Courier, Other:

AMRO ID: 1703027
Date Rec.: 3-22-17
Date Due: 3-29-17

Items to be Checked Upon Receipt	Yes	No	NA	Comments
1. Army Samples received in individual plastic bags?			✓	
2. Custody Seals present?			✓	
3. Custody Seals Intact?			✓	
4. Air Bill included in folder if received?			✓	
5. Is COC included with samples?	✓			
6. Is COC signed and dated by client?	✓			
7. Laboratory receipt temperature. TEMP = 5°C				
Samples rec. with ice ✓ ice packs___ neither____				
8. Were samples received the same day they were sampled?	✓			
Is client temperature ≈ or <6°C ?	✓			
If no obtain authorization from the client for the analyses.				
Client authorization from: Date: Obtained by:				
9. Is the COC filled out correctly and completely?	✓			
10. Does the info on the COC match the samples?	✓			
11. Were samples rec. within holding time?	✓			
12. Were all samples properly labeled?	✓			
13. Were all samples properly preserved?	✓			
14. Were proper sample containers used?	✓			
15. Were all samples received intact? (none broken or leaking)	✓			
16. Were VOA vials rec. with no air bubbles?	✓			
17. Were the sample volumes sufficient for requested analysis?	✓			
18. Were all samples received?	✓			
19. VPH and VOA Soils only:			✓	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container)				
Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCore, B=Bulk, D= DI water				
If M , SB, DI:				
Does preservative cover the soil?				
Does preservation level come close to the fill line on the vial?				
Date/Time DI Preserved vials Frozen on: _____				
Frozen by Client?				
Were vials provided by AMRO?				
If NO then weights MUST be obtained from client				
Was dry weight aliquot provided?				
If NO then notified client and inform the VOA lab ASAP.				
20. Subcontracted Samples:			✓	
What samples sent:				
Where sent:				
Date:				
Analysis:				
TAT:				
21. Information entered into:				
Internal Tracking Log?	✓			
Dry Weight Log?			✓	
Client Log?			✓	
Composite Log?			✓	
Filtration Log?			✓	

Received By: Date: 3-22-17 Logged in By: Date: 3-22-17
Labeled By: Date: 3-22-17 Checked By: Date: 03/27/17

NA= Not Applicable

AMRO Environmental Laboratories Corporation

111 Herrick Street
Merrimack, NH 03054
(603) 424-2022

Please Circle if:
Sample= Soil
Sample= Waste

AMRO ID: 1703027

Sample ID	Analysis	Volume Sample	Preserv. Listed	Initial pH*	Acceptable? Y or N	List Preserv. Added by AMRO	Solution ID # of Preserv.	Volume Preservative Added	Final adjusted pH	Final adjusted pH (after 16 or 24 hours)
01→03A	VOC	2x40ml	HCl	—	—					
01B, 02B	pH, Cl⁻	500ml	none	analyst will check						
01C, 02C	Fe, Hg	500ml	HNO_3	<2	Y					

Sample ID	Analysis	Volume Sample	Preserv. Listed	Initial TRC	Acceptable? Y or N	List Preserv. Added by AMRO	Solution ID # of Preserv.	Volume Preservative Added	Final adjusted TRC	Acceptable? Y or N

** = If the laboratory preserves the drinking water sample (s) for EPA Method 200 series, sample (s) should be held at least 16 hours prior to analysis or 24 hours for water sample (s).*

pH Checked By: W Date: 3/22/17 pH adjusted By: ________ Date: ________

pH Checked By: ________ Date: ________ pH adj.(16 or 24hrs)By: ________ Date: ________

GC/MS VOLATILES- 8260C:

1. A quadratic regression was used for Acetone and Bromomethane in the Initial Calibration analyzed on V-3 02/21/17.

2. Acetone and Carbon disulfide recovered outside the control limits (+/-20%) in the Continuing Calibration Verification Standard analyzed on V-3 03/22/17.

3. No analytical or quality issues were noted, other than those described above or in the Data Comment page.

METALS:

1. No analytical or quality issues were noted, other than those described in the Data Comment page.

WET CHEMISTRY:

1. The samples for pH analysis were received outside the 15 minutes holding time.

2. No analytical or quality issues were noted, other than those described above or in the Data Comment page.

MassDEP Analytical Protocol Certification Form

Laboratory Name: AMRO Environmental Lab. Corp. Project #:

Project Location: YRC North Reading RTN:

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

1703027-01-03

Matrices: ☒ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

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 ☐	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	VPH, EPH, APH, and TO-15 only: 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). 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[1]

***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[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 laboratory 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:** Vice President

Printed Name: Nancy Stewart **Date:** 4-15-17

DATA COMMENT PAGE

Organic Data Qualifiers

ND	Indicates compound was analyzed for, but not detected at or above the reporting limit.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than the method detection limit.
H	Method prescribed holding time exceeded.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
B	This flag is used when the analyte is found in the associated blank as well as in the sample.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
#	See Case Narrative
Q	RPD between signal 1 and signal 2 >40%.

Micro Data Qualifiers

TNTC	Too numerous to count

Inorganic Data Qualifiers

ND or U	Indicates element was analyzed for, but not detected at or above the reporting limit.
J	Indicates a value greater than or equal to the method detection limit, but less than the quantitation limit.
H	Indicates analytical holding time exceedance.
B	Indicates that the analyte is found in the associated blank, as well as in the sample.
MSA	Indicates value determined by the Method of Standard Addition
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
PS	The analyte was below the Reporting Limit but has significant matrix interference as noted by the poor recovery of the Post Digestion Spike.
#	See Case Narrative
*	MCL Exceeded

Report Comments:

1. Soil, sediment and sludge sample results are reported on a "dry weight" basis.
2. Reporting limits are adjusted for sample size used, dilutions and moisture content, if applicable.

AMRO Environmental Laboratories Corp.

Date: *11-Apr-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Influent
Lab Order:	1703027	**Collection Date:**	3/22/2017 9:40:00 AM
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1703027-01A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY MCP MET SW8260C						Analyst: JK
Acetone	ND	10		µg/L	1	3/22/2017 3:25:00 PM
Tertiary Amyl Methyl Ether	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Benzene	ND	1.0		µg/L	1	3/22/2017 3:25:00 PM
Bromobenzene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Bromochloromethane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Bromoform	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Bromomethane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
sec-Butylbenzene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
n-Butylbenzene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
tert-Butylbenzene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Carbon disulfide	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Chlorobenzene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Dibromochloromethane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Chloroethane	ND	5.0		µg/L	1	3/22/2017 3:25:00 PM
Chloroform	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Chloromethane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
2-Chlorotoluene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	3/22/2017 3:25:00 PM
1,2-Dibromoethane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Dibromomethane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,3-Dichlorobenzene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	1	3/22/2017 3:25:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/22/2017 3:25:00 PM
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/22/2017 3:25:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/22/2017 3:25:00 PM
Diethyl ether	ND	5.0		µg/L	1	3/22/2017 3:25:00 PM

AMRO Environmental Laboratories Corp.

Date: *11-Apr-17*

CLIENT: Charles Castelluccio Consulting, LLC
Lab Order: 1703027
Project: YRC North Reading
Lab ID: 1703027-01A

Client Sample ID: Influent
Collection Date: 3/22/2017 9:40:00 AM
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diisopropyl ether	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,4-Dioxane	ND	50		µg/L	1	3/22/2017 3:25:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Ethylbenzene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
2-Hexanone	ND	10		µg/L	1	3/22/2017 3:25:00 PM
Isopropylbenzene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
2-Butanone	ND	10		µg/L	1	3/22/2017 3:25:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/22/2017 3:25:00 PM
Methyl tert-butyl ether	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Methylene chloride	ND	5.0		µg/L	1	3/22/2017 3:25:00 PM
Naphthalene	ND	5.0		µg/L	1	3/22/2017 3:25:00 PM
n-Propylbenzene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Styrene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Tetrachloroethene	74	2.0		µg/L	1	3/22/2017 3:25:00 PM
Tetrahydrofuran	ND	10		µg/L	1	3/22/2017 3:25:00 PM
Toluene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,2,4-Trichlorobenzene	3.0	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,2,3-Trichlorobenzene	3.0	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Trichloroethene	7.5	2.0		µg/L	1	3/22/2017 3:25:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Vinyl chloride	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
o-Xylene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
m,p-Xylene	ND	2.0		µg/L	1	3/22/2017 3:25:00 PM
Surr: Dibromofluoromethane	99.9	70-130		%REC	1	3/22/2017 3:25:00 PM
Surr: 1,2-Dichloroethane-d4	110	70-130		%REC	1	3/22/2017 3:25:00 PM
Surr: Toluene-d8	106	70-130		%REC	1	3/22/2017 3:25:00 PM
Surr: 4-Bromofluorobenzene	88.5	70-130		%REC	1	3/22/2017 3:25:00 PM

AMRO Environmental Laboratories Corp.

Date: *11-Apr-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Effluent
Lab Order:	1703027	**Collection Date:**	3/22/2017 9:10:00 AM
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1703027-02A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY MCP MET SW8260C						Analyst: JK
Acetone	ND	10		µg/L	1	3/22/2017 2:49:00 PM
Tertiary Amyl Methyl Ether	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Benzene	ND	1.0		µg/L	1	3/22/2017 2:49:00 PM
Bromobenzene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Bromochloromethane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Bromoform	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Bromomethane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
sec-Butylbenzene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
n-Butylbenzene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
tert-Butylbenzene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Carbon disulfide	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Chlorobenzene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Dibromochloromethane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Chloroethane	ND	5.0		µg/L	1	3/22/2017 2:49:00 PM
Chloroform	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Chloromethane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
2-Chlorotoluene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	3/22/2017 2:49:00 PM
1,2-Dibromoethane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Dibromomethane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,3-Dichlorobenzene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	1	3/22/2017 2:49:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/22/2017 2:49:00 PM
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/22/2017 2:49:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/22/2017 2:49:00 PM
Diethyl ether	ND	5.0		µg/L	1	3/22/2017 2:49:00 PM

AMRO Environmental Laboratories Corp.

Date: *11-Apr-17*

CLIENT: Charles Castelluccio Consulting, LLC
Lab Order: 1703027
Project: YRC North Reading
Lab ID: 1703027-02A

Client Sample ID: Effluent
Collection Date: 3/22/2017 9:10:00 AM
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diisopropyl ether	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,4-Dioxane	ND	50		µg/L	1	3/22/2017 2:49:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Ethylbenzene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
2-Hexanone	ND	10		µg/L	1	3/22/2017 2:49:00 PM
Isopropylbenzene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
2-Butanone	ND	10		µg/L	1	3/22/2017 2:49:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/22/2017 2:49:00 PM
Methyl tert-butyl ether	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Methylene chloride	ND	5.0		µg/L	1	3/22/2017 2:49:00 PM
Naphthalene	ND	5.0		µg/L	1	3/22/2017 2:49:00 PM
n-Propylbenzene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Styrene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Tetrachloroethene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Tetrahydrofuran	ND	10		µg/L	1	3/22/2017 2:49:00 PM
Toluene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,2,4-Trichlorobenzene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,2,3-Trichlorobenzene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Trichloroethene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Vinyl chloride	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
o-Xylene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
m,p-Xylene	ND	2.0		µg/L	1	3/22/2017 2:49:00 PM
Surr: Dibromofluoromethane	106	70-130		%REC	1	3/22/2017 2:49:00 PM
Surr: 1,2-Dichloroethane-d4	110	70-130		%REC	1	3/22/2017 2:49:00 PM
Surr: Toluene-d8	105	70-130		%REC	1	3/22/2017 2:49:00 PM
Surr: 4-Bromofluorobenzene	89.7	70-130		%REC	1	3/22/2017 2:49:00 PM

AMRO Environmental Laboratories Corp.

Date: *11-Apr-17*

CLIENT:	Charles Casteliuccio Consulting, LLC	**Client Sample ID:**	Trip Blank
Lab Order:	i703027	**Collection Date:**	3/22/2017
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1703027-03A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY MCP MET SW8260C						Analyst: JK
Acetone	ND	10		µg/L	1	3/22/2017 2:13:00 PM
Tertiary Amyl Methyl Ether	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Benzene	ND	1.0		µg/L	1	3/22/2017 2:13:00 PM
Bromobenzene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Bromochloromethane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Bromoform	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Bromomethane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
sec-Butylbenzene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
n-Butylbenzene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
tert-Butylbenzene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Carbon disulfide	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Chlorobenzene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Dibromochloromethane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Chloroethane	ND	5.0		µg/L	1	3/22/2017 2:13:00 PM
Chloroform	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Chloromethane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
2-Chlorotoluene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	3/22/2017 2:13:00 PM
1,2-Dibromoethane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Dibromomethane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,3-Dichlorobenzene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	1	3/22/2017 2:13:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	3/22/2017 2:13:00 PM
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/22/2017 2:13:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/22/2017 2:13:00 PM
Diethyl ether	ND	5.0		µg/L	1	3/22/2017 2:13:00 PM

AMRO Environmental Laboratories Corp.

Date: *11-Apr-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Trip Blank
Lab Order:	1703027	**Collection Date:**	3/22/2017
Project:	YRC North Reading	**Matrix:**	AQUEOUS
Lab ID:	1703027-03A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diisopropyl ether	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,4-Dioxane	ND	50		µg/L	1	3/22/2017 2:13:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Ethylbenzene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
2-Hexanone	ND	10		µg/L	1	3/22/2017 2:13:00 PM
Isopropylbenzene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
2-Butanone	ND	10		µg/L	1	3/22/2017 2:13:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	3/22/2017 2:13:00 PM
Methyl tert-butyl ether	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Methylene chloride	ND	5.0		µg/L	1	3/22/2017 2:13:00 PM
Naphthalene	ND	5.0		µg/L	1	3/22/2017 2:13:00 PM
n-Propylbenzene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Styrene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Tetrachloroethene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Tetrahydrofuran	ND	10		µg/L	1	3/22/2017 2:13:00 PM
Toluene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,2,4-Trichlorobenzene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,2,3-Trichlorobenzene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Trichloroethene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Vinyl chloride	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
o-Xylene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
m,p-Xylene	ND	2.0		µg/L	1	3/22/2017 2:13:00 PM
Surr: Dibromofluoromethane	108	70-130		%REC	1	3/22/2017 2:13:00 PM
Surr: 1,2-Dichloroethane-d4	115	70-130		%REC	1	3/22/2017 2:13:00 PM
Surr: Toluene-d8	106	70-130		%REC	1	3/22/2017 2:13:00 PM
Surr: 4-Bromofluorobenzene	93.6	70-130		%REC	1	3/22/2017 2:13:00 PM

AMRO Environmental Laboratories Corp.

Date: *04-Apr-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1703027
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

Sample ID: mb-03/22/17 **Batch ID:** R59395 **Test Code:** SW8260C **Units:** µg/L **Analysis Date:** 3/22/2017 1:38:00 PM **Prep Date:** 3/22/2017
Client ID: **Run ID:** V-3_170322A **SeqNo:** 996176

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	ND	10	µg/L									
Tertiary Amyl Methyl Ether	ND	2.0	µg/L									
Benzene	ND	1.0	µg/L									
Bromobenzene	ND	2.0	µg/L									
Bromochloromethane	ND	2.0	µg/L									
Bromodichloromethane	ND	2.0	µg/L									
Bromoform	ND	2.0	µg/L									
Bromomethane	ND	2.0	µg/L									
sec-Butylbenzene	ND	2.0	µg/L									
n-Butylbenzene	ND	2.0	µg/L									
tert-Butylbenzene	ND	2.0	µg/L									
Carbon disulfide	ND	2.0	µg/L									
Carbon tetrachloride	ND	2.0	µg/L									
Chlorobenzene	ND	2.0	µg/L									
Dibromochloromethane	ND	2.0	µg/L									
Chloroethane	ND	5.0	µg/L									
Chloroform	ND	2.0	µg/L									
Chloromethane	ND	2.0	µg/L									
2-Chlorotoluene	ND	2.0	µg/L									
4-Chlorotoluene	ND	2.0	µg/L									
1,2-Dibromo-3-chloropropane	ND	5.0	µg/L									
1,2-Dibromoethane	ND	2.0	µg/L									
Dibromomethane	ND	2.0	µg/L									
1,3-Dichlorobenzene	ND	2.0	µg/L									
1,2-Dichlorobenzene	ND	2.0	µg/L									

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1703027
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

1,4-Dichlorobenzene	ND	2.0	µg/L
Dichlorodifluoromethane	ND	5.0	µg/L
1,1-Dichloroethane	ND	2.0	µg/L
1,2-Dichloroethane	ND	2.0	µg/L
1,1-Dichloroethene	ND	1.0	µg/L
cis-1,2-Dichloroethene	ND	2.0	µg/L
trans-1,2-Dichloroethene	ND	2.0	µg/L
1,2-Dichloropropane	ND	2.0	µg/L
1,3-Dichloropropane	ND	2.0	µg/L
2,2-Dichloropropane	ND	2.0	µg/L
1,1-Dichloropropene	ND	2.0	µg/L
cis-1,3-Dichloropropene	ND	1.0	µg/L
trans-1,3-Dichloropropene	ND	1.0	µg/L
Diethyl ether	ND	5.0	µg/L
Diisopropyl ether	ND	2.0	µg/L
1,4-Dioxane	ND	50	µg/L
Ethyl Tertiary Butyl Ether	ND	2.0	µg/L
Ethylbenzene	ND	2.0	µg/L
Hexachlorobutadiene	ND	2.0	µg/L
2-Hexanone	ND	10	µg/L
Isopropylbenzene	ND	2.0	µg/L
4-Isopropyltoluene	ND	2.0	µg/L
2-Butanone	ND	10	µg/L
4-Methyl-2-pentanone	ND	10	µg/L
Methyl tert-butyl ether	ND	2.0	µg/L
Methylene chloride	ND	5.0	µg/L
Naphthalene	ND	5.0	µg/L
n-Propylbenzene	ND	2.0	µg/L
Styrene	ND	2.0	µg/L
1,1,1,2-Tetrachloroethane	ND	2.0	µg/L
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1703027
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

Tetrachloroethene	ND	2.0	µg/L						
Tetrahydrofuran	ND	10	µg/L						
Toluene	ND	2.0	µg/L						
1,2,4-Trichlorobenzene	ND	2.0	µg/L						
1,2,3-Trichlorobenzene	ND	2.0	µg/L						
1,1,1-Trichloroethane	ND	2.0	µg/L						
1,1,2-Trichloroethane	ND	2.0	µg/L						
Trichloroethene	ND	2.0	µg/L						
Trichlorofluoromethane	ND	2.0	µg/L						
1,2,3-Trichloropropane	ND	2.0	µg/L						
1,2,4-Trimethylbenzene	ND	2.0	µg/L						
1,3,5-Trimethylbenzene	ND	2.0	µg/L						
Vinyl chloride	ND	2.0	µg/L						
o-Xylene	ND	2.0	µg/L						
m,p-Xylene	ND	2.0	µg/L						
Surr: Dibromofluoromethane	26.22	2.0	µg/L	25	0	105	70	130	0
Surr: 1,2-Dichloroethane-d4	28.03	2.0	µg/L	25	0	112	70	130	0
Surr: Toluene-d8	26.5	2.0	µg/L	25	0	106	70	130	0
Surr: 4-Bromofluorobenzene	22.83	2.0	µg/L	25	0	91.3	70	130	0

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: *04-Apr-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1703027
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: lcs-03/22/17 **Batch ID:** R59395 **Test Code:** SW8260C **Units:** µg/L **Analysis Date:** 3/22/2017 11:52:00 AM **Prep Date:** 3/22/2017

Client ID: **Run ID:** V-3_170322A **SeqNo:** 996178

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	56.28	10	µg/L	40	0	141	40	160	0			
Tertiary Amyl Methyl Ether	20.48	2.0	µg/L	20	0	102	70	130	0			
Benzene	21.91	1.0	µg/L	20	0	110	70	130	0			
Bromobenzene	18.39	2.0	µg/L	20	0	92	70	130	0			
Bromochloromethane	21.97	2.0	µg/L	20	0	110	70	130	0			
Bromodichloromethane	23.03	2.0	µg/L	20	0	115	70	130	0			
Bromoform	16.96	2.0	µg/L	20	0	84.8	70	130	0			
Bromomethane	20.15	2.0	µg/L	20	0	101	40	160	0			
sec-Butylbenzene	17.55	2.0	µg/L	20	0	87.8	70	130	0			
n-Butylbenzene	18.29	2.0	µg/L	20	0	91.4	70	130	0			
tert-Butylbenzene	18.49	2.0	µg/L	20	0	92.5	70	130	0			
Carbon disulfide	16.4	2.0	µg/L	20	0	82	70	130	0			
Carbon tetrachloride	20.52	2.0	µg/L	20	0	103	70	130	0			
Chlorobenzene	18.2	2.0	µg/L	20	0	91	70	130	0			
Dibromochloromethane	18.47	2.0	µg/L	20	0	92.4	70	130	0			
Chloroethane	16.33	5.0	µg/L	20	0	81.7	70	130	0			
Chloroform	22.08	2.0	µg/L	20	0	110	70	130	0			
Chloromethane	15.92	2.0	µg/L	20	0	79.6	40	160	0			
2-Chlorotoluene	17.7	2.0	µg/L	20	0	88.5	70	130	0			
4-Chlorotoluene	17.96	2.0	µg/L	20	0	89.8	70	130	0			
1,2-Dibromo-3-chloropropane	18.5	5.0	µg/L	20	0	92.5	70	130	0			
1,2-Dibromoethane	21.35	2.0	µg/L	20	0	107	70	130	0			
Dibromomethane	21.62	2.0	µg/L	20	0	108	70	130	0			
1,3-Dichlorobenzene	17.97	2.0	µg/L	20	0	89.8	70	130	0			
1,2-Dichlorobenzene	18.05	2.0	µg/L	20	0	90.2	70	130	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: I703027
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike

1,4-Dichlorobenzene	17.79	2.0	µg/L	20	0	89	70	130	0
Dichlorodifluoromethane	14.39	5.0	µg/L	20	0	72	40	160	0
1,1-Dichloroethane	22.62	2.0	µg/L	20	0	113	70	130	0
1,2-Dichloroethane	22.11	2.0	µg/L	20	0	111	70	130	0
1,1-Dichloroethene	19.73	1.0	µg/L	20	0	98.6	70	130	0
cis-1,2-Dichloroethene	21.43	2.0	µg/L	20	0	107	70	130	0
trans-1,2-Dichloroethene	21.74	2.0	µg/L	20	0	109	70	130	0
1,2-Dichloropropane	21.76	2.0	µg/L	20	0	109	70	130	0
1,3-Dichloropropane	18.78	2.0	µg/L	20	0	93.9	70	130	0
2,2-Dichloropropane	25.54	2.0	µg/L	20	0	128	70	130	0
1,1-Dichloropropene	21.36	2.0	µg/L	20	0	107	70	130	0
cis-1,3-Dichloropropene	22.34	1.0	µg/L	20	0	112	70	130	0
trans-1,3-Dichloropropene	20.9	1.0	µg/L	20	0	104	70	130	0
Diethyl ether	22.43	5.0	µg/L	20	0	112	70	130	0
Diisopropyl ether	22.21	2.0	µg/L	20	0	111	70	130	0
1,4-Dioxane	110.7	50	µg/L	100	0	111	40	160	0
Ethyl Tertiary Butyl Ether	20.95	2.0	µg/L	20	0	105	70	130	0
Ethylbenzene	18.63	2.0	µg/L	20	0	93.2	70	130	0
Hexachlorobutadiene	17.12	2.0	µg/L	20	0	85.6	70	130	0
2-Hexanone	35.41	10	µg/L	40	0	88.5	40	160	0
Isopropylbenzene	18.45	2.0	µg/L	20	0	92.2	70	130	0
4-Isopropyltoluene	18.02	2.0	µg/L	20	0	90.1	70	130	0
2-Butanone	45.48	10	µg/L	40	0	114	40	160	0
4-Methyl-2-pentanone	39.77	10	µg/L	40	0	99.4	40	160	0
Methyl tert-butyl ether	22.05	2.0	µg/L	20	0	110	70	130	0
Methylene chloride	16.31	5.0	µg/L	20	0	81.6	70	130	0
Naphthalene	17.44	5.0	µg/L	20	0	87.2	70	130	0
n-Propylbenzene	18.44	2.0	µg/L	20	0	92.2	70	130	0
Styrene	18.1	2.0	µg/L	20	0	90.5	70	130	0
1,1,1,2-Tetrachloroethane	17.94	2.0	µg/L	20	0	89.7	70	130	0
1,1,2,2-Tetrachloroethane	17.85	2.0	µg/L	20	0	89.2	70	130	0

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1703027
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Tetrachloroethene	17.87	2.0	µg/L	20	0	89.4	70	130	0
Tetrahydrofuran	22.78	10	µg/L	20	0	114	70	130	0
Toluene	21.49	2.0	µg/L	20	0	107	70	130	0
1,2,4-Trichlorobenzene	18.16	2.0	µg/L	20	0	90.8	70	130	0
1,2,3-Trichlorobenzene	15.58	2.0	µg/L	20	0	77.9	70	130	0
1,1,1-Trichloroethane	20.45	2.0	µg/L	20	0	102	70	130	0
1,1,2-Trichloroethane	21.38	2.0	µg/L	20	0	107	70	130	0
Trichloroethene	21.98	2.0	µg/L	20	0	110	70	130	0
Trichlorofluoromethane	21.21	2.0	µg/L	20	0	106	70	130	0
1,2,3-Trichloropropane	19.84	2.0	µg/L	20	0	99.2	70	130	0
1,2,4-Trimethylbenzene	18.72	2.0	µg/L	20	0	93.6	70	130	0
1,3,5-Trimethylbenzene	18.48	2.0	µg/L	20	0	92.4	70	130	0
Vinyl chloride	16.11	2.0	µg/L	20	0	80.6	70	130	0
o-Xylene	17.7	2.0	µg/L	20	0	88.5	70	130	0
m,p-Xylene	35.89	2.0	µg/L	40	0	89.7	70	130	0
Surr: Dibromofluoromethane	26.54	2.0	µg/L	25	0	106	70	130	0
Surr: 1,2-Dichloroethane-d4	24.51	2.0	µg/L	25	0	98	70	130	0
Surr: Toluene-d8	27.68	2.0	µg/L	25	0	111	70	130	0
Surr: 4-Bromofluorobenzene	23.8	2.0	µg/L	25	0	95.2	70	130	0

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: *04-Apr-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1703027
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: lcsd-03/22/17 **Batch ID:** R59395 **Test Code:** SW8260C **Units:** µg/L **Analysis Date:** 3/22/2017 12:27:00 PM **Prep Date:** 3/22/2017
Client ID: **Run ID:** V-3_170322A **SeqNo:** 996177

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	50.89	10	µg/L	40	0	127	40	160	56.28	10.1	20	
Tertiary Amyl Methyl Ether	20.5	2.0	µg/L	20	0	103	70	130	20.48	0.0976	20	
Benzene	22.35	1.0	µg/L	20	0	112	70	130	21.91	1.99	20	
Bromobenzene	18.84	2.0	µg/L	20	0	94.2	70	130	18.39	2.42	20	
Bromochloromethane	21.84	2.0	µg/L	20	0	109	70	130	21.97	0.593	20	
Bromodichloromethane	23.37	2.0	µg/L	20	0	117	70	130	23.03	1.47	20	
Bromoform	17.12	2.0	µg/L	20	0	85.6	70	130	16.96	0.939	20	
Bromomethane	19.95	2.0	µg/L	20	0	99.8	40	160	20.15	0.998	20	
sec-Butylbenzene	17.73	2.0	µg/L	20	0	88.6	70	130	17.55	1.02	20	
n-Butylbenzene	18.62	2.0	µg/L	20	0	93.1	70	130	18.29	1.79	20	
tert-Butylbenzene	19.26	2.0	µg/L	20	0	96.3	70	130	18.49	4.08	20	
Carbon disulfide	16.86	2.0	µg/L	20	0	84.3	70	130	16.4	2.77	20	
Carbon tetrachloride	21.72	2.0	µg/L	20	0	109	70	130	20.52	5.68	20	
Chlorobenzene	18.5	2.0	µg/L	20	0	92.5	70	130	18.2	1.63	20	
Dibromochloromethane	19.09	2.0	µg/L	20	0	95.4	70	130	18.47	3.3	20	
Chloroethane	16.38	5.0	µg/L	20	0	81.9	70	130	16.33	0.306	20	
Chloroform	22.89	2.0	µg/L	20	0	114	70	130	22.08	3.6	20	
Chloromethane	14.29	2.0	µg/L	20	0	71.5	40	160	15.92	10.8	20	
2-Chlorotoluene	18.8	2.0	µg/L	20	0	94	70	130	17.7	6.03	20	
4-Chlorotoluene	18.64	2.0	µg/L	20	0	93.2	70	130	17.96	3.72	20	
1,2-Dibromo-3-chloropropane	18.9	5.0	µg/L	20	0	94.5	70	130	18.5	2.14	20	
1,2-Dibromoethane	21.38	2.0	µg/L	20	0	107	70	130	21.35	0.14	20	
Dibromomethane	21.72	2.0	µg/L	20	0	109	70	130	21.62	0.461	20	
1,3-Dichlorobenzene	18.28	2.0	µg/L	20	0	91.4	70	130	17.97	1.71	20	
1,2-Dichlorobenzene	18.51	2.0	µg/L	20	0	92.6	70	130	18.05	2.52	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1703027
Project: YRC North Reading

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

1,4-Dichlorobenzene	18.2	2.0	µg/L	20	0	91	70	130	17.79	2.28	20
Dichlorodifluoromethane	16.59	5.0	µg/L	20	0	83	40	160	14.39	14.2	20
1,1-Dichloroethane	22.77	2.0	µg/L	20	0	114	70	130	22.62	0.661	20
1,2-Dichloroethane	22.52	2.0	µg/L	20	0	113	70	130	22.11	1.84	20
1,1-Dichloroethene	21.25	1.0	µg/L	20	0	106	70	130	19.73	7.42	20
cis-1,2-Dichloroethene	21.53	2.0	µg/L	20	0	108	70	130	21.43	0.466	20
trans-1,2-Dichloroethene	22.76	2.0	µg/L	20	0	114	70	130	21.74	4.58	20
1,2-Dichloropropane	21.17	2.0	µg/L	20	0	106	70	130	21.76	2.75	20
1,3-Dichloropropane	18.67	2.0	µg/L	20	0	93.4	70	130	18.78	0.587	20
2,2-Dichloropropane	25.1	2.0	µg/L	20	0	126	70	130	25.54	1.74	20
1,1-Dichloropropene	22.73	2.0	µg/L	20	0	114	70	130	21.36	6.21	20
cis-1,3-Dichloropropene	22.41	1.0	µg/L	20	0	112	70	130	22.34	0.313	20
trans-1,3-Dichloropropene	20.43	1.0	µg/L	20	0	102	70	130	20.9	2.27	20
Diethyl ether	22.68	5.0	µg/L	20	0	113	70	130	22.43	1.11	20
Diisopropyl ether	21.76	2.0	µg/L	20	0	109	70	130	22.21	2.05	20
1,4-Dioxane	127.4	50	µg/L	100	0	127	40	160	110.7	14	20
Ethyl Tertiary Butyl Ether	20.54	2.0	µg/L	20	0	103	70	130	20.95	1.98	20
Ethylbenzene	19.38	2.0	µg/L	20	0	96.9	70	130	18.63	3.95	20
Hexachlorobutadiene	16.61	2.0	µg/L	20	0	83	70	130	17.12	3.02	20
2-Hexanone	35.35	10	µg/L	40	0	88.4	40	160	35.41	0.17	20
Isopropylbenzene	18.91	2.0	µg/L	20	0	94.6	70	130	18.45	2.46	20
4-Isopropyltoluene	18.73	2.0	µg/L	20	0	93.6	70	130	18.02	3.86	20
2-Butanone	41.5	10	µg/L	40	0	104	40	160	45.48	9.15	20
4-Methyl-2-pentanone	39.47	10	µg/L	40	0	98.7	40	160	39.77	0.757	20
Methyl tert-butyl ether	22.47	2.0	µg/L	20	0	112	70	130	22.05	1.89	20
Methylene chloride	16.66	5.0	µg/L	20	0	83.3	70	130	16.31	2.12	20
Naphthalene	17.48	5.0	µg/L	20	0	87.4	70	130	17.44	0.229	20
n-Propylbenzene	18.91	2.0	µg/L	20	0	94.6	70	130	18.44	2.52	20
Styrene	18.58	2.0	µg/L	20	0	92.9	70	130	18.1	2.62	20
1,1,1,2-Tetrachloroethane	18.76	2.0	µg/L	20	0	93.8	70	130	17.94	4.47	20
1,1,2,2-Tetrachloroethane	18.19	2.0	µg/L	20	0	91	70	130	17.85	1.89	20

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1703027
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Tetrachloroethene	19.07	2.0	µg/L	20	0	95.4	70	130	17.87	6.5	20
Tetrahydrofuran	25.86	10	µg/L	20	0	129	70	130	22.78	12.7	20
Toluene	21.67	2.0	µg/L	20	0	108	70	130	21.49	0.834	20
1,2,4-Trichlorobenzene	18.04	2.0	µg/L	20	0	90.2	70	130	18.16	0.663	20
1,2,3-Trichlorobenzene	15.64	2.0	µg/L	20	0	78.2	70	130	15.58	0.384	20
1,1,1-Trichloroethane	21.33	2.0	µg/L	20	0	107	70	130	20.45	4.21	20
1,1,2-Trichloroethane	21.3	2.0	µg/L	20	0	106	70	130	21.38	0.375	20
Trichloroethene	23.12	2.0	µg/L	20	0	116	70	130	21.98	5.06	20
Trichlorofluoromethane	22.9	2.0	µg/L	20	0	114	70	130	21.21	7.66	20
1,2,3-Trichloropropane	20.41	2.0	µg/L	20	0	102	70	130	19.64	2.83	20
1,2,4-Trimethylbenzene	19.43	2.0	µg/L	20	0	97.2	70	130	18.72	3.72	20
1,3,5-Trimethylbenzene	19.29	2.0	µg/L	20	0	96.5	70	130	18.48	4.29	20
Vinyl chloride	18.78	2.0	µg/L	20	0	93.9	70	130	16.11	15.3	20
o-Xylene	18.49	2.0	µg/L	20	0	92.5	70	130	17.7	4.37	20
m,p-Xylene	36.1	2.0	µg/L	40	0	90.2	70	130	35.89	0.583	20
Surr: Dibromofluoromethane	26.26	2.0	µg/L	25	0	105	70	130	0	0	0
Surr: 1,2-Dichloroethane-d4	25.78	2.0	µg/L	25	0	103	70	130	0	0	0
Surr: Toluene-d8	27.13	2.0	µg/L	25	0	109	70	130	0	0	0
Surr: 4-Bromofluorobenzene	23.92	2.0	µg/L	25	0	95.7	70	130	0	0	0

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R - RPD outside accepted recovery limits
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: *11-Apr-17*

CLIENT: Charles Castelluccio Consulting, LLC
Project: YRC North Reading
Lab Order: 1703027

Lab ID: 1703027-01
Collection Date: 3/22/2017 9:40:00 AM
Collection Time:
Client Sample ID: Influent
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: AL
Iron	ND	100		µg/L	1	3/27/2017 5:00:43 PM
ION CHROMATOGRAPHY		**E300**				Analyst: AL
Chloride	420	10		mg/L	20	4/5/2017
MERCURY, TOTAL		**E245.1**				Analyst: AL
Mercury	ND	0.20		µg/L	1	3/28/2017 3:51:53 PM
PH		**SM4500-H, B**				Analyst: AL
pH	6.6	0	H	pH Units	1	3/22/2017 2:58:00 PM

Lab ID: 1703027-02
Collection Date: 3/22/2017 9:10:00 AM
Collection Time:
Client Sample ID: Effluent
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: AL
Iron	ND	100		µg/L	1	3/27/2017 5:07:23 PM
ION CHROMATOGRAPHY		**E300**				Analyst: AL
Chloride	380	10		mg/L	20	4/5/2017
MERCURY, TOTAL		**E245.1**				Analyst: AL
Mercury	ND	0.20		µg/L	1	3/28/2017 4:07:04 PM
PH		**SM4500-H, B**				Analyst: AL
pH	7.8	0	H	pH Units	1	3/22/2017 3:05:00 PM

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1703027
Project: YRC North Reading

QC SUMMARY REPORT
Method Blank

Sample ID: mb-27235 **Batch ID:** 27235 **Test Code:** E200.7 **Units:** µg/L **Analysis Date:** 3/27/2017 3:40:38 PM **Prep Date:** 3/22/2017
Client ID: **Run ID:** ICP-OPTIMA_170327A **SeqNo:** 996240

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Iron	ND	100	µg/L									

Sample ID: MB-R59448 **Batch ID:** R59448 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 4/5/2017 **Prep Date:**
Client ID: **Run ID:** DIONEX_170405A **SeqNo:** 996811

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	ND	0.50	mg/L									

Sample ID: mb-27239 **Batch ID:** 27239 **Test Code:** E245.1 **Units:** µg/L **Analysis Date:** 3/28/2017 3:40:36 PM **Prep Date:** 3/28/2017
Client ID: **Run ID:** HG-FIMS_170328A **SeqNo:** 996349

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	ND	0.20	µg/L									

Qualifiers: ND - Not Detected at the Reporting Limit
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RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1703027
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: lcs-27235 **Batch ID:** 27235 **Test Code:** E200.7 **Units:** µg/L **Analysis Date:** 3/27/2017 3:45:14 PM **Prep Date:** 3/22/2017
Client ID: **Run ID:** ICP-OPTIMA_170327A **SeqNo:** 996241

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Iron	4155	100	µg/L	4004	0	104	85	115	0			

Sample ID: LCS-R59448 **Batch ID:** R59448 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 4/5/2017 **Prep Date:**
Client ID: **Run ID:** DIONEX_170405A **SeqNo:** 996812

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	13.48	0.50	mg/L	12.5	0	108	89	110	0			

Sample ID: LCSD-R59448 **Batch ID:** R59448 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 4/5/2017 **Prep Date:**
Client ID: **Run ID:** DIONEX_170405A **SeqNo:** 996817

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	13.47	0.50	mg/L	12.5	0	108	89	110	0			

Sample ID: lcsd-27239 **Batch ID:** 27239 **Test Code:** E245.1 **Units:** µg/L **Analysis Date:** 3/28/2017 3:48:07 PM **Prep Date:** 3/28/2017
Client ID: **Run ID:** HG-FIMS_170328A **SeqNo:** 996350

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.556	0.20	µg/L	4	0	114	85	115	0			

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: *11-Apr-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1703027
Project: YRC North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: LCS-27239 **Batch ID:** 27239 **Test Code:** E245.1 **Units:** mg/L **Analysis Date:** 3/28/2017 5:28:09 PM **Prep Date:** 3/28/2017
Client ID: **Run ID:** HG-FIMS_170328A **SeqNo:** 996376

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.045	0.20	mg/L	4	0	101	85	115	0			

Sample ID: LCS-R59415 **Batch ID:** R59415 **Test Code:** SM4500-H, B **Units:** pH Units **Analysis Date:** 3/22/2017 2:34:00 PM **Prep Date:**
Client ID: **Run ID:** ING-WET_170322A **SeqNo:** 996425

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
pH	6.03	0	pH Units	6	0	100	99	101	0			

Sample ID: LCSD-R59415 **Batch ID:** R59415 **Test Code:** SM4500-H, B **Units:** pH Units **Analysis Date:** 3/22/2017 2:56:00 PM **Prep Date:**
Client ID: **Run ID:** ING-WET_170322A **SeqNo:** 996431

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
pH	6.05	0	pH Units	6	0	101	99	101	6.03	0.331	5	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1703027
Project: YRC North Reading

QC SUMMARY REPORT
Sample Duplicate

Sample ID: 1703027-01BD **Batch ID:** R59448 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 4/5/2017 **Prep Date:**
Client ID: Influent **Run ID:** DIONEX_170405A **SeqNo:** 996815

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	415	10	mg/L	0	0	0	0	0	415.6	0.142	20	

Sample ID: 1703027-01CD **Batch ID:** 27239 **Test Code:** E245.1 **Units:** µg/L **Analysis Date:** 3/28/2017 3:55:41 PM **Prep Date:** 3/28/2017
Client ID: Influent **Run ID:** HG-FIMS_170328A **SeqNo:** 996352

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	ND	0.20	µg/L	0	0	0	0	0	0.03809	0	20	

Sample ID: 1703027-01BD **Batch ID:** R59415 **Test Code:** SM4500-H, B **Units:** pH Units **Analysis Date:** 3/22/2017 3:00:00 PM **Prep Date:**
Client ID: Influent **Run ID:** ING-WET_170322A **SeqNo:** 996429

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
pH	6.64	0	pH Units	0	0	0	0	0	6.59	0.756	5	H

Qualifiers: ND - Not Detected at the Reporting Limit
S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: *11-Apr-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1703027
Project: YRC North Reading

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID: 1703027-01BMS **Batch ID:** R59448 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 4/5/2017 **Prep Date:**
Client ID: Influent **Run ID:** DIONEX_170405A **SeqNo:** 996816

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	671.2	10	mg/L	250	415.6	102	65	134	0			

Sample ID: 1703027-01CMS **Batch ID:** 27239 **Test Code:** E245.1 **Units:** µg/L **Analysis Date:** 3/28/2017 3:59:27 PM **Prep Date:** 3/28/2017
Client ID: Influent **Run ID:** HG-FIMS_170328A **SeqNo:** 996353

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.163	0.20	µg/L	4	0.03809	103	70	130	0			

Sample ID: 1703027-01CMSD **Batch ID:** 27239 **Test Code:** E245.1 **Units:** µg/L **Analysis Date:** 3/28/2017 4:03:15 PM **Prep Date:** 3/28/2017
Client ID: Influent **Run ID:** HG-FIMS_170328A **SeqNo:** 996354

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.204	0.20	µg/L	4	0.03809	104	70	130	4.163	0.996	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corporation

111 Herrick Street, Merrimack, NH 03054
TEL: (603) 424-2022 • FAX: (603) 429-8496
www.amrolabs.com

May 15, 2017

ANALYTICAL TEST RESULTS

Charles Castelluccio
Charles Castelluccio Consulting, LLC
62 Wescroft Road
Reading, MA 01867
TEL: (978) 505-1123
FAX:

Subject: YRC N. Reading

Workorder No.: 1704037

Dear Charles Castelluccio:

AMRO Environmental Laboratories Corp. received 3 samples on 4/20/2017 for the analyses presented in the following report.

The enclosed sample results are revised based upon further review of the the analytical data or legitimate changes made at your request.

AMRO is accredited in accordance with NELAC and certifies that these test results meet all the requirements of NELAC, where applicable, unless otherwise noted in the case narrative.

Please be advised that any unused sample volume and sample extracts will be stored for a period of thirty (30) days from this report date. After this time, AMRO will properly dispose of the remaining sample(s). If you require further analysis, or need the samples held for a longer period, please contact us immediately.

This report consists of a total of 39 pages. This letter is an integral part of your data report. If you have any questions regarding this project in the future, please refer to the Order Number above.

Sincerely,

Nancy Stewart
Vice President

State Certifications: NH (NELAC): 1001, MA: M-NH012, CT: PH-0758, NY: 11278 (NELAC), ME: NH012 and 1001.

Hard copy of the State Certification is available upon request.

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Project: YRC N. Reading
Lab Order: 1704037
Date Received: 4/20/2017

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Collection Date	Collection Time
1704037-01A	Influent	4/20/2017	9:25 AM
1704037-01B	Influent	4/20/2017	9:25 AM
1704037-01C	Influent	4/20/2017	9:25 AM
1704037-01D	Influent	4/20/2017	9:25 AM
1704037-01E	Influent	4/20/2017	9:25 AM
1704037-02A	Effluent	4/20/2017	9:10 AM
1704037-02B	Effluent	4/20/2017	9:10 AM
1704037-02C	Effluent	4/20/2017	9:10 AM
1704037-02D	Effluent	4/20/2017	9:10 AM
1704037-03A	Receiving	4/20/2017	10:30 AM
1704037-03B	Receiving	4/20/2017	10:30 AM
1704037-03C	Receiving	4/20/2017	10:30 AM

AMRO Environmental Laboratories Corp.

Lab Order: 1704037
Client: Charles Castelluccio Consulting, LLC
Project: YRC N. Reading

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
1704037-01A	Influent	4/20/2017 9:25:00 AM	Aqueous	MCP VOCs 8260C, EPA 5030C		4/26/2017	
				EPA 5030B	4/20/2017	R59500	
1704037-01B				EPA 200.7 ICP METALS, TOTAL		5/1/2017	
				200 Series Prep: ICP/GFAA	4/28/2017	27283	
				EPA 200.9 ARSENIC, Total		5/4/2017	
					4/28/2017	27283	
				EPA 200.9 LEAD, Total		5/1/2017	
					4/28/2017	27283	
				EPA 200.9 SELENIUM, Total		5/2/2017	
					4/28/2017	27283	
				EPA 245.1 MERCURY, Total		5/2/2017	
				MERCURY PREP: EPA 245.1/7040	5/2/2017	27294	
				HARDNESS		5/1/2017	
				200 Series Prep: ICP/GFAA	4/28/2017	27283	
1704037-01C				Standard Methods - Ammonia as Nitrogen		4/23/2017	
						R59526	
1704037-01D				Standard Methods - Cyanide, Total		4/26/2017	
						R59527	
1704037-01E				Ion Chromatography, EPA 300		4/25/2017	
						R59495	
				SM 3500D Hexavalent Chromium		4/20/2017	
						R59487	
				SM 4500G Chlorine, Total Residual (modified)		4/20/2017	
						R59485	

AMRO Environmental Laboratories Corp.

Lab Order: 1704037
Client: Charles Castelluccio Consulting, LLC
Project: YRC N. Reading

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
1704037-01E	Influent	4/20/2017 9:25:00 AM	Aqueous	Standard Methods - Total Suspended Solids		4/26/2017 R59528	
1704037-02A	Effluent	4/20/2017 9:10:00 AM		MCP VOCs 8260C, EPA 5030C		4/26/2017	
				EPA 5030B	4/20/2017	R59500	
1704037-02B				Standard Methods - Ammonia as Nitrogen		4/23/2017 R59526	
1704037-02C				SM 3500D Hexavalent Chromium		4/20/2017 R59487	
				SM 4500G Chlorine, Total Residual (modified)		4/20/2017 R59485	
1704037-02D				EPA 200.7 ICP METALS, TOTAL		5/1/2017	
				200 Series Prep: ICP/GFAA	4/28/2017	27283	
				HARDNESS		5/1/2017	
					4/28/2017	27283	
1704037-03A	Receiving	4/20/2017 10:30:00 AM		Standard Methods - Ammonia as Nitrogen		4/23/2017 R59526	
1704037-03B				SM 3500D Hexavalent Chromium		4/20/2017 R59487	
1704037-03C				HARDNESS		5/1/2017	
				200 Series Prep: ICP/GFAA	4/28/2017	27283	

AMRO Environmental Laboratories Corporation
111 Herrick Street
Merrimack, NH 03054

CHAIN-OF-CUSTODY RECORD

NO: 66973

Office: (603) 424-2022
Fax: (603) 429-8496
web: www.amrolabs.com

Project No.: YRC	Project Name: N. Reading	Project State: MA	Project Manager: C Castelluccio	Samplers (Signature): C. Castelluccio	AMRO Project No.: 1704037
P.O.#:	Results Needed by: Standard				
QUOTE #:	Seal Intact? Yes No N/A				

Sample ID.:	Date/Time Sampled	Matrix	Total # of Cont. & Size	Comp.	Grab	metals + hardness	VOCs	Ammonia	Cyanide	Cl⁻, Cr6, TRC, TSS	Cr6 only run if found in Influent										Remarks
Influent	4/20/17 925	A			X	X	X	X	X	X											lists of analytes as provided to lab for NJT RGP permit
Effluent	4/20/17 910	A			X	*	X	X	**	3*											
Receiving	4/20/17 1030	A			X	*		X			X										

Preservative: Cl-HCl, MeOH, N-HN03, S-H2SO4, Na-NaOH, O- Other

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Send Results To:	PRIORITY TURNAROUND TIME AUTHORIZATION	METALS 8 RCRA ☐ 13 PP ☐ 23 TAL ☐ 14 MCP ☐
Charles.Castelluccio@gmail.com	Before submitting samples for expedited TAT, you must *have a coded AUTHORIZATION NUMBER*	Method: 6010 ☐ 200.7 ☐ Other Metals:
	AUTHORIZATION No.: BY:	Dissolved Metals Field Filtered? YES ☐ NO ☐
PHONE #: 978 505 1123 FAX #:		MCP Presumptive Certainty Required? YES ☒ NO ☐
E-mail: Charles.Castelluccio@gmail.com.		MCP Methods Needed: YES ☐ NO ☒

Relinquished By:	Date/Time	Received By	AMRO report package level needed:	Required Reporting Limits: S-1 ☐ GW-1 ☒ S-2 ☐ GW-2 ☐ S-3 ☐ GW-3 ☐
	4/20/17 1320			
M/H Grayson	4/20/17 1910		EDD required:	Other:

Please print clearly, legibly and completely. Samples can not be logged in and the turnaround time clock will not start until any ambiguities are resolved.

Samples arriving after 12:00 noon will be tracked and billed as received on the following day.

AMRO policy requires notification in writing to the laboratory in cases where the samples were collected from highly contaminated sites.

KNOWN SITE CONTAMINATION:

White: Lab Copy Yellow: Client Copy

SHEET OF

* only run metals if detected in influent; Run hardness regardless.
** only run cyanide in effluent if detected in influent 3* only run Cl⁻, Cr6, TRC, TSS if detected in influent

AMRO Environmental Laboratories Corporation

SAMPLE RECEIPT CHECKLIST

111 Herrick Street
Merrimack, NH 03054
(603) 424-2022

Client: Charles Castelluccis — AMRO ID: 17-04037
Project Name: YRC N. Reading — Date Rec.: 4-20-17
Ship via: (circle one) Fed Ex., UPS, (AMRO Courier) — Date Due: 4-27-17
Hand Del., Other Courier, Other:

Items to be Checked Upon Receipt	Yes	No	NA	Comments
1. Army Samples received in individual plastic bags?			✓	
2. Custody Seals present?			✓	
3. Custody Seals Intact?			✓	
4. Air Bill included in folder if received?			✓	
5. Is COC included with samples?	✓			
6. Is COC signed and dated by client?	✓			
7. Laboratory receipt temperature. TEMP = 4°C				
Samples rec. with ice ✓ ice packs ___ neither ___				
8. Were samples received the same day they were sampled?	✓			
Is client temperature = or <6°C ?	✓			
If no obtain authorization from the client for the analyses.				
Client authorization from: Date: Obtained by:				
9. Is the COC filled out correctly and completely?	✓			
10. Does the info on the COC match the samples?	✓			
11. Were samples rec. within holding time?	✓			
12. Were all samples properly labeled?	✓			
13. Were all samples properly preserved?	✓			
14. Were proper sample containers used?	✓			
15. Were all samples received intact? (none broken or leaking)	✓			
16. Were VOA vials rec. with no air bubbles?	✓			
17. Were the sample volumes sufficient for requested analysis?	✓			
18. Were all samples received?	✓			
19. VPH and VOA Soils only:			✓	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container)				
Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCore, B=Bulk, D= DI water				
If M , SB, DI:				
Does preservative cover the soil?				
Does preservation level come close to the fill line on the vial?				
Date/Time DI Preserved vials Frozen on:				
Frozen by Client?				
Were vials provided by AMRO?				
If NO then weights MUST be obtained from client				
Was dry weight aliquot provided?				
If NO then notified client and inform the VOA lab ASAP.				
20. Subcontracted Samples:			✓	
What samples sent:				
Where sent:				
Date:				
Analysis:				
TAT:				
21. Information entered into:				
Internal Tracking Log?	✓			
Dry Weight Log?			✓	
Client Log?			✓	
Composite Log?			✓	
Filtration Log?			✓	

Received By: [illegible] Date: 4-20-17 — Logged in By: [illegible] Date: 4-20-17
Labeled By: [illegible] Date: 4-20-17 — Checked By: [illegible] Date: 04/24/17

NA= Not Applicable

AMRO Environmental Laboratories Corporation

111 Herrick Street
Merrimack, NH 03054
(603) 424-2022

Please Circle if:
Sample= Soil
Sample= Waste

AMRO ID: 1704037

Sample ID	Analysis	Volume Sample	Preserv. Listed	Initial pH*	Acceptable? Y or N	List Preserv. Added by AMRO	Solution ID # of Preserv.	Volume Preservative Added	Final adjusted pH	Final adjusted pH (after 16 or 24 hours)
01A, 02A	VOC	2x40ml	HCl							
01B, 02B, 03C	Metals	500ml	HNO_3	<2	Y					
01C, 02B, 03A	Amm.	500ml	H_2SO_4	<2	Y					
01D, 02	CN^-	250ml	NaOH, AA	>12	Y					
01E, 02C	Cl-, NO_3, TRC, TSS	500ml	none	analyst						
03B	Cr6	500ml	none		↓					

Sample ID	Analysis	Volume Sample	Preserv. Listed	Initial TRC	Acceptable? Y or N	List Preserv. Added by AMRO	Solution ID # of Preserv.	Volume Preservative Added	Final adjusted TRC	Acceptable? Y or N

** = if the laboratory preserves the drinking water sample (s) for EPA Method 200 series, sample (s) should be held at least 16 hours prior to analysis or 24 hours for water sample (s).*

pH Checked By: _____ Date: 4-20-17 pH adjusted By: _____ Date: _____

pH Checked By: _____ Date: _____ pH adj.(16 or 24hrs)By: _____ Date: _____

GC/MS VOLATILES- 8260C:

1. A quadratic regression was used for 2-Butanone and Methylene chloride in the Initial Calibration analyzed on V-2 04/23/17.

2. A Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were performed on 04/26/17 on V-2 (Batch ID: R59500). All %Rs and RPDs were within the laboratory control limits with the following exception(s):

2.1 The %R for 2 analytes out of 71 analytes in the LCS were outside the control limits.
2.2 The RPD for 1 analyte out of 71 analytes was outside the control limits.

3. No analytical or quality issues were noted, other than those described above or in the Data Comment page.

METALS:

1. No analytical or quality issues were noted, other than those described in the Data Comment page.

WET CHEMISTRY:

1. No analytical or quality issues were noted, other than those described in the Data Comment page.

MassDEP Analytical Protocol Certification Form

Laboratory Name: AMRO Environmental Lab. Corp. Project #:

Project Location: YRC N. Reading RTN:

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

1704087-01-03

Matrices: [X] Groundwater/Surface Water [ ] Soil/Sediment [ ] Drinking Water [ ] Air [ ] Other:

CAM Protocol (check all that apply below):

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 [ ]	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?	[X] Yes [ ] No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	[X] 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?	[X] 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"?	[X] Yes [ ] No
E	VPH, EPH, APH, and TO-15 only: 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). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	[ ] Yes [ ] No N/A [ ] 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)?	[X] 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)?	[X] Yes [ ] No[1]

***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 [X] No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	[X] Yes [ ] No[1]

[1] *All negative responses must be addressed in an attached laboratory 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: [signature] Position: Vice President

Printed Name: Nancy Stewart Date: 5-15-17

DATA COMMENT PAGE

Organic Data Qualifiers

ND	Indicates compound was analyzed for, but not detected at or above the reporting limit.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than the method detection limit.
H	Method prescribed holding time exceeded.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
B	This flag is used when the analyte is found in the associated blank as well as in the sample.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
#	See Case Narrative
Q	RPD between signal 1 and signal 2 >40%.

Micro Data Qualifiers

TNTC	Too numerous to count

Inorganic Data Qualifiers

ND or U	Indicates element was analyzed for, but not detected at or above the reporting limit.
J	Indicates a value greater than or equal to the method detection limit, but less than the quantitation limit.
H	Indicates analytical holding time exceedance.
B	Indicates that the analyte is found in the associated blank, as well as in the sample.
MSA	Indicates value determined by the Method of Standard Addition
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
PS	The analyte was below the Reporting Limit but has significant matrix interference as noted by the poor recovery of the Post Digestion Spike.
#	See Case Narrative
*	MCL Exceeded

Report Comments:

1. Soil, sediment and sludge sample results are reported on a "dry weight" basis.
2. Reporting limits are adjusted for sample size used, dilutions and moisture content, if applicable.

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Influent
Lab Order:	1704037	**Collection Date:**	4/20/2017 9:25:00 AM
Project:	YRC N. Reading	**Matrix:**	AQUEOUS
Lab ID:	1704037-01A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY MCP MET SW8260C						Analyst: JK
Acetone	ND	10		µg/L	1	4/26/2017 6:00:00 PM
Tertiary Amyl Methyl Ether	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Benzene	ND	1.0		µg/L	1	4/26/2017 6:00:00 PM
Bromobenzene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Bromochloromethane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Bromoform	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Bromomethane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
sec-Butylbenzene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
n-Butylbenzene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
tert-Butylbenzene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Carbon disulfide	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Chlorobenzene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Dibromochloromethane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Chloroethane	ND	5.0		µg/L	1	4/26/2017 6:00:00 PM
Chloroform	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Chloromethane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
2-Chlorotoluene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	4/26/2017 6:00:00 PM
1,2-Dibromoethane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Dibromomethane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,3-Dichlorobenzene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	1	4/26/2017 6:00:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	4/26/2017 6:00:00 PM
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 6:00:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 6:00:00 PM
Diethyl ether	ND	5.0		µg/L	1	4/26/2017 6:00:00 PM

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Lab Order: 1704037
Project: YRC N. Reading
Lab ID: 1704037-01A

Client Sample ID: Influent
Collection Date: 4/20/2017 9:25:00 AM
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diisopropyl ether	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,4-Dioxane	ND	50		µg/L	1	4/26/2017 6:00:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Ethylbenzene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
2-Hexanone	ND	10		µg/L	1	4/26/2017 6:00:00 PM
Isopropylbenzene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
2-Butanone	ND	10		µg/L	1	4/26/2017 6:00:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	4/26/2017 6:00:00 PM
Methyl tert-butyl ether	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Methylene chloride	ND	5.0		µg/L	1	4/26/2017 6:00:00 PM
Naphthalene	ND	5.0		µg/L	1	4/26/2017 6:00:00 PM
n-Propylbenzene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Styrene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Tetrachloroethene	96	2.0		µg/L	1	4/26/2017 6:00:00 PM
Tetrahydrofuran	ND	10		µg/L	1	4/26/2017 6:00:00 PM
Toluene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,2,4-Trichlorobenzene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,2,3-Trichlorobenzene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Trichloroethene	7.0	2.0		µg/L	1	4/26/2017 6:00:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Vinyl chloride	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
o-Xylene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
m,p-Xylene	ND	2.0		µg/L	1	4/26/2017 6:00:00 PM
Surr: Dibromofluoromethane	99.5	70-130		%REC	1	4/26/2017 6:00:00 PM
Surr: 1,2-Dichloroethane-d4	116	70-130		%REC	1	4/26/2017 6:00:00 PM
Surr: Toluene-d8	97.6	70-130		%REC	1	4/26/2017 6:00:00 PM
Surr: 4-Bromofluorobenzene	90.8	70-130		%REC	1	4/26/2017 6:00:00 PM

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Effluent
Lab Order:	1704037	**Collection Date:**	4/20/2017 9:10:00 AM
Project:	YRC N. Reading	**Matrix:**	AQUEOUS
Lab ID:	1704037-02A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY MCP MET SW8260C						Analyst: JK
Acetone	ND	10		µg/L	1	4/26/2017 6:39:00 PM
Tertiary Amyl Methyl Ether	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Benzene	ND	1.0		µg/L	1	4/26/2017 6:39:00 PM
Bromobenzene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Bromochloromethane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Bromoform	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Bromomethane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
sec-Butylbenzene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
n-Butylbenzene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
tert-Butylbenzene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Carbon disulfide	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Chlorobenzene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Dibromochloromethane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Chloroethane	ND	5.0		µg/L	1	4/26/2017 6:39:00 PM
Chloroform	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Chloromethane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
2-Chlorotoluene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	4/26/2017 6:39:00 PM
1,2-Dibromoethane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Dibromomethane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,3-Dichlorobenzene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	1	4/26/2017 6:39:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	4/26/2017 6:39:00 PM
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 6:39:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 6:39:00 PM
Diethyl ether	ND	5.0		µg/L	1	4/26/2017 6:39:00 PM

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Lab Order: 1704037
Project: YRC N. Reading
Lab ID: 1704037-02A

Client Sample ID: Effluent
Collection Date: 4/20/2017 9:10:00 AM
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diisopropyl ether	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,4-Dioxane	ND	50		µg/L	1	4/26/2017 6:39:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Ethylbenzene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
2-Hexanone	ND	10		µg/L	1	4/26/2017 6:39:00 PM
Isopropylbenzene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
2-Butanone	ND	10		µg/L	1	4/26/2017 6:39:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	4/26/2017 6:39:00 PM
Methyl tert-butyl ether	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Methylene chloride	ND	5.0		µg/L	1	4/26/2017 6:39:00 PM
Naphthalene	ND	5.0		µg/L	1	4/26/2017 6:39:00 PM
n-Propylbenzene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Styrene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Tetrachloroethene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Tetrahydrofuran	ND	10		µg/L	1	4/26/2017 6:39:00 PM
Toluene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,2,4-Trichlorobenzene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,2,3-Trichlorobenzene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Trichloroethene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Vinyl chloride	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
o-Xylene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
m,p-Xylene	ND	2.0		µg/L	1	4/26/2017 6:39:00 PM
Surr: Dibromofluoromethane	103	70-130		%REC	1	4/26/2017 6:39:00 PM
Surr: 1,2-Dichloroethane-d4	114	70-130		%REC	1	4/26/2017 6:39:00 PM
Surr: Toluene-d8	97.4	70-130		%REC	1	4/26/2017 6:39:00 PM
Surr: 4-Bromofluorobenzene	89.6	70-130		%REC	1	4/26/2017 6:39:00 PM

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Method Blank

Sample ID: **mb-04/26/17** Batch ID: **R59500** Test Code: **SW8260C** Units: **µg/L** Analysis Date: **4/26/2017 1:32:00 PM** Prep Date: **4/26/2017**
Client ID: Run ID: **V-2_170426A** SeqNo: **997759**

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	ND	10	µg/L									
Tertiary Amyl Methyl Ether	ND	2.0	µg/L									
Benzene	ND	1.0	µg/L									
Bromobenzene	ND	2.0	µg/L									
Bromochloromethane	ND	2.0	µg/L									
Bromodichloromethane	ND	2.0	µg/L									
Bromoform	ND	2.0	µg/L									
Bromomethane	ND	2.0	µg/L									
sec-Butylbenzene	ND	2.0	µg/L									
n-Butylbenzene	ND	2.0	µg/L									
tert-Butylbenzene	ND	2.0	µg/L									
Carbon disulfide	ND	2.0	µg/L									
Carbon tetrachloride	ND	2.0	µg/L									
Chlorobenzene	ND	2.0	µg/L									
Dibromochloromethane	ND	2.0	µg/L									
Chloroethane	ND	5.0	µg/L									
Chloroform	ND	2.0	µg/L									
Chloromethane	ND	2.0	µg/L									
2-Chlorotoluene	ND	2.0	µg/L									
4-Chlorotoluene	ND	2.0	µg/L									
1,2-Dibromo-3-chloropropane	ND	5.0	µg/L									
1,2-Dibromoethane	ND	2.0	µg/L									
Dibromomethane	ND	2.0	µg/L									
1,3-Dichlorobenzene	ND	2.0	µg/L									
1,2-Dichlorobenzene	ND	2.0	µg/L									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Method Blank

1,4-Dichlorobenzene	ND	2.0	µg/L
Dichlorodifluoromethane	ND	5.0	µg/L
1,1-Dichloroethane	ND	2.0	µg/L
1,2-Dichloroethane	ND	2.0	µg/L
1,1-Dichloroethene	ND	1.0	µg/L
cis-1,2-Dichloroethene	ND	2.0	µg/L
trans-1,2-Dichloroethene	ND	2.0	µg/L
1,2-Dichloropropane	ND	2.0	µg/L
1,3-Dichloropropane	ND	2.0	µg/L
2,2-Dichloropropane	ND	2.0	µg/L
1,1-Dichloropropene	ND	2.0	µg/L
cis-1,3-Dichloropropene	ND	1.0	µg/L
trans-1,3-Dichloropropene	ND	1.0	µg/L
Diethyl ether	ND	5.0	µg/L
Diisopropyl ether	ND	2.0	µg/L
1,4-Dioxane	ND	50	µg/L
Ethyl Tertiary Butyl Ether	ND	2.0	µg/L
Ethylbenzene	ND	2.0	µg/L
Hexachlorobutadiene	ND	2.0	µg/L
2-Hexanone	ND	10	µg/L
Isopropylbenzene	ND	2.0	µg/L
4-Isopropyltoluene	ND	2.0	µg/L
2-Butanone	ND	10	µg/L
4-Methyl-2-pentanone	ND	10	µg/L
Methyl tert-butyl ether	ND	2.0	µg/L
Methylene chloride	ND	5.0	µg/L
Naphthalene	ND	5.0	µg/L
n-Propylbenzene	ND	2.0	µg/L
Styrene	ND	2.0	µg/L
1,1,1,2-Tetrachloroethane	ND	2.0	µg/L
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Method Blank

Tetrachloroethene	ND	2.0	µg/L						
Tetrahydrofuran	ND	10	µg/L						
Toluene	ND	2.0	µg/L						
1,2,4-Trichlorobenzene	ND	2.0	µg/L						
1,2,3-Trichlorobenzene	ND	2.0	µg/L						
1,1,1-Trichloroethane	ND	2.0	µg/L						
1,1,2-Trichloroethane	ND	2.0	µg/L						
Trichloroethene	ND	2.0	µg/L						
Trichlorofluoromethane	ND	2.0	µg/L						
1,2,3-Trichloropropane	ND	2.0	µg/L						
1,2,4-Trimethylbenzene	ND	2.0	µg/L						
1,3,5-Trimethylbenzene	ND	2.0	µg/L						
Vinyl chloride	ND	2.0	µg/L						
o-Xylene	ND	2.0	µg/L						
m,p-Xylene	ND	2.0	µg/L						
Surr: Dibromofluoromethane	25.99	2.0	µg/L	25	0	104	70	130	0
Surr: 1,2-Dichloroethane-d4	29.16	2.0	µg/L	25	0	117	70	130	0
Surr: Toluene-d8	25.19	2.0	µg/L	25	0	101	70	130	0
Surr: 4-Bromofluorobenzene	23.44	2.0	µg/L	25	0	93.8	70	130	0

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: **lcs-04/26/17** Batch ID: **R59500** Test Code: **SW8260C** Units: **µg/L** Analysis Date: **4/26/2017 11:40:00 AM** Prep Date: **4/26/2017**
Client ID: Run ID: **V-2_170426A** SeqNo: **997761**

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	40.64	10	µg/L	40	0	102	40	160	0			
Tertiary Amyl Methyl Ether	21.57	2.0	µg/L	20	0	108	70	130	0			
Benzene	24.97	1.0	µg/L	20	0	125	70	130	0			
Bromobenzene	20.84	2.0	µg/L	20	0	104	70	130	0			
Bromochloromethane	22.9	2.0	µg/L	20	0	114	70	130	0			
Bromodichloromethane	21.48	2.0	µg/L	20	0	107	70	130	0			
Bromoform	16.83	2.0	µg/L	20	0	84.2	70	130	0			
Bromomethane	14.02	2.0	µg/L	20	0	70.1	40	160	0			
sec-Butylbenzene	23.26	2.0	µg/L	20	0	116	70	130	0			
n-Butylbenzene	24.07	2.0	µg/L	20	0	120	70	130	0			
tert-Butylbenzene	21.18	2.0	µg/L	20	0	106	70	130	0			
Carbon disulfide	20.29	2.0	µg/L	20	0	101	70	130	0			
Carbon tetrachloride	25.97	2.0	µg/L	20	0	130	70	130	0			
Chlorobenzene	19.09	2.0	µg/L	20	0	95.4	70	130	0			
Dibromochloromethane	18.85	2.0	µg/L	20	0	94.2	70	130	0			
Chloroethane	17.82	5.0	µg/L	20	0	89.1	70	130	0			
Chloroform	21.27	2.0	µg/L	20	0	106	70	130	0			
Chloromethane	14.78	2.0	µg/L	20	0	73.9	40	160	0			
2-Chlorotoluene	21.83	2.0	µg/L	20	0	109	70	130	0			
4-Chlorotoluene	20.48	2.0	µg/L	20	0	102	70	130	0			
1,2-Dibromo-3-chloropropane	16.47	5.0	µg/L	20	0	82.4	70	130	0			
1,2-Dibromoethane	21.95	2.0	µg/L	20	0	110	70	130	0			
Dibromomethane	18.5	2.0	µg/L	20	0	92.5	70	130	0			
1,3-Dichlorobenzene	22.05	2.0	µg/L	20	0	110	70	130	0			
1,2-Dichlorobenzene	20.99	2.0	µg/L	20	0	105	70	130	0			

Qualifiers: ND - Not Detected at the Reporting Limit
S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT

Laboratory Control Spike

1,4-Dichlorobenzene	20.23	2.0	µg/L	20	0	101	70	130	0	
Dichlorodifluoromethane	14.51	5.0	µg/L	20	0	72.6	40	160	0	
1,1-Dichloroethane	21.65	2.0	µg/L	20	0	108	70	130	0	
1,2-Dichloroethane	22.8	2.0	µg/L	20	0	114	70	130	0	
1,1-Dichloroethene	20.24	1.0	µg/L	20	0	101	70	130	0	
cis-1,2-Dichloroethene	21.9	2.0	µg/L	20	0	110	70	130	0	
trans-1,2-Dichloroethene	21.73	2.0	µg/L	20	0	109	70	130	0	
1,2-Dichloropropane	20.13	2.0	µg/L	20	0	101	70	130	0	
1,3-Dichloropropane	19.45	2.0	µg/L	20	0	97.3	70	130	0	
2,2-Dichloropropane	28.42	2.0	µg/L	20	0	142	70	130	0	S
1,1-Dichloropropene	27.6	2.0	µg/L	20	0	138	70	130	0	S
cis-1,3-Dichloropropene	21.72	1.0	µg/L	20	0	109	70	130	0	
trans-1,3-Dichloropropene	17.49	1.0	µg/L	20	0	87.5	70	130	0	
Diethyl ether	20.53	5.0	µg/L	20	0	103	70	130	0	
Diisopropyl ether	22.64	2.0	µg/L	20	0	113	70	130	0	
1,4-Dioxane	78.35	50	µg/L	100	0	78.4	40	160	0	
Ethyl Tertiary Butyl Ether	23.72	2.0	µg/L	20	0	119	70	130	0	
Ethylbenzene	20.22	2.0	µg/L	20	0	101	70	130	0	
Hexachlorobutadiene	19.44	2.0	µg/L	20	0	97.2	70	130	0	
2-Hexanone	22.21	10	µg/L	40	0	55.5	40	160	0	
Isopropylbenzene	23.12	2.0	µg/L	20	0	116	70	130	0	
4-Isopropyltoluene	23.12	2.0	µg/L	20	0	116	70	130	0	
2-Butanone	33.21	10	µg/L	40	0	83	40	160	0	
4-Methyl-2-pentanone	30.39	10	µg/L	40	0	76	40	160	0	
Methyl tert-butyl ether	19.84	2.0	µg/L	20	0	99.2	70	130	0	
Methylene chloride	19.55	5.0	µg/L	20	0	97.8	70	130	0	
Naphthalene	19.17	5.0	µg/L	20	0	95.8	70	130	0	
n-Propylbenzene	22.5	2.0	µg/L	20	0	112	70	130	0	
Styrene	21.96	2.0	µg/L	20	0	110	70	130	0	
1,1,1,2-Tetrachloroethane	19.76	2.0	µg/L	20	0	98.8	70	130	0	
1,1,2,2-Tetrachloroethane	17.88	2.0	µg/L	20	0	89.4	70	130	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT

Laboratory Control Spike

Tetrachloroethene	23.36	2.0	µg/L	20	0	117	70	130	0
Tetrahydrofuran	15.74	10	µg/L	20	0	78.7	70	130	0
Toluene	20.71	2.0	µg/L	20	0	104	70	130	0
1,2,4-Trichlorobenzene	22.51	2.0	µg/L	20	0	113	70	130	0
1,2,3-Trichlorobenzene	19.77	2.0	µg/L	20	0	98.8	70	130	0
1,1,1-Trichloroethane	21.93	2.0	µg/L	20	0	110	70	130	0
1,1,2-Trichloroethane	20.67	2.0	µg/L	20	0	103	70	130	0
Trichloroethene	21.75	2.0	µg/L	20	0	109	70	130	0
Trichlorofluoromethane	24.3	2.0	µg/L	20	0	122	70	130	0
1,2,3-Trichloropropane	19.74	2.0	µg/L	20	0	98.7	70	130	0
1,2,4-Trimethylbenzene	22.86	2.0	µg/L	20	0	114	70	130	0
1,3,5-Trimethylbenzene	22.15	2.0	µg/L	20	0	111	70	130	0
Vinyl chloride	16.48	2.0	µg/L	20	0	82.4	70	130	0
o-Xylene	21	2.0	µg/L	20	0	105	70	130	0
m,p-Xylene	44.43	2.0	µg/L	40	0	111	70	130	0
Surr: Dibromofluoromethane	25.63	2.0	µg/L	25	0	103	70	130	0
Surr: 1,2-Dichloroethane-d4	28.99	2.0	µg/L	25	0	116	70	130	0
Surr: Toluene-d8	24.98	2.0	µg/L	25	0	99.9	70	130	0
Surr: 4-Bromofluorobenzene	22.98	2.0	µg/L	25	0	91.9	70	130	0

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: lcsd-04/26/17 **Batch ID:** R59500 **Test Code:** SW8260C **Units:** µg/L **Analysis Date:** 4/26/2017 12:17:00 PM **Prep Date:** 4/26/2017
Client ID: **Run ID:** V-2_170426A **SeqNo:** 997760

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	36.53	10	µg/L	40	0	91.3	40	160	40.64	10.7	20	
Tertiary Amyl Methyl Ether	20.98	2.0	µg/L	20	0	105	70	130	21.57	2.77	20	
Benzene	22.91	1.0	µg/L	20	0	115	70	130	24.97	8.6	20	
Bromobenzene	20.66	2.0	µg/L	20	0	103	70	130	20.84	0.867	20	
Bromochloromethane	20.82	2.0	µg/L	20	0	104	70	130	22.9	9.52	20	
Bromodichloromethane	20.04	2.0	µg/L	20	0	100	70	130	21.48	6.94	20	
Bromoform	15.01	2.0	µg/L	20	0	75	70	130	16.83	11.4	20	
Bromomethane	15.09	2.0	µg/L	20	0	75.5	40	160	14.02	7.35	20	
sec-Butylbenzene	23.73	2.0	µg/L	20	0	119	70	130	23.26	2	20	
n-Butylbenzene	23.81	2.0	µg/L	20	0	119	70	130	24.07	1.09	20	
tert-Butylbenzene	21.07	2.0	µg/L	20	0	105	70	130	21.18	0.521	20	
Carbon disulfide	18.81	2.0	µg/L	20	0	94.1	70	130	20.29	7.57	20	
Carbon tetrachloride	23.08	2.0	µg/L	20	0	115	70	130	25.97	11.8	20	
Chlorobenzene	18.48	2.0	µg/L	20	0	92.4	70	130	19.09	3.25	20	
Dibromochloromethane	17.54	2.0	µg/L	20	0	87.7	70	130	18.85	7.2	20	
Chloroethane	16.02	5.0	µg/L	20	0	80.1	70	130	17.82	10.6	20	
Chloroform	20.39	2.0	µg/L	20	0	102	70	130	21.27	4.22	20	
Chloromethane	14.14	2.0	µg/L	20	0	70.7	40	160	14.78	4.43	20	
2-Chlorotoluene	21.56	2.0	µg/L	20	0	108	70	130	21.83	1.24	20	
4-Chlorotoluene	21.9	2.0	µg/L	20	0	110	70	130	20.48	6.7	20	
1,2-Dibromo-3-chloropropane	15.18	5.0	µg/L	20	0	75.9	70	130	16.47	8.15	20	
1,2-Dibromoethane	20.6	2.0	µg/L	20	0	103	70	130	21.95	6.35	20	
Dibromomethane	18.12	2.0	µg/L	20	0	90.6	70	130	18.5	2.08	20	
1,3-Dichlorobenzene	22.44	2.0	µg/L	20	0	112	70	130	22.05	1.75	20	
1,2-Dichlorobenzene	21.3	2.0	µg/L	20	0	106	70	130	20.99	1.47	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

1,4-Dichlorobenzene	20.57	2.0	µg/L	20	0	103	70	130	20.23	1.67	20	
Dichlorodifluoromethane	12.02	5.0	µg/L	20	0	60.1	40	160	14.51	18.8	20	
1,1-Dichloroethane	20.87	2.0	µg/L	20	0	104	70	130	21.65	3.67	20	
1,2-Dichloroethane	22.67	2.0	µg/L	20	0	113	70	130	22.8	0.572	20	
1,1-Dichloroethene	19.89	1.0	µg/L	20	0	99.4	70	130	20.24	1.74	20	
cis-1,2-Dichloroethene	20.4	2.0	µg/L	20	0	102	70	130	21.9	7.09	20	
trans-1,2-Dichloroethene	20.05	2.0	µg/L	20	0	100	70	130	21.73	8.04	20	
1,2-Dichloropropane	19.32	2.0	µg/L	20	0	96.6	70	130	20.13	4.11	20	
1,3-Dichloropropane	19.06	2.0	µg/L	20	0	95.3	70	130	19.45	2.03	20	
2,2-Dichloropropane	25.06	2.0	µg/L	20	0	125	70	130	28.42	12.6	20	
1,1-Dichloropropene	25.05	2.0	µg/L	20	0	125	70	130	27.6	9.69	20	
cis-1,3-Dichloropropene	20.04	1.0	µg/L	20	0	100	70	130	21.72	8.05	20	
trans-1,3-Dichloropropene	17.52	1.0	µg/L	20	0	87.6	70	130	17.49	0.171	20	
Diethyl ether	19.42	5.0	µg/L	20	0	97.1	70	130	20.53	5.56	20	
Diisopropyl ether	21.36	2.0	µg/L	20	0	107	70	130	22.64	5.82	20	
1,4-Dioxane	65.62	50	µg/L	100	0	65.6	40	160	78.35	17.7	20	
Ethyl Tertiary Butyl Ether	22.29	2.0	µg/L	20	0	111	70	130	23.72	6.22	20	
Ethylbenzene	19.9	2.0	µg/L	20	0	99.5	70	130	20.22	1.6	20	
Hexachlorobutadiene	18.33	2.0	µg/L	20	0	91.7	70	130	19.44	5.88	20	
2-Hexanone	28.87	10	µg/L	40	0	72.2	40	160	22.21	26.1	20	R
Isopropylbenzene	22.4	2.0	µg/L	20	0	112	70	130	23.12	3.16	20	
4-Isopropyltoluene	23.7	2.0	µg/L	20	0	118	70	130	23.12	2.48	20	
2-Butanone	38.26	10	µg/L	40	0	95.7	40	160	33.21	14.1	20	
4-Methyl-2-pentanone	29.03	10	µg/L	40	0	72.6	40	160	30.39	4.58	20	
Methyl tert-butyl ether	19.81	2.0	µg/L	20	0	99	70	130	19.84	0.151	20	
Methylene chloride	19.71	5.0	µg/L	20	0	98.6	70	130	19.55	0.815	20	
Naphthalene	19.86	5.0	µg/L	20	0	99.3	70	130	19.17	3.54	20	
n-Propylbenzene	22.69	2.0	µg/L	20	0	113	70	130	22.5	0.841	20	
Styrene	20.84	2.0	µg/L	20	0	104	70	130	21.96	5.23	20	
1,1,1,2-Tetrachloroethane	20.03	2.0	µg/L	20	0	100	70	130	19.76	1.36	20	
1,1,2,2-Tetrachloroethane	18.44	2.0	µg/L	20	0	92.2	70	130	17.88	3.08	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur; RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Tetrachloroethene	21.83	2.0	µg/L	20	0	109	70	130	23.36	6.77	20
Tetrahydrofuran	18.79	10	µg/L	20	0	94	70	130	15.74	17.7	20
Toluene	19.84	2.0	µg/L	20	0	99.2	70	130	20.71	4.29	20
1,2,4-Trichlorobenzene	24.32	2.0	µg/L	20	0	122	70	130	22.51	7.73	20
1,2,3-Trichlorobenzene	21	2.0	µg/L	20	0	105	70	130	19.77	6.03	20
1,1,1-Trichloroethane	21.02	2.0	µg/L	20	0	105	70	130	21.93	4.24	20
1,1,2-Trichloroethane	19.23	2.0	µg/L	20	0	96.2	70	130	20.67	7.22	20
Trichloroethene	19.27	2.0	µg/L	20	0	96.4	70	130	21.75	12.1	20
Trichlorofluoromethane	21.75	2.0	µg/L	20	0	109	70	130	24.3	11.1	20
1,2,3-Trichloropropane	18.76	2.0	µg/L	20	0	93.8	70	130	19.74	5.09	20
1,2,4-Trimethylbenzene	22.8	2.0	µg/L	20	0	114	70	130	22.86	0.263	20
1,3,5-Trimethylbenzene	21.8	2.0	µg/L	20	0	109	70	130	22.15	1.59	20
Vinyl chloride	14.67	2.0	µg/L	20	0	73.4	70	130	16.48	11.6	20
o-Xylene	19.7	2.0	µg/L	20	0	98.5	70	130	21	6.39	20
m,p-Xylene	43.06	2.0	µg/L	40	0	108	70	130	44.43	3.13	20
Surr: Dibromofluoromethane	25.15	2.0	µg/L	25	0	101	70	130	0	0	0
Surr: 1,2-Dichloroethane-d4	27.63	2.0	µg/L	25	0	111	70	130	0	0	0
Surr: Toluene-d8	25.27	2.0	µg/L	25	0	101	70	130	0	0	0
Surr: 4-Bromofluorobenzene	23.28	2.0	µg/L	25	0	93.1	70	130	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Project: YRC N. Reading

Lab Order: 1704037

Lab ID: 1704037-01
Collection Date: 4/20/2017 9:25:00 AM
Collection Time:

Client Sample ID: Influent
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: AL
Antimony	ND	20		µg/L	1	5/1/2017 4:46:49 PM
Cadmium	ND	4.0		µg/L	1	5/1/2017 4:46:49 PM
Chromium	ND	10		µg/L	1	5/1/2017 4:46:49 PM
Copper	ND	25		µg/L	1	5/1/2017 4:46:49 PM
Iron	ND	100		µg/L	1	5/1/2017 4:46:49 PM
Nickel	ND	40		µg/L	1	5/1/2017 4:46:49 PM
Silver	ND	7.0		µg/L	1	5/1/2017 4:46:49 PM
Zinc	23	20		µg/L	1	5/1/2017 4:46:49 PM
ARSENIC, TOTAL		**E200.9_AS**				Analyst: AL
Arsenic	ND	2.0		µg/L	1	5/4/2017 3:44:15 PM
LEAD, TOTAL		**E200.9_PB**				Analyst: AL
Lead	ND	2.0		µg/L	1	5/1/2017 5:42:35 PM
SELENIUM, TOTAL		**E200.9_SE**				Analyst: AL
Selenium	ND	5.0	PS	µg/L	1	5/2/2017 2:48:26 PM
HARDNESS AS CACO3		**E200.7**				Analyst: AL
Hardness (As CaCO3)	370	17		mg/L	1	5/1/2017
MERCURY, TOTAL		**E245.1**				Analyst: AL
Mercury	ND	0.20		µg/L	1	5/2/2017 5:42:01 PM

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Project: YRC N. Reading
Lab Order: 1704037

Lab ID: 1704037-02
Collection Date: 4/20/2017 9:10:00 AM
Collection Time:
Client Sample ID: Effluent
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP- TOTAL METALS BY 200.7		**E200.7**				Analyst: AL
Zinc	22	20		µg/L	1	5/1/2017 4:53:32 PM
HARDNESS AS CACO3		**E200.7**				Analyst: AL
Hardness (As CaCO3)	280	17		mg/L	1	5/1/2017

Lab ID: 1704037-03
Collection Date: 4/20/2017 10:30:00 AM
Collection Time:
Client Sample ID: Receiving
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
HARDNESS AS CACO3		**E200.7**				Analyst: AL
Hardness (As CaCO3)	69	17		mg/L	1	5/1/2017

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Project: YRC N. Reading
Lab Order: 1704037

Lab ID: 1704037-01
Collection Date: 4/20/2017 9:25:00 AM
Collection Time:
Client Sample ID: Influent
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ION CHROMATOGRAPHY		**E300**				Analyst: AL
Chloride	380	10		mg/L	20	4/25/2017
TOTAL SUSPENDED SOLIDS		**SM2540 D**				Analyst: AL
Suspended Solids (Residue, Non-Filterable)	4.0	4.0		mg/L	1	4/26/2017
HEXAVALENT CHROMIUM		**M3500-CR**				Analyst: AL
Chromium, Hexavalent	ND	0.010		mg/L	1	4/20/2017 4:40:00 PM
CHLORINE, TOTAL RESIDUAL (MODIFIED)		**M4500-CL G**				Analyst: AL
Chlorine, Total Residual	ND	0.10		mg/L	1	4/20/2017 2:45:00 PM
CYANIDE, TOTAL		**SM4500-CN C,E**				Analyst: AL
Cyanide	ND	0.010		mg/L	1	4/26/2017
AMMONIA AS NITROGEN		**SM4500-NH3, C**				Analyst: AL
Nitrogen, Ammonia (As N)	ND	1.0		mg/L	1	4/23/2017

Lab ID: 1704037-02
Collection Date: 4/20/2017 9:10:00 AM
Collection Time:
Client Sample ID: Effluent
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM		**M3500-CR**				Analyst: AL
Chromium, Hexavalent	ND	0.010		mg/L	1	4/20/2017 4:40:00 PM
CHLORINE, TOTAL RESIDUAL (MODIFIED)		**M4500-CL G**				Analyst: AL
Chlorine, Total Residual	ND	0.10		mg/L	1	4/20/2017 2:45:00 PM
AMMONIA AS NITROGEN		**SM4500-NH3, C**				Analyst: AL
Nitrogen, Ammonia (As N)	ND	1.0		mg/L	1	4/23/2017

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Project: YRC N. Reading
Lab Order: 1704037

Lab ID: 1704037-03
Collection Date: 4/20/2017 10:30:00 AM
Collection Time:
Client Sample ID: Receiving
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM		**M3500-CR**				Analyst: **AL**
Chromium, Hexavalent	ND	0.010		mg/L	1	4/20/2017 4:40:00 PM
AMMONIA AS NITROGEN		**SM4500-NH3, C**				Analyst: **AL**
Nitrogen, Ammonia (As N)	ND	1.0		mg/L	1	4/23/2017

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Method Blank

Sample ID: mb-27283 **Batch ID:** 27283 **Test Code:** E200.7 **Units:** µg/L **Analysis Date:** 5/1/2017 3:17:51 PM **Prep Date:** 4/28/2017
Client ID: **Run ID:** ICP-OPTIMA_170501A **SeqNo:** 998404

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	ND	20	µg/L									
Cadmium	ND	4.0	µg/L									
Chromium	ND	10	µg/L									
Copper	ND	25	µg/L									
Iron	ND	100	µg/L									
Nickel	ND	40	µg/L									
Silver	ND	7.0	µg/L									
Zinc	ND	20	µg/L									

Sample ID: MB-27283 **Batch ID:** 27283 **Test Code:** E200.9_As **Units:** µg/L **Analysis Date:** 5/4/2017 2:44:29 PM **Prep Date:** 4/28/2017
Client ID: **Run ID:** AANALYST 600_170504 **SeqNo:** 999199

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Arsenic	ND	2.0	µg/L									

Sample ID: MB-27283 **Batch ID:** 27283 **Test Code:** E200.9_Pb **Units:** µg/L **Analysis Date:** 5/1/2017 4:36:26 PM **Prep Date:** 4/28/2017
Client ID: **Run ID:** AANALYST 600_170501 **SeqNo:** 998865

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Lead	ND	2.0	µg/L									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Method Blank

Sample ID: MB-27283 **Batch ID:** 27283 **Test Code:** E200.9_Se **Units:** µg/L **Analysis Date:** 5/2/2017 1:49:15 PM **Prep Date:** 4/28/2017
Client ID: **Run ID:** AANALYST 600_170502 **SeqNo:** 999098

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Selenium	ND	5.0	µg/L									

Sample ID: MB-R59495 **Batch ID:** R59495 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 4/25/2017 **Prep Date:**
Client ID: **Run ID:** DIONEX_170425A **SeqNo:** 997653

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	ND	0.50	mg/L									

Sample ID: MB-27283 **Batch ID:** 27283 **Test Code:** E200.7 **Units:** mg/L **Analysis Date:** 5/1/2017 **Prep Date:** 4/28/2017
Client ID: **Run ID:** ICP-OPTIMA_170501B **SeqNo:** 998526

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Hardness (As CaCO3)	ND	17	mg/L									

Sample ID: MB-27294 **Batch ID:** 27294 **Test Code:** E245.1 **Units:** µg/L **Analysis Date:** 5/2/2017 5:30:30 PM **Prep Date:** 5/2/2017
Client ID: **Run ID:** HG-FIMS_170502A **SeqNo:** 998553

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	ND	0.20	µg/L									

Qualifiers: ND - Not Detected at the Reporting Limit
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RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Method Blank

Sample ID: MB-R59528 **Batch ID:** R59528 **Test Code:** SM2540 D **Units:** mg/L **Analysis Date:** 4/26/2017 **Prep Date:**
Client ID: **Run ID:** ING-WET_170426B **SeqNo:** 998821

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Suspended Solids (Residue, Non	ND	4.0	mg/L									

Sample ID: MB-R59487 **Batch ID:** R59487 **Test Code:** M3500-Cr **Units:** mg/L **Analysis Date:** 4/20/2017 4:40:00 PM **Prep Date:**
Client ID: **Run ID:** ING-WET_170420C **SeqNo:** 997550

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chromium, Hexavalent	ND	0.010	mg/L									

Sample ID: MB-R59485 **Batch ID:** R59485 **Test Code:** M4500-Cl G **Units:** mg/L **Analysis Date:** 4/20/2017 2:45:00 PM **Prep Date:**
Client ID: **Run ID:** ING-WET_170420B **SeqNo:** 997494

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chlorine, Total Residual	ND	0.10	mg/L									

Sample ID: MB-R59527 **Batch ID:** R59527 **Test Code:** SM4500-CN C **Units:** mg/L **Analysis Date:** 4/26/2017 **Prep Date:**
Client ID: **Run ID:** ING-WET_170426A **SeqNo:** 998812

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	ND	0.010	mg/L									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-R59526** Batch ID: **R59526** Test Code: **SM4500-NH3,** Units: **mg/L** Analysis Date: **4/23/2017** Prep Date:

Client ID: Run ID: **ING-WET_170423A** SeqNo: **998800**

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	ND	1.0	mg/L									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: lcs-27283 **Batch ID:** 27283 **Test Code:** E200.7 **Units:** µg/L **Analysis Date:** 5/1/2017 3:24:27 PM **Prep Date:** 4/28/2017
Client ID: **Run ID:** ICP-OPTIMA_170501A **SeqNo:** 998405

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Antimony	2034	20	µg/L	1996	0	102	85	115	0			
Cadmium	794.2	4.0	µg/L	800	0	99.3	85	115	0			
Chromium	4151	10	µg/L	3976	0	104	85	115	0			
Copper	1923	25	µg/L	2004	0	95.9	85	115	0			
Iron	4233	100	µg/L	4004	0	106	85	115	0			
Nickel	4076	40	µg/L	3984	0	102	85	115	0			
Silver	402.8	7.0	µg/L	400	0	101	85	115	0			
Zinc	4111	20	µg/L	3984	0	103	85	115	0			

Sample ID: LCS-27283 **Batch ID:** 27283 **Test Code:** E200.9_As **Units:** µg/L **Analysis Date:** 5/4/2017 2:47:16 PM **Prep Date:** 4/28/2017
Client ID: **Run ID:** AANALYST 600_170504 **SeqNo:** 999200

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Arsenic	21.03	2.0	µg/L	20	0	105	85	115	0			

Sample ID: LCS-27283 **Batch ID:** 27283 **Test Code:** E200.9_Pb **Units:** µg/L **Analysis Date:** 5/1/2017 4:39:14 PM **Prep Date:** 4/28/2017
Client ID: **Run ID:** AANALYST 600_170501 **SeqNo:** 998866

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Lead	20.87	2.0	µg/L	20	0	104	85	115	0			

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: LCS-27283 **Batch ID:** 27283 **Test Code:** E200.9_Se **Units:** µg/L **Analysis Date:** 5/2/2017 1:52:12 PM **Prep Date:** 4/28/2017
Client ID: **Run ID:** AANALYST 600_170502 **SeqNo:** 999099

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Selenium	20.57	5.0	µg/L	20	0	103	85	115	0			

Sample ID: LCS-R59495 **Batch ID:** R59495 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 4/25/2017 **Prep Date:**
Client ID: **Run ID:** DIONEX_170425A **SeqNo:** 997654

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	12.97	0.50	mg/L	12.5	0	104	89	110	0			

Sample ID: LCSD-R59495 **Batch ID:** R59495 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 4/25/2017 **Prep Date:**
Client ID: **Run ID:** DIONEX_170425A **SeqNo:** 997661

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	12.99	0.50	mg/L	12.5	0	104	89	110	12.97	0.174	20	

Sample ID: LCS-27283 **Batch ID:** 27283 **Test Code:** E200.7 **Units:** mg/L **Analysis Date:** 5/1/2017 **Prep Date:** 4/28/2017
Client ID: **Run ID:** ICP-OPTIMA_170501B **SeqNo:** 998527

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Hardness (As CaCO3)	137.8	17	mg/L	132.3	0	104	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: LCS-27294 Batch ID: 27294 Test Code: E245.1 Units: µg/L Analysis Date: 5/2/2017 5:34:20 PM Prep Date: 5/2/2017
Client ID: Run ID: HG-FIMS_170502A SeqNo: 998554

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.242	0.20	µg/L	4	0	106	85	115	0			

Sample ID: LCSD-27294 Batch ID: 27294 Test Code: E245.1 Units: µg/L Analysis Date: 5/2/2017 5:38:11 PM Prep Date: 5/2/2017
Client ID: Run ID: HG-FIMS_170502A SeqNo: 998555

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.274	0.20	µg/L	4	0	107	85	115	4.242	0.743	20	

Sample ID: LCS-R59528 Batch ID: R59528 Test Code: SM2540 D Units: mg/L Analysis Date: 4/26/2017 Prep Date:
Client ID: Run ID: ING-WET_170426B SeqNo: 998822

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Suspended Solids (Residue, Non	935	4.0	mg/L	951	0	98.3	97	103	0			

Sample ID: LCS-R59487 Batch ID: R59487 Test Code: M3500-Cr Units: mg/L Analysis Date: 4/20/2017 4:40:00 PM Prep Date:
Client ID: Run ID: ING-WET_170420C SeqNo: 997551

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chromium, Hexavalent	0.104	0.010	mg/L	0.1	0	104	85	115	0			

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: LCS-R59485 **Batch ID:** R59485 **Test Code:** M4500-Cl G **Units:** mg/L **Analysis Date:** 4/20/2017 2:45:00 PM **Prep Date:**
Client ID: **Run ID:** ING-WET_170420B **SeqNo:** 997495

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chlorine, Total Residual	1.098	0.10	mg/L	1	0	110	90	110	0			

Sample ID: LCS-R59527 **Batch ID:** R59527 **Test Code:** SM4500-CN C **Units:** mg/L **Analysis Date:** 4/26/2017 **Prep Date:**
Client ID: **Run ID:** ING-WET_170426A **SeqNo:** 998813

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	0.208	0.010	mg/L	0.2	0	104	84	121	0			

Sample ID: LCS-R59526 **Batch ID:** R59526 **Test Code:** SM4500-NH3, **Units:** mg/L **Analysis Date:** 4/23/2017 **Prep Date:**
Client ID: **Run ID:** ING-WET_170423A **SeqNo:** 998801

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	9.1	1.0	mg/L	10	0	91	88	95	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Sample Duplicate

Sample ID: 1704037-01BD **Batch ID:** 27294 **Test Code:** E245.1 **Units:** µg/L **Analysis Date:** 5/2/2017 5:45:55 PM **Prep Date:** 5/2/2017
Client ID: Influent **Run ID:** HG-FIMS_170502A **SeqNo:** 998557

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	ND	0.20	µg/L	0	0	0	0	0	0	0	20	

Sample ID: 1704037-01ED **Batch ID:** R59528 **Test Code:** SM2540 D **Units:** mg/L **Analysis Date:** 4/26/2017 **Prep Date:**
Client ID: Influent **Run ID:** ING-WET_170426B **SeqNo:** 998825

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Suspended Solids (Residue, Non	ND	4.0	mg/L	0	0	0	0	0	4	0	5	

Sample ID: 1704037-01ED **Batch ID:** R59487 **Test Code:** M3500-Cr **Units:** mg/L **Analysis Date:** 4/20/2017 4:40:00 PM **Prep Date:**
Client ID: Influent **Run ID:** ING-WET_170420C **SeqNo:** 997555

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chromium, Hexavalent	ND	0.010	mg/L	0	0	0	0	0	0	0	20	

Sample ID: 1704037-01ED **Batch ID:** R59485 **Test Code:** M4500-Cl G **Units:** mg/L **Analysis Date:** 4/20/2017 2:45:00 PM **Prep Date:**
Client ID: Influent **Run ID:** ING-WET_170420B **SeqNo:** 997499

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chlorine, Total Residual	ND	0.10	mg/L	0	0	0	0	0	0	0	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Sample Duplicate

Sample ID: **1704037-01DD** Batch ID: **R59527** Test Code: **SM4500-CN C** Units: **mg/L** Analysis Date: **4/26/2017** Prep Date:
Client ID: **Influent** Run ID: **ING-WET_170426A** SeqNo: **998818**

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	ND	0.010	mg/L	0	0	0	0	0	0	0	20	

Sample ID: **1704037-01CD** Batch ID: **R59526** Test Code: **SM4500-NH3,** Units: **mg/L** Analysis Date: **4/23/2017** Prep Date:
Client ID: **Influent** Run ID: **ING-WET_170423A** SeqNo: **998807**

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	ND	1.0	mg/L	0	0	0	0	0	0	0	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID: 1704037-01BMS **Batch ID:** 27294 **Test Code:** E245.1 **Units:** µg/L **Analysis Date:** 5/2/2017 5:49:43 PM **Prep Date:** 5/2/2017
Client ID: Influent **Run ID:** HG-FIMS_170502A **SeqNo:** 998558

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.591	0.20	µg/L	4	0	115	70	130	0			

Sample ID: 1704037-01BMSD **Batch ID:** 27294 **Test Code:** E245.1 **Units:** µg/L **Analysis Date:** 5/2/2017 5:53:28 PM **Prep Date:** 5/2/2017
Client ID: Influent **Run ID:** HG-FIMS_170502A **SeqNo:** 998559

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Mercury	4.664	0.20	µg/L	4	0	117	70	130	4.591	1.59	20	

Sample ID: 1704037-01EMS **Batch ID:** R59487 **Test Code:** M3500-Cr **Units:** mg/L **Analysis Date:** 4/20/2017 4:40:00 PM **Prep Date:**
Client ID: Influent **Run ID:** ING-WET_170420C **SeqNo:** 997556

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chromium, Hexavalent	0.1	0.010	mg/L	0.1	0	100	85	115	0			

Sample ID: 1704037-01EMS **Batch ID:** R59485 **Test Code:** M4500-Cl G **Units:** mg/L **Analysis Date:** 4/20/2017 2:45:00 PM **Prep Date:**
Client ID: Influent **Run ID:** ING-WET_170420B **SeqNo:** 997500

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chlorine, Total Residual	1.075	0.10	mg/L	1	0	108	89	118	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: *15-May-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1704037
Project: YRC N. Reading

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID: 1704037-01EMS **Batch ID:** R59485 **Test Code:** M4500-Cl G **Units:** mg/L **Analysis Date:** 4/20/2017 2:45:00 PM **Prep Date:**
Client ID: Influent **Run ID:** ING-WET_170420B **SeqNo:** 997500

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chlorine, Total Residual	1.075	0.10	mg/L	1	0	108	89	118	0			

Sample ID: 1704037-01DMS **Batch ID:** R59527 **Test Code:** SM4500-CN C **Units:** mg/L **Analysis Date:** 4/26/2017 **Prep Date:**
Client ID: Influent **Run ID:** ING-WET_170426A **SeqNo:** 998819

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Cyanide	0.204	0.010	mg/L	0.2	0	102	68	119	0			

Sample ID: 1704037-01CMS **Batch ID:** R59526 **Test Code:** SM4500-NH3, **Units:** mg/L **Analysis Date:** 4/23/2017 **Prep Date:**
Client ID: Influent **Run ID:** ING-WET_170423A **SeqNo:** 998808

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Nitrogen, Ammonia (As N)	9.38	1.0	mg/L	10	0	93.8	78	107	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corporation

111 Herrick Street, Merrimack, NH 03054
TEL: (603) 424-2022 • FAX: (603) 429-8496
www.amrolabs.com

June 01, 2017

ANALYTICAL TEST RESULTS

Charles Castelluccio
Charles Castelluccio Consulting, LLC
62 Wescroft Road
Reading, MA 01867
TEL: (978) 505-1123
FAX:

Subject: North Reading

Workorder No.: 1705043

Dear Charles Castelluccio:

AMRO Environmental Laboratories Corp. received 2 samples on 5/17/2017 for the analyses presented in the following report.

AMRO is accredited in accordance with NELAC and certifies that these test results meet all the requirements of NELAC, where applicable, unless otherwise noted in the case narrative.

The enclosed Sample Receipt Checklist details the condition of your sample(s) upon receipt. Please be advised that any unused sample volume and sample extracts will be stored for a period of 60 days from sample receipt date (90 days for samples from New York). After this time, AMRO will properly dispose of the remaining sample(s). If you require further analysis, or need the samples held for a longer period, please contact us immediately.

This report consists of a total of 29 pages. This letter is an integral part of your data report. All results in this project relate only to the sample(s) as received by the laboratory and documented in the Chain-of-Custody. This report shall not be reproduced except in full, without the written approval of the laboratory. If you have any questions regarding this project in the future, please refer to the Workorder Number above.

Sincerely,

Nancy Stewart
Vice President

State Certifications: NH (NELAC): 1001, MA: M-NH012, CT: PH-0758, NY: 11278 (NELAC), ME: NH012 and 1001.

Hard copy of the State Certification is available upon request.

AMRO Environmental Laboratories Corp.

Date: *01-Jun-17*

CLIENT: Charles Castelluccio Consulting, LLC
Project: North Reading
Lab Order: 1705043
Date Received: 5/17/2017

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Collection Date	Collection Time
1705043-01A	Effluent	5/17/2017	9:30 AM
1705043-01B	Effluent	5/17/2017	9:30 AM
1705043-02A	Influent	5/17/2017	9:50 AM
1705043-02B	Influent	5/17/2017	9:50 AM

Lab Order: 1705043
Client: Charles Castelluccio Consulting, LLC
Project: North Reading

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name / Preparatory Test Name	Prep Date	Analysis Date / Batch ID	TCLP Date
1705043-01A	Effluent	5/17/2017 9:30:00 AM	Aqueous	MCP VOCs 8260C, EPA 5030C		5/22/2017	
				EPA 5030B	5/17/2017	R59597	
1705043-01B				Ion Chromatography, EPA 300		5/25/2017	
						R59619	
				Standard Methods - pH, Water		5/17/2017	
						R59572	
1705043-02A	Influent	5/17/2017 9:50:00 AM		8260C SIM, EPA 5030C		5/31/2017	
					5/17/2017	R59624	
				MCP VOCs 8260C, EPA 5030C		5/22/2017	
				EPA 5030B	5/17/2017	R59597	
1705043-02B				Ion Chromatography, EPA 300		5/25/2017	
						R59619	
				Standard Methods - pH, Water		5/17/2017	
						R59572	

AMRO Environmental Laboratories Corporation
111 Herrick Street
Merrimack, NH 03054

CHAIN-OF-CUSTODY RECORD

NO: 67913

Office: (603) 424-2022
Fax: (603) 429-8496
web: www.amrolabs.com

Project No.:	Project Name: North Reading	Project State: MA	Project Manager: C. Castellucci	Samplers (Signature):	AMRO Project No.: 1705093
P.O.#:	Results Needed by: Standard				
QUOTE #:	Seal Intact? Yes No N/A				

Sample ID.:	Date/Time Sampled	Matrix	Total # of Cont. & Size	Comp.	Grab	VOC	pH Cl-	Remarks
Influent	5/17/17 930	A	3		X	X	X	Chlorinated Solvents by SIM on Influent.
Effluent	5/17/17 950	A	3		X	X	X	

Preservative: Cl-HCl, MeOH, N-HN03, S-H2SO4, Na-NaOH, O- Other

Send Results To: Charles.Castellucci@gmail.com

PHONE #: 978-805-1123 FAX #:

E-mail:

PRIORITY TURNAROUND TIME AUTHORIZATION
Before submitting samples for expedited TAT, you must *have a coded AUTHORIZATION NUMBER*
AUTHORIZATION No.: BY:

METALS 8 RCRA ☐ 13 PP ☐ 23 TAL ☐ 14 MCP ☐
Method: 6010 ☐ 200.7 ☐ Other Metals:
Dissolved Metals Field Filtered? YES ☐ NO ☐

MCP Presumptive Certainty Required? YES ☒ NO ☐

MCP Methods Needed: YES ☐ NO ☒

Required Reporting Limits: S-1 ☐ GW-1 ☒ S-2 ☐ GW-2 ☐ S-3 ☐ GW-3 ☐ Other:

AMRO report package level needed:

EDD required:

Relinquished By	Date/Time	Received By
	5/17/17 1105	

Please print clearly, legibly and completely. Samples can not be logged in and the turnaround time clock will not start until any ambiguities are resolved.

Samples arriving after 12:00 noon will be tracked and billed as received on the following day.

AMRO policy requires notification in writing to the laboratory in cases where the samples were collected from highly contaminated sites.

KNOWN SITE CONTAMINATION:

White: Lab Copy Yellow: Client Copy

SHEET OF

AMROCOC2004, Rev.3 08/18/04

Client: Charles Castelluccio | AMRO ID: 1705043
Project Name: North Reading | Date Rec.: 05/12/17
Ship via: (circle one) Fed Ex., UPS, AMRO Courier, Hand Del., Other Courier, Other: | Date Due: 05/24/17

Items to be Checked Upon Receipt	Yes	No	NA	Comments
1. Army Samples received in individual plastic bags?			✓	
2. Custody Seals present?			✓	
3. Custody Seals Intact?			✓	
4. Air Bill included in folder if received?				
5. Is COC included with samples?	✓			
6. Is COC signed and dated by client?	✓			
7. Laboratory receipt temperature. TEMP = Not taken				
Samples rec. with ice___ ice packs___ neither___				
8. Were samples received the same day they were sampled?	✓			
Is client temperature = or <6°C ?				
If no obtain authorization from the client for the analyses.				
Client authorization from: Date: Obtained by:				
9. Is the COC filled out correctly and completely?	✓			
10. Does the info on the COC match the samples?	✓			
11. Were samples rec. within holding time?	✓			
12. Were all samples properly labeled?	✓			
13. Were all samples properly preserved?	✓			
14. Were proper sample containers used?	✓			
15. Were all samples received intact? (none broken or leaking)	✓			
16. Were VOA vials rec. with no air bubbles?				
17. Were the sample volumes sufficient for requested analysis?	✓			
18. Were all samples received?	✓			
19. VPH and VOA Soils only:				
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container)				
Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCore, B=Bulk, D= DI water				
If M , SB, DI:				
Does preservative cover the soil?				
Does preservation level come close to the fill line on the vial?				
Date/Time DI Preserved vials Frozen on: ______				
Frozen by Client?				
Were vials provided by AMRO?				
If NO then weights MUST be obtained from client				
Was dry weight aliquot provided?				
If NO then notified client and inform the VOA lab ASAP.				
20. Subcontracted Samples:				
What samples sent:				
Where sent:				
Date:				
Analysis:				
TAT:				
21. Information entered into:				
Internal Tracking Log?	✓			
Dry Weight Log?			✓	
Client Log?			✓	
Composite Log?			✓	
Filtration Log?			✓	

Received By: NS Date: 05/12/17 Logged in By: NB Date: 05/12/17
Labeled By: NS Date: 05/12/17 Checked By: SIV Date: 05/12/17

NA= Not Applicable

AMRO Environmental
Laboratories Corporation

111 Herrick Street
Merrimack, NH 03054
(603) 424-2022

Please Circle if:
Sample= Soil
Sample= Waste

AMRO ID: 1705043

Sample ID	Analysis	Volume Sample	Preserv. Listed	Initial pH*	Acceptable? Y or N	List Preserv. Added by AMRO	Solution ID # of Preserv.	Volume Preservative Added	Final adjusted pH	Final adjusted pH (after 16 or 24 hours)
01A	VOA	3x40ml	HCl	—						
02A	↓	↓	↓	—						
01B	E300	1x250ml	—							
02B	↓	↓	—							

Sample ID	Analysis	Volume Sample	Preserv. Listed	Initial TRC	Acceptable? Y or N	List Preserv. Added by AMRO	Solution ID # of Preserv.	Volume Preservative Added	Final adjusted TRC	Acceptable? Y or N

= If the laboratory preserves the drinking water sample (s) for EPA Method 200 series, sample (s) should be held at least 16 hours prior to analysis or 24 hours for water sample (s).

pH Checked By: ______________ Date: __________ pH adjusted By: _________ Date: _________

pH Checked By: ______________ Date: __________ pH adj.(16 or 24hrs)By: _________ Date: _________

GC/MS VOLATILES- 8260C:

1. A quadratic regression was used for Chloroethane and Bromomethane in the Initial Calibration analyzed on V-3 05/03/17.

2. A Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were performed on 05/22/17 on V-3 (Batch ID: R59597). All %Rs and RPDs were within the laboratory control limits with the following exception(s):

2.1 The %R for 1 analyte out of 71 analytes in the LCS was outside the control limits.

3. No analytical or quality issues were noted, other than those described above or in the Data Comment page.

GC/MS VOLATILES- 8260C SIM:

1. No analytical or quality issues were noted, other than those described in the Data Comment page.

WET CHEMISTRY:

1. The samples for pH analysis were received outside the method recommended holding time (15-minutes).

MassDEP Analytical Protocol Certification Form

Laboratory Name: AMRO Environmental Lab. Corp. Project #:

Project Location: North Reading RTN:

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

1705043-01

Matrices: [X] Groundwater/Surface Water [ ] Soil/Sediment [ ] Drinking Water [ ] Air [ ] Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A [X]	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 [ ]	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?	[X] Yes [ ] No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	[X] 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?	[X] 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"?	[X] Yes [ ] No
E	VPH, EPH, APH, and TO-15 only: 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). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	[X] Yes [ ] No NA [ ] 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)?	[X] 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)?	[X] Yes [ ] No[1]

***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 [X] No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	[X] Yes [ ] No[1]

[1] *All negative responses must be addressed in an attached laboratory 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:** Vice President

Printed Name: Nancy Stewart

Date: 6-1-17

DATA COMMENT PAGE

Organic Data Qualifiers

ND	Indicates compound was analyzed for, but not detected at or above the reporting limit.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than the method detection limit.
H	Method prescribed holding time exceeded.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
B	This flag is used when the analyte is found in the associated blank as well as in the sample.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
#	See Case Narrative
Q	RPD between signal 1 and signal 2 >40%.

Micro Data Qualifiers

TNTC	Too numerous to count

Inorganic Data Qualifiers

ND or U	Indicates element was analyzed for, but not detected at or above the reporting limit.
J	Indicates a value greater than or equal to the method detection limit, but less than the quantitation limit.
H	Indicates analytical holding time exceedance.
B	Indicates that the analyte is found in the associated blank, as well as in the sample.
MSA	Indicates value determined by the Method of Standard Addition
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
PS	The analyte was below the Reporting Limit but has significant matrix interference as noted by the poor recovery of the Post Digestion Spike.
#	See Case Narrative
*	MCL Exceeded

Report Comments:

1. Soil, sediment and sludge sample results are reported on a "dry weight" basis.
2. Reporting limits are adjusted for sample size used, dilutions and moisture content, if applicable.

AMRO Environmental Laboratories Corp.

Date: *01-Jun-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Effluent
Lab Order:	1705043	**Collection Date:**	5/17/2017 9:30:00 AM
Project:	North Reading	**Matrix:**	AQUEOUS
Lab ID:	1705043-01A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY MCP MET SW8260C						Analyst: JK
Acetone	ND	10		µg/L	1	5/22/2017 5:45:00 PM
Tertiary Amyl Methyl Ether	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Benzene	ND	1.0		µg/L	1	5/22/2017 5:45:00 PM
Bromobenzene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Bromochloromethane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Bromoform	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Bromomethane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
sec-Butylbenzene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
n-Butylbenzene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
tert-Butylbenzene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Carbon disulfide	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Chlorobenzene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Dibromochloromethane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Chloroethane	ND	5.0		µg/L	1	5/22/2017 5:45:00 PM
Chloroform	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Chloromethane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
2-Chlorotoluene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	5/22/2017 5:45:00 PM
1,2-Dibromoethane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Dibromomethane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,3-Dichlorobenzene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	1	5/22/2017 5:45:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	5/22/2017 5:45:00 PM
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 5:45:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 5:45:00 PM
Diethyl ether	ND	5.0		µg/L	1	5/22/2017 5:45:00 PM

AMRO Environmental Laboratories Corp.

Date: *01-Jun-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Effluent
Lab Order:	1705043	**Collection Date:**	5/17/2017 9:30:00 AM
Project:	North Reading	**Matrix:**	AQUEOUS
Lab ID:	1705043-01A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diisopropyl ether	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,4-Dioxane	ND	50		µg/L	1	5/22/2017 5:45:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Ethylbenzene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
2-Hexanone	ND	10		µg/L	1	5/22/2017 5:45:00 PM
Isopropylbenzene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
2-Butanone	ND	10		µg/L	1	5/22/2017 5:45:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	5/22/2017 5:45:00 PM
Methyl tert-butyl ether	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Methylene chloride	ND	5.0		µg/L	1	5/22/2017 5:45:00 PM
Naphthalene	ND	5.0		µg/L	1	5/22/2017 5:45:00 PM
n-Propylbenzene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Styrene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Tetrachloroethene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Tetrahydrofuran	ND	10		µg/L	1	5/22/2017 5:45:00 PM
Toluene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,2,4-Trichlorobenzene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,2,3-Trichlorobenzene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Trichloroethene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Vinyl chloride	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
o-Xylene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
m,p-Xylene	ND	2.0		µg/L	1	5/22/2017 5:45:00 PM
Surr: Dibromofluoromethane	100	70-130		%REC	1	5/22/2017 5:45:00 PM
Surr: 1,2-Dichloroethane-d4	97.0	70-130		%REC	1	5/22/2017 5:45:00 PM
Surr: Toluene-d8	101	70-130		%REC	1	5/22/2017 5:45:00 PM
Surr: 4-Bromofluorobenzene	91.2	70-130		%REC	1	5/22/2017 5:45:00 PM

AMRO Environmental Laboratories Corp.

Date: *01-Jun-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Influent
Lab Order:	1705043	**Collection Date:**	5/17/2017 9:50:00 AM
Project:	North Reading	**Matrix:**	AQUEOUS
Lab ID:	1705043-02A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY MCP MET SW8260C						Analyst: JK
Acetone	ND	10		µg/L	1	5/22/2017 6:19:00 PM
Tertiary Amyl Methyl Ether	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Benzene	ND	1.0		µg/L	1	5/22/2017 6:19:00 PM
Bromobenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Bromochloromethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Bromodichloromethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Bromoform	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Bromomethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
sec-Butylbenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
n-Butylbenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
tert-Butylbenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Carbon disulfide	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Chlorobenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Dibromochloromethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Chloroethane	ND	5.0		µg/L	1	5/22/2017 6:19:00 PM
Chloroform	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Chloromethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
2-Chlorotoluene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	5/22/2017 6:19:00 PM
1,2-Dibromoethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Dibromomethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,3-Dichlorobenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,2-Dichlorobenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,4-Dichlorobenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Dichlorodifluoromethane	ND	5.0		µg/L	1	5/22/2017 6:19:00 PM
1,1-Dichloroethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,2-Dichloroethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	5/22/2017 6:19:00 PM
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,2-Dichloropropane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,3-Dichloropropane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,1-Dichloropropene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 6:19:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 6:19:00 PM
Diethyl ether	ND	5.0		µg/L	1	5/22/2017 6:19:00 PM

AMRO Environmental Laboratories Corp.

Date: *01-Jun-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Influent
Lab Order:	1705043	**Collection Date:**	5/17/2017 9:50:00 AM
Project:	North Reading	**Matrix:**	AQUEOUS
Lab ID:	1705043-02A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diisopropyl ether	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,4-Dioxane	ND	50		µg/L	1	5/22/2017 6:19:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Ethylbenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Hexachlorobutadiene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
2-Hexanone	ND	10		µg/L	1	5/22/2017 6:19:00 PM
Isopropylbenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
4-Isopropyltoluene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
2-Butanone	ND	10		µg/L	1	5/22/2017 6:19:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	5/22/2017 6:19:00 PM
Methyl tert-butyl ether	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Methylene chloride	ND	5.0		µg/L	1	5/22/2017 6:19:00 PM
Naphthalene	ND	5.0		µg/L	1	5/22/2017 6:19:00 PM
n-Propylbenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Styrene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Tetrachloroethene	99	2.0		µg/L	1	5/22/2017 6:19:00 PM
Tetrahydrofuran	ND	10		µg/L	1	5/22/2017 6:19:00 PM
Toluene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,2,4-Trichlorobenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,2,3-Trichlorobenzene	2.8	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,1,1-Trichloroethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,1,2-Trichloroethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Trichloroethene	7.5	2.0		µg/L	1	5/22/2017 6:19:00 PM
Trichlorofluoromethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,2,4-Trimethylbenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
1,3,5-Trimethylbenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Vinyl chloride	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
o-Xylene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
m,p-Xylene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PM
Surr: Dibromofluoromethane	104	70-130		%REC	1	5/22/2017 6:19:00 PM
Surr: 1,2-Dichloroethane-d4	97.0	70-130		%REC	1	5/22/2017 6:19:00 PM
Surr: Toluene-d8	101	70-130		%REC	1	5/22/2017 6:19:00 PM
Surr: 4-Bromofluorobenzene	91.0	70-130		%REC	1	5/22/2017 6:19:00 PM

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1705043
Project: North Reading

QC SUMMARY REPORT
Method Blank

Sample ID: **mb-05/22/17** Batch ID: **R59597** Test Code: **SW8260C** Units: **µg/L** Analysis Date: **5/22/2017 1:25:00 PM** Prep Date: **5/22/2017**
Client ID: Run ID: **V-3_170522A** SeqNo: **999890**

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	ND	10	µg/L									
Tertiary Amyl Methyl Ether	ND	2.0	µg/L									
Benzene	ND	1.0	µg/L									
Bromobenzene	ND	2.0	µg/L									
Bromochloromethane	ND	2.0	µg/L									
Bromodichloromethane	ND	2.0	µg/L									
Bromoform	ND	2.0	µg/L									
Bromomethane	ND	2.0	µg/L									
sec-Butylbenzene	ND	2.0	µg/L									
n-Butylbenzene	ND	2.0	µg/L									
tert-Butylbenzene	ND	2.0	µg/L									
Carbon disulfide	ND	2.0	µg/L									
Carbon tetrachloride	ND	2.0	µg/L									
Chlorobenzene	ND	2.0	µg/L									
Dibromochloromethane	ND	2.0	µg/L									
Chloroethane	ND	5.0	µg/L									
Chloroform	ND	2.0	µg/L									
Chloromethane	ND	2.0	µg/L									
2-Chlorotoluene	ND	2.0	µg/L									
4-Chlorotoluene	ND	2.0	µg/L									
1,2-Dibromo-3-chloropropane	ND	5.0	µg/L									
1,2-Dibromoethane	ND	2.0	µg/L									
Dibromomethane	ND	2.0	µg/L									
1,3-Dichlorobenzene	ND	2.0	µg/L									
1,2-Dichlorobenzene	ND	2.0	µg/L									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1705043
Project: North Reading

QC SUMMARY REPORT
Method Blank

1,4-Dichlorobenzene	ND	2.0	µg/L
Dichlorodifluoromethane	ND	5.0	µg/L
1,1-Dichloroethane	ND	2.0	µg/L
1,2-Dichloroethane	ND	2.0	µg/L
1,1-Dichloroethene	ND	1.0	µg/L
cis-1,2-Dichloroethene	ND	2.0	µg/L
trans-1,2-Dichloroethene	ND	2.0	µg/L
1,2-Dichloropropane	ND	2.0	µg/L
1,3-Dichloropropane	ND	2.0	µg/L
2,2-Dichloropropane	ND	2.0	µg/L
1,1-Dichloropropene	ND	2.0	µg/L
cis-1,3-Dichloropropene	ND	1.0	µg/L
trans-1,3-Dichloropropene	ND	1.0	µg/L
Diethyl ether	ND	5.0	µg/L
Diisopropyl ether	ND	2.0	µg/L
1,4-Dioxane	ND	50	µg/L
Ethyl Tertiary Butyl Ether	ND	2.0	µg/L
Ethylbenzene	ND	2.0	µg/L
Hexachlorobutadiene	ND	2.0	µg/L
2-Hexanone	ND	10	µg/L
Isopropylbenzene	ND	2.0	µg/L
4-Isopropyltoluene	ND	2.0	µg/L
2-Butanone	ND	10	µg/L
4-Methyl-2-pentanone	ND	10	µg/L
Methyl tert-butyl ether	ND	2.0	µg/L
Methylene chloride	ND	5.0	µg/L
Naphthalene	ND	5.0	µg/L
n-Propylbenzene	ND	2.0	µg/L
Styrene	ND	2.0	µg/L
1,1,1,2-Tetrachloroethane	ND	2.0	µg/L
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1705043
Project: North Reading

QC SUMMARY REPORT
Method Blank

Tetrachloroethene	ND	2.0	µg/L						
Tetrahydrofuran	ND	10	µg/L						
Toluene	ND	2.0	µg/L						
1,2,4-Trichlorobenzene	ND	2.0	µg/L						
1,2,3-Trichlorobenzene	ND	2.0	µg/L						
1,1,1-Trichloroethane	ND	2.0	µg/L						
1,1,2-Trichloroethane	ND	2.0	µg/L						
Trichloroethene	ND	2.0	µg/L						
Trichlorofluoromethane	ND	2.0	µg/L						
1,2,3-Trichloropropane	ND	2.0	µg/L						
1,2,4-Trimethylbenzene	ND	2.0	µg/L						
1,3,5-Trimethylbenzene	ND	2.0	µg/L						
Vinyl chloride	ND	2.0	µg/L						
o-Xylene	ND	2.0	µg/L						
m,p-Xylene	ND	2.0	µg/L						
Surr: Dibromofluoromethane	24.79	2.0	µg/L	25	0	99.2	70	130	0
Surr: 1,2-Dichloroethane-d4	23.68	2.0	µg/L	25	0	94.7	70	130	0
Surr: Toluene-d8	25.07	2.0	µg/L	25	0	100	70	130	0
Surr: 4-Bromofluorobenzene	23.18	2.0	µg/L	25	0	92.7	70	130	0

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1705043
Project: North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: **lcs-05/22/17** Batch ID: **R59597** Test Code: **SW8260C** Units: **µg/L** Analysis Date: **5/22/2017 11:43:00 AM** Prep Date: **5/22/2017**
Client ID: Run ID: **V-3_170522A** SeqNo: **999892**

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	38.87	10	µg/L	40	0	97.2	40	160	0			
Tertiary Amyl Methyl Ether	21.45	2.0	µg/L	20	0	107	70	130	0			
Benzene	20.66	1.0	µg/L	20	0	103	70	130	0			
Bromobenzene	21.16	2.0	µg/L	20	0	106	70	130	0			
Bromochloromethane	22.17	2.0	µg/L	20	0	111	70	130	0			
Bromodichloromethane	21.5	2.0	µg/L	20	0	108	70	130	0			
Bromoform	18.32	2.0	µg/L	20	0	91.6	70	130	0			
Bromomethane	21.79	2.0	µg/L	20	0	109	40	160	0			
sec-Butylbenzene	20.85	2.0	µg/L	20	0	104	70	130	0			
n-Butylbenzene	21.9	2.0	µg/L	20	0	110	70	130	0			
tert-Butylbenzene	21.18	2.0	µg/L	20	0	106	70	130	0			
Carbon disulfide	15.18	2.0	µg/L	20	0	75.9	70	130	0			
Carbon tetrachloride	20.59	2.0	µg/L	20	0	103	70	130	0			
Chlorobenzene	20.53	2.0	µg/L	20	0	103	70	130	0			
Dibromochloromethane	20.16	2.0	µg/L	20	0	101	70	130	0			
Chloroethane	17.47	5.0	µg/L	20	0	87.4	70	130	0			
Chloroform	19.91	2.0	µg/L	20	0	99.6	70	130	0			
Chloromethane	25.75	2.0	µg/L	20	0	129	40	160	0			
2-Chlorotoluene	20.22	2.0	µg/L	20	0	101	70	130	0			
4-Chlorotoluene	20.73	2.0	µg/L	20	0	104	70	130	0			
1,2-Dibromo-3-chloropropane	22.39	5.0	µg/L	20	0	112	70	130	0			
1,2-Dibromoethane	21.31	2.0	µg/L	20	0	107	70	130	0			
Dibromomethane	20.4	2.0	µg/L	20	0	102	70	130	0			
1,3-Dichlorobenzene	20.59	2.0	µg/L	20	0	103	70	130	0			
1,2-Dichlorobenzene	20.77	2.0	µg/L	20	0	104	70	130	0			

Qualifiers: ND - Not Detected at the Reporting Limit
S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1705043
Project: North Reading

QC SUMMARY REPORT
Laboratory Control Spike

1,4-Dichlorobenzene	20.6	2.0	µg/L	20	0	103	70	130	0	
Dichlorodifluoromethane	36.87	5.0	µg/L	20	0	184	40	160	0	S
1,1-Dichloroethane	18.94	2.0	µg/L	20	0	94.7	70	130	0	
1,2-Dichloroethane	20.54	2.0	µg/L	20	0	103	70	130	0	
1,1-Dichloroethene	20.79	1.0	µg/L	20	0	104	70	130	0	
cis-1,2-Dichloroethene	19.92	2.0	µg/L	20	0	99.6	70	130	0	
trans-1,2-Dichloroethene	19.65	2.0	µg/L	20	0	98.2	70	130	0	
1,2-Dichloropropane	20.66	2.0	µg/L	20	0	103	70	130	0	
1,3-Dichloropropane	19.34	2.0	µg/L	20	0	96.7	70	130	0	
2,2-Dichloropropane	22.17	2.0	µg/L	20	0	111	70	130	0	
1,1-Dichloropropene	21.87	2.0	µg/L	20	0	109	70	130	0	
cis-1,3-Dichloropropene	21.9	1.0	µg/L	20	0	110	70	130	0	
trans-1,3-Dichloropropene	21.12	1.0	µg/L	20	0	106	70	130	0	
Diethyl ether	20.37	5.0	µg/L	20	0	102	70	130	0	
Diisopropyl ether	19.78	2.0	µg/L	20	0	98.9	70	130	0	
1,4-Dioxane	119.6	50	µg/L	100	0	120	40	160	0	
Ethyl Tertiary Butyl Ether	20	2.0	µg/L	20	0	100	70	130	0	
Ethylbenzene	21.18	2.0	µg/L	20	0	106	70	130	0	
Hexachlorobutadiene	20.35	2.0	µg/L	20	0	102	70	130	0	
2-Hexanone	37.46	10	µg/L	40	0	93.6	40	160	0	
Isopropylbenzene	21.48	2.0	µg/L	20	0	107	70	130	0	
4-Isopropyltoluene	21.96	2.0	µg/L	20	0	110	70	130	0	
2-Butanone	39.05	10	µg/L	40	0	97.6	40	160	0	
4-Methyl-2-pentanone	41.82	10	µg/L	40	0	105	40	160	0	
Methyl tert-butyl ether	21.03	2.0	µg/L	20	0	105	70	130	0	
Methylene chloride	20.2	5.0	µg/L	20	0	101	70	130	0	
Naphthalene	20.93	5.0	µg/L	20	0	105	70	130	0	
n-Propylbenzene	21.12	2.0	µg/L	20	0	106	70	130	0	
Styrene	19.92	2.0	µg/L	20	0	99.6	70	130	0	
1,1,1,2-Tetrachloroethane	20.13	2.0	µg/L	20	0	101	70	130	0	
1,1,2,2-Tetrachloroethane	19.8	2.0	µg/L	20	0	99	70	130	0	

Qualifiers: ND - Not Detected at the Reporting Limit
S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1705043
Project: North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Tetrachloroethene	20.89	2.0	µg/L	20	0	104	70	130	0
Tetrahydrofuran	22.62	10	µg/L	20	0	113	70	130	0
Toluene	21.46	2.0	µg/L	20	0	107	70	130	0
1,2,4-Trichlorobenzene	21.77	2.0	µg/L	20	0	109	70	130	0
1,2,3-Trichlorobenzene	19.34	2.0	µg/L	20	0	96.7	70	130	0
1,1,1-Trichloroethane	20.55	2.0	µg/L	20	0	103	70	130	0
1,1,2-Trichloroethane	20.35	2.0	µg/L	20	0	102	70	130	0
Trichloroethene	20.9	2.0	µg/L	20	0	104	70	130	0
Trichlorofluoromethane	20.04	2.0	µg/L	20	0	100	70	130	0
1,2,3-Trichloropropane	19.78	2.0	µg/L	20	0	98.9	70	130	0
1,2,4-Trimethylbenzene	21.49	2.0	µg/L	20	0	107	70	130	0
1,3,5-Trimethylbenzene	21.49	2.0	µg/L	20	0	107	70	130	0
Vinyl chloride	22.59	2.0	µg/L	20	0	113	70	130	0
o-Xylene	19.54	2.0	µg/L	20	0	97.7	70	130	0
m,p-Xylene	41.22	2.0	µg/L	40	0	103	70	130	0
Surr: Dibromofluoromethane	25.85	2.0	µg/L	25	0	103	70	130	0
Surr: 1,2-Dichloroethane-d4	24.65	2.0	µg/L	25	0	98.6	70	130	0
Surr: Toluene-d8	25.83	2.0	µg/L	25	0	103	70	130	0
Surr: 4-Bromofluorobenzene	23.6	2.0	µg/L	25	0	94.4	70	130	0

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: *01-Jun-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1705043
Project: North Reading

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: lcsd-05/22/17 **Batch ID:** R59597 **Test Code:** SW8260C **Units:** µg/L **Analysis Date:** 5/22/2017 12:17:00 PM **Prep Date:** 5/22/2017
Client ID: **Run ID:** V-3_170522A **SeqNo:** 999891

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Acetone	42.37	10	µg/L	40	0	106	40	160	38.87	8.62	20	
Tertiary Amyl Methyl Ether	20.59	2.0	µg/L	20	0	103	70	130	21.45	4.09	20	
Benzene	19.46	1.0	µg/L	20	0	97.3	70	130	20.66	5.98	20	
Bromobenzene	20.26	2.0	µg/L	20	0	101	70	130	21.16	4.35	20	
Bromochloromethane	21.5	2.0	µg/L	20	0	108	70	130	22.17	3.07	20	
Bromodichloromethane	20.28	2.0	µg/L	20	0	101	70	130	21.5	5.84	20	
Bromoform	18.34	2.0	µg/L	20	0	91.7	70	130	18.32	0.109	20	
Bromomethane	19.3	2.0	µg/L	20	0	96.5	40	160	21.79	12.1	20	
sec-Butylbenzene	19.34	2.0	µg/L	20	0	96.7	70	130	20.85	7.51	20	
n-Butylbenzene	20.46	2.0	µg/L	20	0	102	70	130	21.9	6.8	20	
tert-Butylbenzene	19.99	2.0	µg/L	20	0	100	70	130	21.18	5.78	20	
Carbon disulfide	14.69	2.0	µg/L	20	0	73.5	70	130	15.18	3.28	20	
Carbon tetrachloride	20.65	2.0	µg/L	20	0	103	70	130	20.59	0.291	20	
Chlorobenzene	19.28	2.0	µg/L	20	0	96.4	70	130	20.53	6.28	20	
Dibromochloromethane	19.96	2.0	µg/L	20	0	99.8	70	130	20.16	0.997	20	
Chloroethane	15.29	5.0	µg/L	20	0	76.5	70	130	17.47	13.3	20	
Chloroform	19.41	2.0	µg/L	20	0	97	70	130	19.91	2.54	20	
Chloromethane	22.77	2.0	µg/L	20	0	114	40	160	25.75	12.3	20	
2-Chlorotoluene	19.17	2.0	µg/L	20	0	95.8	70	130	20.22	5.33	20	
4-Chlorotoluene	19.74	2.0	µg/L	20	0	98.7	70	130	20.73	4.89	20	
1,2-Dibromo-3-chloropropane	21.1	5.0	µg/L	20	0	106	70	130	22.39	5.93	20	
1,2-Dibromoethane	20.88	2.0	µg/L	20	0	104	70	130	21.31	2.04	20	
Dibromomethane	19.86	2.0	µg/L	20	0	99.3	70	130	20.4	2.68	20	
1,3-Dichlorobenzene	19.67	2.0	µg/L	20	0	98.4	70	130	20.59	4.57	20	
1,2-Dichlorobenzene	20.16	2.0	µg/L	20	0	101	70	130	20.77	2.98	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1705043
Project: North Reading

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

1,4-Dichlorobenzene	19.69	2.0	µg/L	20	0	98.4	70	130	20.6	4.52	20
Dichlorodifluoromethane	31.87	5.0	µg/L	20	0	159	40	160	36.87	14.5	20
1,1-Dichloroethane	17.57	2.0	µg/L	20	0	87.8	70	130	18.94	7.5	20
1,2-Dichloroethane	20.11	2.0	µg/L	20	0	101	70	130	20.54	2.12	20
1,1-Dichloroethene	19.09	1.0	µg/L	20	0	95.4	70	130	20.79	8.53	20
cis-1,2-Dichloroethene	18.92	2.0	µg/L	20	0	94.6	70	130	19.92	5.15	20
trans-1,2-Dichloroethene	17.58	2.0	µg/L	20	0	87.9	70	130	19.65	11.1	20
1,2-Dichloropropane	19.8	2.0	µg/L	20	0	99	70	130	20.66	4.25	20
1,3-Dichloropropane	19.25	2.0	µg/L	20	0	96.2	70	130	19.34	0.466	20
2,2-Dichloropropane	20.82	2.0	µg/L	20	0	104	70	130	22.17	6.28	20
1,1-Dichloropropene	20.25	2.0	µg/L	20	0	101	70	130	21.87	7.69	20
cis-1,3-Dichloropropene	21.24	1.0	µg/L	20	0	106	70	130	21.9	3.06	20
trans-1,3-Dichloropropene	20.64	1.0	µg/L	20	0	103	70	130	21.12	2.3	20
Diethyl ether	19.54	5.0	µg/L	20	0	97.7	70	130	20.37	4.16	20
Diisopropyl ether	18.14	2.0	µg/L	20	0	90.7	70	130	19.78	8.65	20
1,4-Dioxane	117.1	50	µg/L	100	0	117	40	160	119.6	2.08	20
Ethyl Tertiary Butyl Ether	19.26	2.0	µg/L	20	0	96.3	70	130	20	3.77	20
Ethylbenzene	19.84	2.0	µg/L	20	0	99.2	70	130	21.18	6.53	20
Hexachlorobutadiene	19.67	2.0	µg/L	20	0	98.4	70	130	20.35	3.4	20
2-Hexanone	38.72	10	µg/L	40	0	96.8	40	160	37.46	3.31	20
Isopropylbenzene	19.83	2.0	µg/L	20	0	99.2	70	130	21.48	7.99	20
4-Isopropyltoluene	20.66	2.0	µg/L	20	0	103	70	130	21.96	6.1	20
2-Butanone	41.92	10	µg/L	40	0	105	40	160	39.05	7.09	20
4-Methyl-2-pentanone	41.45	10	µg/L	40	0	104	40	160	41.82	0.889	20
Methyl tert-butyl ether	20.13	2.0	µg/L	20	0	101	70	130	21.03	4.37	20
Methylene chloride	20.16	5.0	µg/L	20	0	101	70	130	20.2	0.198	20
Naphthalene	20.18	5.0	µg/L	20	0	101	70	130	20.93	3.65	20
n-Propylbenzene	19.84	2.0	µg/L	20	0	99.2	70	130	21.12	6.25	20
Styrene	18.9	2.0	µg/L	20	0	94.5	70	130	19.92	5.26	20
1,1,1,2-Tetrachloroethane	19.02	2.0	µg/L	20	0	95.1	70	130	20.13	5.67	20
1,1,2,2-Tetrachloroethane	19.32	2.0	µg/L	20	0	96.6	70	130	19.8	2.45	20

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1705043
Project: North Reading

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Tetrachloroethene	19.27	2.0	µg/L	20	0	96.4	70	130	20.89	8.07	20
Tetrahydrofuran	21.31	10	µg/L	20	0	107	70	130	22.62	5.96	20
Toluene	20.65	2.0	µg/L	20	0	103	70	130	21.46	3.85	20
1,2,4-Trichlorobenzene	21.07	2.0	µg/L	20	0	105	70	130	21.77	3.27	20
1,2,3-Trichlorobenzene	18.49	2.0	µg/L	20	0	92.5	70	130	19.34	4.49	20
1,1,1-Trichloroethane	19.52	2.0	µg/L	20	0	97.6	70	130	20.55	5.14	20
1,1,2-Trichloroethane	19.86	2.0	µg/L	20	0	99.3	70	130	20.35	2.44	20
Trichloroethene	19.42	2.0	µg/L	20	0	97.1	70	130	20.9	7.34	20
Trichlorofluoromethane	17.24	2.0	µg/L	20	0	86.2	70	130	20.04	15	20
1,2,3-Trichloropropane	19.4	2.0	µg/L	20	0	97	70	130	19.78	1.94	20
1,2,4-Trimethylbenzene	19.95	2.0	µg/L	20	0	99.8	70	130	21.49	7.43	20
1,3,5-Trimethylbenzene	20.33	2.0	µg/L	20	0	102	70	130	21.49	5.55	20
Vinyl chloride	20	2.0	µg/L	20	0	100	70	130	22.59	12.2	20
o-Xylene	18.9	2.0	µg/L	20	0	94.5	70	130	19.54	3.33	20
m,p-Xylene	38.75	2.0	µg/L	40	0	96.9	70	130	41.22	6.16	20
Surr: Dibromofluoromethane	25.9	2.0	µg/L	25	0	104	70	130	0	0	0
Surr: 1,2-Dichloroethane-d4	25.19	2.0	µg/L	25	0	101	70	130	0	0	0
Surr: Toluene-d8	26.08	2.0	µg/L	25	0	104	70	130	0	0	0
Surr: 4-Bromofluorobenzene	23.25	2.0	µg/L	25	0	93	70	130	0	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: *01-Jun-17*

CLIENT:	Charles Castelluccio Consulting, LLC	**Client Sample ID:**	Influent
Lab Order:	1705043	**Collection Date:**	5/17/2017 9:50:00 AM
Project:	North Reading	**Matrix:**	AQUEOUS
Lab ID:	1705043-02A		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
8260C SIM, EPA 5030C		**SW8260C**				Analyst: JK
1,2-Dibromoethane	ND	0.050		µg/L	1	5/31/2017 2:03:00 PM
Surr: 1,2-Dichloroethane-d4	108	72-129		%REC	1	5/31/2017 2:03:00 PM
Surr: 4-Bromofluorobenzene	98.0	82-119		%REC	1	5/31/2017 2:03:00 PM
Surr: Dibromofluoromethane	105	83-116		%REC	1	5/31/2017 2:03:00 PM
Surr: Toluene-d8	111	55-130		%REC	1	5/31/2017 2:03:00 PM

AMRO Environmental Laboratories Corp.

Date: *01-Jun-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1705043
Project: North Reading

QC SUMMARY REPORT
Method Blank

Sample ID: **mb-05/31/17** Batch ID: **R59624** Test Code: **SW8260C** Units: **µg/L** Analysis Date: **5/31/2017 1:32:00 PM** Prep Date: **5/31/2017**

Client ID: Run ID: **V-1_170531A** SeqNo: **1000278**

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
1,2-Dibromoethane	ND	0.050	µg/L									
Surr: 1,2-Dichloroethane-d4	5.31	2.0	µg/L	5	0	106	72	129	0			
Surr: 4-Bromofluorobenzene	4.8	2.0	µg/L	5	0	96	82	119	0			
Surr: Dibromofluoromethane	5.12	2.0	µg/L	5	0	102	83	116	0			
Surr: Toluene-d8	5.47	2.0	µg/L	5	0	109	55	130	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1705043
Project: North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: lcs-05/31/17 **Batch ID:** R59624 **Test Code:** SW8260C **Units:** µg/L **Analysis Date:** 5/31/2017 12:31:00 PM **Prep Date:** 5/31/2017
Client ID: **Run ID:** V-1_170531A **SeqNo:** 1000276

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
1,2-Dibromoethane	1	0.050	µg/L	1	0	100	76	132	0			
Surr: 1,2-Dichloroethane-d4	5.36	2.0	µg/L	5	0	107	72	129	0			
Surr: 4-Bromofluorobenzene	5.09	2.0	µg/L	5	0	102	82	119	0			
Surr: Dibromofluoromethane	5.24	2.0	µg/L	5	0	105	83	116	0			
Surr: Toluene-d8	4.92	2.0	µg/L	5	0	98.4	55	130	0			

Sample ID: lcsd-05/31/17 **Batch ID:** R59624 **Test Code:** SW8260C **Units:** µg/L **Analysis Date:** 5/31/2017 1:02:00 PM **Prep Date:** 5/31/2017
Client ID: **Run ID:** V-1_170531A **SeqNo:** 1000277

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
1,2-Dibromoethane	1.18	0.050	µg/L	1	0	118	76	132	1	16.5	20	
Surr: 1,2-Dichloroethane-d4	4.88	2.0	µg/L	5	0	97.6	72	129	0	0	0	
Surr: 4-Bromofluorobenzene	4.9	2.0	µg/L	5	0	98	82	119	0	0	0	
Surr: Dibromofluoromethane	4.7	2.0	µg/L	5	0	94	83	116	0	0	0	
Surr: Toluene-d8	4.91	2.0	µg/L	5	0	98.2	55	130	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: *01-Jun-17*

CLIENT: Charles Castelluccio Consulting, LLC
Project: North Reading
Lab Order: 1705043

Lab ID: 1705043-01
Collection Date: 5/17/2017 9:30:00 AM
Collection Time:
Client Sample ID: Effluent
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ION CHROMATOGRAPHY		**E300**				Analyst: AL
Chloride	400	10		mg/L	20	5/25/2017 12:52:25 PM
PH		**SM4500-H, B**				Analyst: JK
pH	8.0	0	H	pH Units	1	5/17/2017

Lab ID: 1705043-02
Collection Date: 5/17/2017 9:50:00 AM
Collection Time:
Client Sample ID: Influent
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ION CHROMATOGRAPHY		**E300**				Analyst: AL
Chloride	420	10		mg/L	20	5/25/2017 12:52:25 PM
PH		**SM4500-H, B**				Analyst: JK
pH	6.9	0	H	pH Units	1	5/17/2017

AMRO Environmental Laboratories Corp.

Date: *01-Jun-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1705043
Project: North Reading

QC SUMMARY REPORT
Method Blank

Sample ID: MB-052517 **Batch ID:** R59619 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 5/25/2017 12:52:25 PM **Prep Date:**
Client ID: **Run ID:** DIONEX_170525A **SeqNo:** 1000214

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	ND	0.50	mg/L									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1705043
Project: North Reading

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: LCS-052517 **Batch ID:** R59619 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 5/25/2017 12:52:25 PM **Prep Date:**
Client ID: **Run ID:** DIONEX_170525A **SeqNo:** 1000215

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	12	0.50	mg/L	12.5	0	96	89	110	0			

Sample ID: LCSD-052517 **Batch ID:** R59619 **Test Code:** E300 **Units:** mg/L **Analysis Date:** 5/25/2017 12:52:25 PM **Prep Date:**
Client ID: **Run ID:** DIONEX_170525A **SeqNo:** 1000220

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
Chloride	11.98	0.50	mg/L	12.5	0	95.8	89	110	12	0.196	20	

Sample ID: LCS-R59572 **Batch ID:** R59572 **Test Code:** SM4500-H, B **Units:** pH Units **Analysis Date:** 5/17/2017 **Prep Date:**
Client ID: **Run ID:** ING-WET_170517B **SeqNo:** 999539

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
pH	6.02	0	pH Units	6	0	100	99	101	0			

Sample ID: LCSD-R59572 **Batch ID:** R59572 **Test Code:** SM4500-H, B **Units:** pH Units **Analysis Date:** 5/17/2017 **Prep Date:**
Client ID: **Run ID:** ING-WET_170517B **SeqNo:** 999542

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
pH	6.02	0	pH Units	6	0	100	99	101	6.02	0	5	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

AMRO Environmental Laboratories Corp.

Date: *01-Jun-17*

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1705043
Project: North Reading

QC SUMMARY REPORT
Sample Duplicate

Sample ID: **1705043-02BDUP** Batch ID: **R59572** Test Code: **SM4500-H, B** Units: **pH Units** Analysis Date: **5/17/2017** Prep Date:

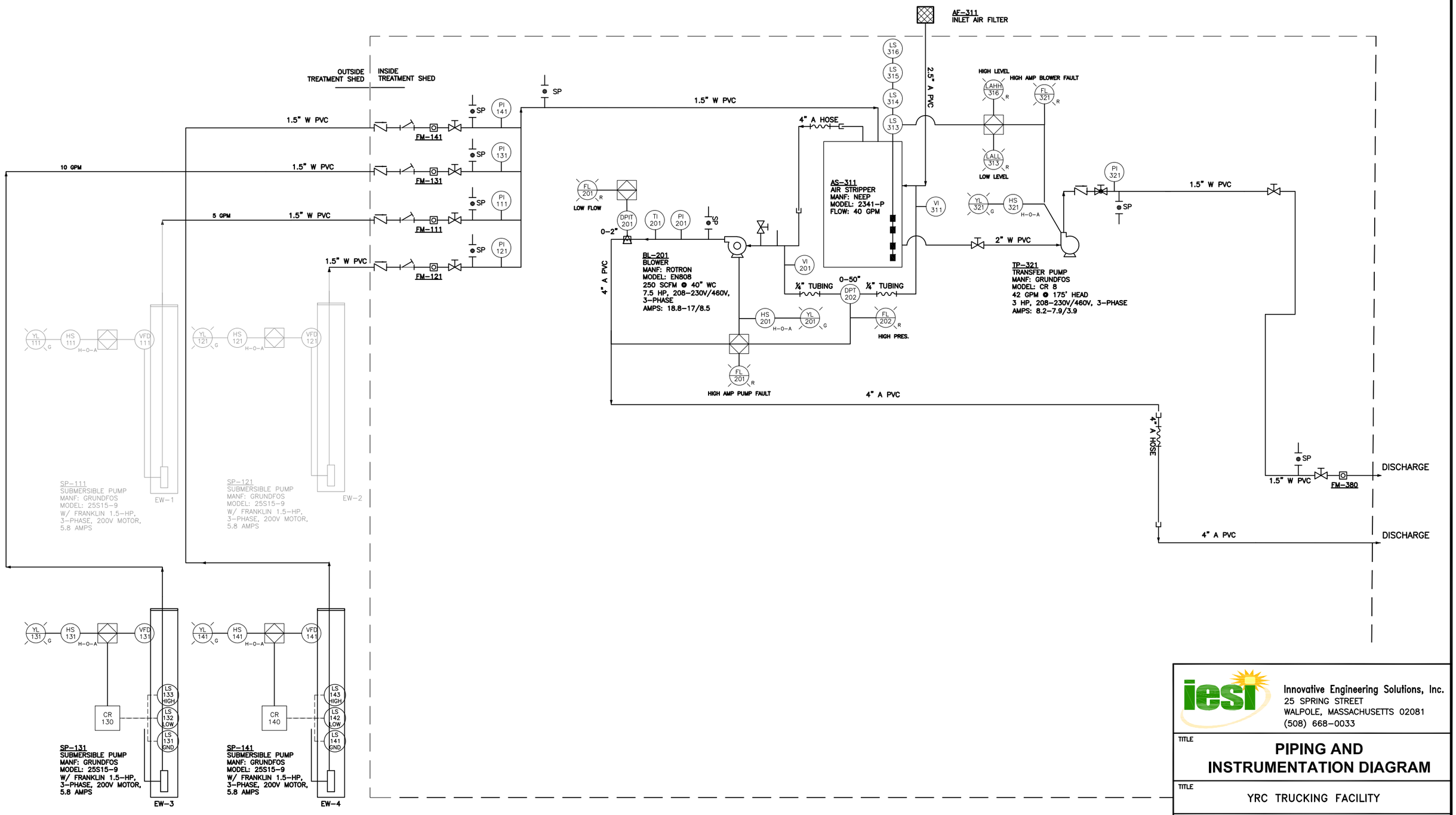
Client ID: **Influent** Run ID: **ING-WET_170517B** SeqNo: **999543**

Analyte	QC Sample Result	RL	Units	QC Spike Amount	Original Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Qua
pH	6.85	0	pH Units	0	0	0	0	0	6.9	0.727	5	H

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

ATTACHMENT E

Schematic of System Flow



Innovative Engineering Solutions, Inc.
25 SPRING STREET
WALPOLE, MASSACHUSETTS 02081
(508) 668-0033

TITLE

PIPING AND INSTRUMENTATION DIAGRAM

TITLE

YRC TRUCKING FACILITY

SITE

NORTH READING MASSACHUSETTS

CLIENT

YRC

DRAWN	CHECKED	FILENAME	DATE	FIGURE
DF		YRC CAD	APRIL 2017	1

ATTACHMENT F

Endangered Species Act

Section G. ESA

Based on a review of available Site information, the attached table "Federally Listed Endangered and Threatened Species in Massachusetts" obtained from the United States Fish and Wildlife Service, New England Field Office, there are no federally-listed threatened or endangered species or critical habitats identified in the town of North Reading with the exception of the Northern Long-eared Bat which is state-wide. In addition, a review of the Massachusetts Division of Fisheries and Wildlife's Natural Heritage & Endangered Species Program Map indicates that no NHESP estimated habitats of rare wildlife or rare species are located in the area of the site.

The Northern Long-Eared Bats are primarily cave and tree dwellers. There are no known caves in the area of the site which is the subject of this permit application and the site is also paved with no trees. There will be no changes to the site as a result of this permit application as the treatment system which is housed in a shed is still active and has been active under the 2010 RGP permit. Discharges of treated water from the remediation system travel below grade in the storm sewer system to a discharge point where the water infiltrates the ground. Northern Long-Eared Bats primarily fly through the understory of forested areas to feed on insects. Again there are no caves or trees on the site, which is paved and therefore it is highly unlikely that endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the “action area”.

Additional information to support the above determination is also included in a MassDEP - Bureau of Waste Site Cleanup MCP Numerical Ranking System map: 500 ft & 0.5 Mile Radii (attached) which indicates that there are no areas of critical environmental concern within 500-feet of the site. There is a potential for wetland wildlife within 500-feet of the site. However, the site is an active trucking terminal that is paved and discharge water is directed below grade to the storm water system on the site and there is a low likelihood of impacts to endangered or threatened species or their designated critical habitat to occur in proximity to the storm water discharges or discharge related activities.

Therefore, Criterion C was selected.

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Barnstable	Piping Plover	Threatened	Coastal Beaches	All Towns
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Chatham
	Sandplain gerardia	Endangered	Open areas with sandy soils.	Sandwich and Falmouth.
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Bourne (north of the Cape Cod Canal)
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Berkshire	Bog Turtle	Threatened	Wetlands	Egremont and Sheffield
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Bristol	Piping Plover	Threatened	Coastal Beaches	Fairhaven, Dartmouth, Westport
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Fairhaven, New Bedford, Dartmouth, Westport
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Taunton
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Dukes	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Piping Plover	Threatened	Coastal Beaches	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Aquinnah and Chilmark
	Sandplain gerardia	Endangered	Open areas with sandy soils.	West Tisbury
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

Updated 02/05/2016

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Essex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Gloucester, Essex and Manchester
	Piping Plover	Threatened	Coastal Beaches	Gloucester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Franklin	Northeastern bulrush	Endangered	Wetlands	Montague, Warwick
	Dwarf wedgemussel	Endangered	Mill River	Whately
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampshire	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Hadley
	Puritan tiger beetle	Threatened	Sandy beaches along the Connecticut River	Northampton and Hadley
	Dwarf wedgemussel	Endangered	Rivers and Streams.	Hatfield, Amherst and Northampton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampden	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Southwick
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Middlesex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Groton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Nantucket	Piping Plover	Threatened	Coastal Beaches	Nantucket
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Nantucket
	American burying beetle	Endangered	Upland grassy meadows	Nantucket
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

Updated 02/05/2016

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Plymouth	Piping Plover	Threatened	Coastal Beaches	Scituate, Marshfield, Duxbury, Plymouth, Wareham and Mattapoisett
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Kingston, Middleborough, Carver, Plymouth, Bourne, Wareham, Halifax, and Pembroke
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Plymouth, Marion, Wareham, and Mattapoisett.
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Suffolk	Piping Plover	Threatened	Coastal Beaches	Revere, Winthrop
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Worcester	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Leominster
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

[1]Migratory only, scattered along the coast in small numbers

-Eastern cougar and gray wolf are considered extirpated in Massachusetts.
-Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.
-Critical habitat for the Northern Red-bellied Cooter is present in Plymouth County.

Updated 02/05/2016

MassDEP - Bureau of Waste Site Cleanup

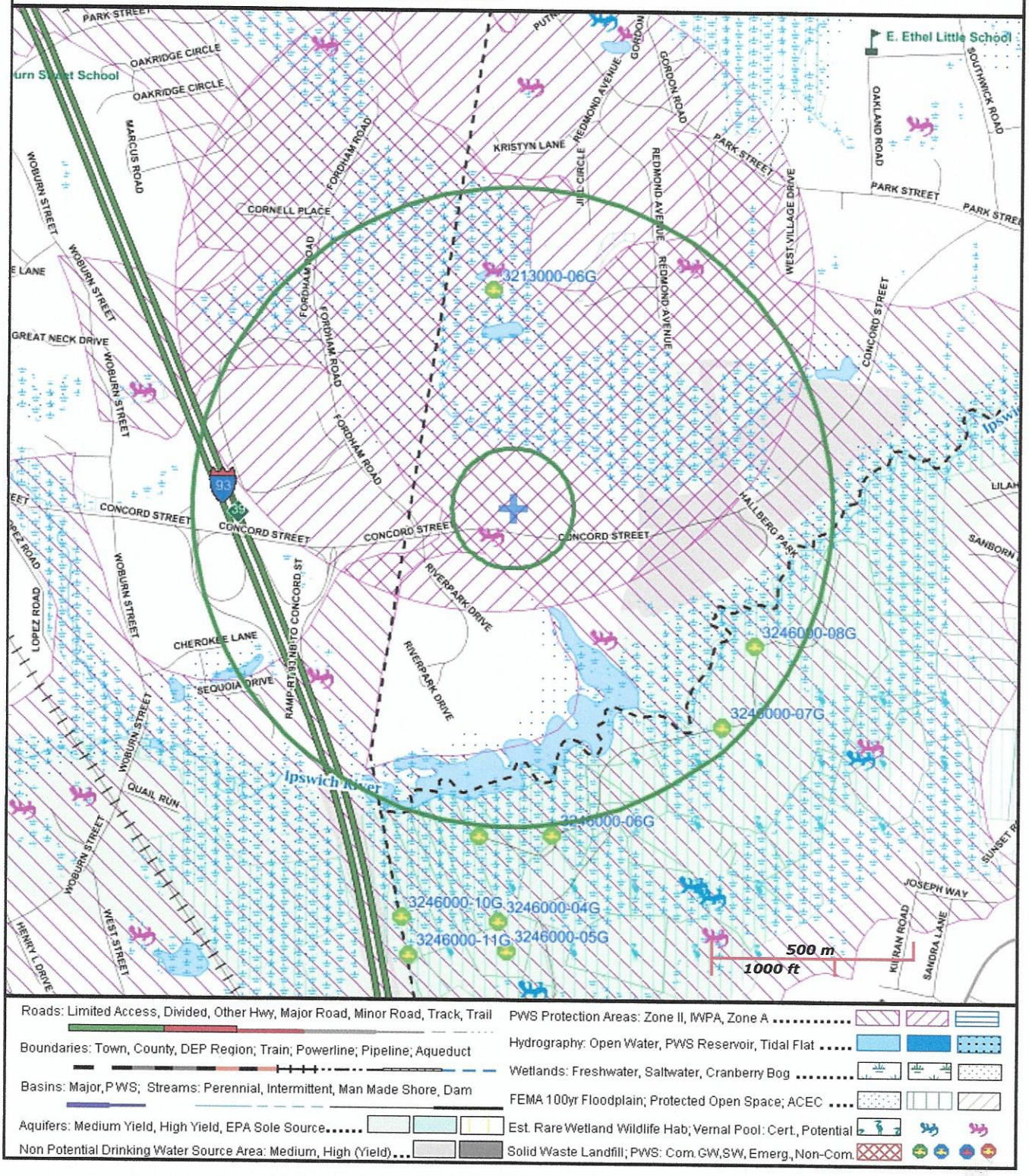
Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
FORMER ROADWAY TERMINAL
95 CONCORD STREET NORTH READING, MA
3-000002363

NAD83 UTM Meters:
5245097mN , -7918422mE (Zone: 18)
April 21, 2017

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

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



ATTACHMENT G

National Historic Preservation Act

Section H. NHPA Eligibility

Based on a visual inspection of the Site and discharge area indicates that there would be no historical properties that would be impacted by discharge activities (database search results of the National Register of Historic Places and the Massachusetts Cultural Resource Information System are attached). While there are a number of sites listed in North Reading, none are within the vicinity of the Site and discharge area. Therefore, Criterion 1a is assigned.

Massachusetts Cultural Re

MA

MACRIS Search Results

Search Criteria: Town(s): North Reading; Resource Type(s): Structure, Object, Burial

Inv. No.	Property Name
NRE.A	Peabody Court
NRE.B	Center Village Historic District
NRE.C	First Period Buildings of Eastern Massachusetts
NRE.D	McIntire, Jacob House and Shed
NRE.E	Main Street Streetscape
NRE.F	Chestnut Street Village
NRE.G	Elm Street - Dutton's Corner
NRE.H	Haverhill Street - Mount Vernon Street Area
NRE.I	Massachusetts State Tuberculosis Sanatorium
NRE.J	Upton Avenue and Chestnut Street Area
NRE.K	West Village - Pudding Point
NRE.65	Kittredge House
NRE.39	Abbott, Daniel Graves House
NRE.38	Hart, Joseph M. Cabinet Maker Shop
NRE.37	
NRE.32	Hart, Joseph M. House
NRE.36	Buxton, Benjamin House
NRE.33	Walls, William House
NRE.35	Turner, James Edwin House
NRE.34	Turner, Roy W. House
NRE.26	Jeffrey, Elisha House
NRE.25	Damon, David Tavern
NRE.24	Foster, Edwin House
NRE.23	Putnam, Rev. Daniel House
NRE.22	Foster, Elizabeth Putnam House
NRE.145	Upton - Howard House
NRE.146	Upton, Aaron and Amos Jr. House
NRE.28	Flint Memorial Hall
NRE.800	Gould Family Cemetery

NRE.801	Harmony Vale Cemetery
NRE.66	Flint - Smith, G. S. House
NRE.67	Flint, A. House
NRE.68	Flint, A. Barn
NRE.69	Harris, James Z. House
NRE.70	Burditt, Jonathan N. House and Shop
NRE.73	Walker, Charles M. Cottage
NRE.71	Whittredge, William House
NRE.72	Whittredge, William Barn
NRE.74	Upton, Frederic A. - Upton, Lysander House
NRE.147	Upton, Wallace F. House
NRE.148	Abbott, Ebenezer - Merrill, Lorenzo G. House
NRE.149	Parker, Elijah B. House
NRE.150	Parker, George B. - Abbott, Joel House
NRE.151	Parker, Dea. George K. House
NRE.152	Parker, George B. House and Shoe Factory
NRE.63	Parker, Eliab Jr. House
NRE.191	Eaton, David G. House
NRE.192	Upton, Louis House
NRE.802	Riverside Cemetery
NRE.75	Upton, Benjamin House
NRE.76	Hayward, Sylvester Shed
NRE.77	Hayward, Leon G. House
NRE.78	Hayward - Howard, John House
NRE.79	McIntire, Archelaus - Jeffreys, Joseph House
NRE.80	Tarbox, Rachel E. House
NRE.81	Orben, Henry House
NRE.82	Parker, David Jr. - Rayner, Thomas House
NRE.83	Parker, David Jr. - Rayner, Thomas Barn
NRE.84	Upton, Ebenezer - Graves, Daniel House
NRE.85	
NRE.86	Parker, Lt. David - Pickard, William H. House
NRE.88	Graves, Capt. Daniel - Holt, Joseph E. House
NRE.89	Gates, J. S. House
NRE.64	Bickford, John House
NRE.157	Upton, Charles A. Slaughter House
NRE.158	Upton, Charles A. House
NRE.159	North Reading Poor House
NRE.160	Eaton, Joseph H. House
NRE.161	Cotter, James P. House
NRE.162	Flint, Eben House and Shoe Shop
NRE.163	Eaton, Thomas - Smith, Ann C. House
NRE.164	Gowing, Joseph D. House

NRE.165	Hayward, Samuel House
NRE.166	McIntire, Asa R. House
NRE.92	Gowing, Jacob D. Barn
NRE.93	Gowing, Jacob D. Barn
NRE.900	North Reading Bandstand
NRE.902	Haverhill Street Bridge over Ipswich River
NRE.94	Nichols, Jeremiah House
NRE.95	Nichols, Jeremiah Barn
NRE.154	Hersey, Nathan W. House
NRE.155	Flint, Daniel House
NRE.156	Nichols, William I. House
NRE.61	Franklin District School
NRE.170	North Reading First Baptist Church
NRE.171	Abbott, Ebenezer Tilden House
NRE.172	Abbott, Ebenezer Tilden House
NRE.173	Eaton, Hovey D. House
NRE.174	Jeffrey, E. and Company
NRE.55	Ryer, Mollie F. House
NRE.21	Hoyt, Dr. W. Hadley House
NRE.20	Abbott, Alice L. Upton House
NRE.18	Union Congregational Church
NRE.19	Stone, Matilda Lydia Jones House
NRE.16	Hammond, John F. House
NRE.17	Holt, Solon O. House
NRE.15	Hammond, John F. Barn
NRE.12	Flint, John II House
NRE.14	Putnam, Henry Barn
NRE.13	
NRE.96	
NRE.97	Campbell, John Buxton House
NRE.98	Graves, D. House
NRE.99	Graves, D. Barn
NRE.100	Campbell, Walter S. House
NRE.101	Foley, Dennis and Thomas L. House
NRE.102	Flint, Ebenezer Jr. House
NRE.103	Wood, William M. Caretaker's Cottage
NRE.104	Wood, William M. Caretaker's Barn and Stable
NRE.105	Batchelder, Joseph House
NRE.11	Putnam, Henry House
NRE.10	Pennell, Albert House
NRE.9	Campbell, Warren A. House
NRE.182	Massachusetts State Tuberculosis Sanatorium
NRE.183	Massachusetts State Tuberculosis Sanatorium

NRE.184	Massachusetts State Tuberculosis Sanatorium
NRE.185	Massachusetts State Tuberculosis Sanatorium
NRE.803	Congregation Ahabat Sholum Cemetery
NRE.901	Martins Brook Bridge
NRE.142	Carpenter, Edward A. - McLane, Jared Brown House
NRE.143	Carpenter, Edward A. - McLane, Jared Brown House
NRE.144	Carpenter, Edward A. - McLane, Jared Brown House
NRE.106	Pleasure Lanes
NRE.193	Jenkins, Luther House
NRE.194	Upton - Batchelder House
NRE.107	Flint, W. - Eaton House
NRE.108	Flint, W. - Eaton Barn
NRE.109	Eaton, George E. House
NRE.110	Eaton, George E. Barn
NRE.175	McDonald, John House
NRE.176	Parker, Gustavus E. - Monroe, A. B. House
NRE.177	Morse, William S. House
NRE.178	First Baptist Church Parsonage
NRE.179	Whittredge, William A. House
NRE.180	Foster, Walter K. House
NRE.181	Hall, Benjamin and Horace House
NRE.111	Eaton, Ebenezer House
NRE.112	Eaton, Moses - LeFavor, Woodbury P. House
NRE.113	Westcott, S. P. - Emerson, Benjamin A. House
NRE.114	Holt, Benjamin House
NRE.115	Batchelder, Dennis House
NRE.60	North Reading Junior and Senior High School
NRE.804	Park Street Cemetery
NRE.903	Stone Bridge
NRE.116	McIntire, Jacob House
NRE.117	McIntire, Jacob Shed
NRE.118	Abbott, Frederick A. - Eames, Benjamin House
NRE.119	Abbott, Frederick A. - Eames, Benjamin Barn
NRE.120	Upton, John K. Slaughterhouse
NRE.121	Mason, Ozro - Abbott, Herbert Leon House
NRE.122	Eaton, Albert Barn
NRE.123	Eaton, Albert House
NRE.40	Symonds, Otis P. Box Factory
NRE.41	Lavers, Milton House
NRE.42	Abbott, Capt. Ebenezer III House
NRE.31	McLane, J. B. House
NRE.43	Abbott, Benjamin Swain - Harnden, William House
NRE.30	Ward, James M. House

NRE.44	Eaton, James L. - Carpenter, Edward A. House
NRE.45	Bay-Bank Middlesex Bank Branch Office
NRE.29	BP Gibbs Service Station
NRE.46	Eaton, James L. Hay and Grain Store
NRE.47	North Reading Baptist Parsonage
NRE.48	Howard, Charles Putnam House
NRE.49	Carpenter, Edward A. House
NRE.50	Turner, J. E. and Sons Paint Shop
NRE.51	McLane, Jared Brown House
NRE.1	North Reading Third Meetinghouse
NRE.52	North Reading Police and Fire Station
NRE.53	McDonnell, John House
NRE.54	Lew's Mobil Service Station
NRE.56	Foster, Edwin Store
NRE.57	Bay-Bank Middlesex Bank
NRE.58	Malden Cooperative Bank
NRE.59	U. S. Post Office - North Reading Branch
NRE.124	Flint, Hezekiah House
NRE.125	Flint, Peter G. - Estes, Frederick J. House
NRE.126	
NRE.127	Nichols - Batchelder Barn
NRE.128	Nichols, Warren - Batchelder, Elizabeth A. House
NRE.129	Buxton, Ebenezer - Sheldon, Samuel H. House
NRE.130	Buxton, Washington House
NRE.195	Eames, John E. House
NRE.196	Union National Store
NRE.197	Eames, Joseph - Jacques, Olive House
NRE.198	Batchelder - Beard, Eben House
NRE.199	Flint, Samuel - Bacheller, John House
NRE.62	Flint, George House
NRE.131	Frye, Joseph House
NRE.805	Frye - Travis - Forster Burial Ground
NRE.3	Stone, Rev. Eliab House
NRE.2	Batchelder, Leland Dennis Elementary School House
NRE.5	Peabody, James House
NRE.4	O'Brien, John House
NRE.6	Peabody, James W. Shoe Shop
NRE.8	Nichols, Agnes House
NRE.7	Peabody, James House
NRE.132	
NRE.186	
NRE.187	Upton, Alanson Augustine House
NRE.188	Upton, Henry A. House

NRE.189	Frye, Joseph - Upton, Alanson Augustine House
NRE.190	Upton, Alanson Augustine Slaughter House
NRE.133	Upton, Alanson Augustine - Turner, T. Alfred House
NRE.134	Dixon, John H. House and Shop
NRE.135	Breed, Samuel P. House
NRE.136	Morse, Alonzo House
NRE.167	Crosby, John A. House
NRE.168	Dutton, Ephraim B. House
NRE.169	Carter - Buxton, S. House
NRE.27	Cleveland, Mary E. - Burditt, Arthur A. House
NRE.137	Weeks, George House
NRE.138	Garvin, Edward - Weeks, Mary T. House
NRE.139	Weeks, Mary T. Barn
NRE.140	Richardson, Roy E. Garage and Store
NRE.141	Nichols, Richard House

:source Information System

CRIS

Ground, Building, Area;

Street	Town	Year
	North Reading	
	North Reading	
	North Reading	
	North Reading	
	North Reading	
	North Reading	
	North Reading	
	North Reading	
	North Reading	
	North Reading	
	North Reading	
10 Batchelder Ave	North Reading	1905
3 Bow St	North Reading	1853
5 Bow St	North Reading	1853
7-9 Bow St	North Reading	1952
10 Bow St	North Reading	1854
11 Bow St	North Reading	c 1816
12 Bow St	North Reading	c 1836
13 Bow St	North Reading	1889
15 Bow St	North Reading	1925
19 Bow St	North Reading	1844
21 Bow St	North Reading	1817
25 Bow St	North Reading	1838
27 Bow St	North Reading	1720
33 Bow St	North Reading	1871
3 Cedar St	North Reading	r 1840
7 Cedar St	North Reading	c 1760
1 Central Sq	North Reading	1875
255 Central St	North Reading	c 1847

Chestnut St	North Reading	c 1800
1 Chestnut St	North Reading	c 1800
46 Chestnut St	North Reading	r 1865
46 Chestnut St	North Reading	r 1865
56 Chestnut St	North Reading	c 1870
73 Chestnut St	North Reading	1792
91 Chestnut St	North Reading	c 1920
97 Chestnut St	North Reading	r 1750
97 Chestnut St	North Reading	r 1865
108 Chestnut St	North Reading	c 1845
115 Chestnut St	North Reading	c 1915
118 Chestnut St	North Reading	r 1845
121 Chestnut St	North Reading	r 1685
122 Chestnut St	North Reading	r 1845
124 Chestnut St	North Reading	r 1845
125 Chestnut St	North Reading	r 1855
126 Chestnut St	North Reading	1783
135 Chestnut St	North Reading	r 1750
138 Chestnut St	North Reading	r 1840
Elm St	North Reading	r 1750
17 Elm St	North Reading	1781
17 Elm St	North Reading	r 1870
34 Elm St	North Reading	r 1900
41 Elm St	North Reading	c 1860
67 Elm St	North Reading	c 1787
107 Elm St	North Reading	c 1795
151 Elm St	North Reading	r 1850
189 Elm St	North Reading	c 1795
189 Elm St	North Reading	
207 Elm St	North Reading	c 1732
207 Elm St	North Reading	1985
215 Elm St	North Reading	r 1710
221 Elm St	North Reading	r 1725
232 Elm St	North Reading	r 1840
235 Elm St	North Reading	c 1735
240 Elm St	North Reading	r 1785
245 Elm St	North Reading	r 1800
248 Elm St	North Reading	1792
255 Elm St	North Reading	c 1810
256 Elm St	North Reading	c 1900
257 Elm St	North Reading	r 1840
259 Elm St	North Reading	1844
273 Elm St	North Reading	c 1910

279 Elm St	North Reading	c 1739
283 Elm St	North Reading	r 1840
7 Gowing Ln	North Reading	r 1880
7 Gowing Ln	North Reading	r 1880
Haverhill St	North Reading	1976
Haverhill St	North Reading	1958
15 Haverhill St	North Reading	1792
15 Haverhill St	North Reading	
61 Haverhill St	North Reading	1864
70 Haverhill St	North Reading	c 1840
76 Haverhill St	North Reading	r 1845
85 Haverhill St	North Reading	c 1820
97 Haverhill St	North Reading	c 1927
100 Haverhill St	North Reading	1834
109 Haverhill St	North Reading	r 1865
110 Haverhill St	North Reading	1910
114 Haverhill St	North Reading	r 1850
125 Haverhill St	North Reading	1925
143 Haverhill St	North Reading	1953
145 Haverhill St	North Reading	1930
148 Haverhill St	North Reading	1836
149 Haverhill St	North Reading	1891
151 Haverhill St	North Reading	1841
152 Haverhill St	North Reading	1872
153 Haverhill St	North Reading	1842
154 Haverhill St	North Reading	1849
155 Haverhill St	North Reading	c 1800
157 Haverhill St	North Reading	
170 Haverhill St	North Reading	c 1920
171 Haverhill St	North Reading	1857
192 Haverhill St	North Reading	1839
192 Haverhill St	North Reading	
219 Haverhill St	North Reading	c 1900
222 Haverhill St	North Reading	r 1740
315 Haverhill St	North Reading	c 1830
318 Haverhill St	North Reading	1918
318 Haverhill St	North Reading	1918
338 Haverhill St	North Reading	1817
3 Hill St	North Reading	1856
5 Hill St	North Reading	1950
9 Hill St	North Reading	1849
Lowell Rd	North Reading	r 1915
Lowell Rd	North Reading	r 1915

Lowell Rd	North Reading	r 1915
Lowell Rd	North Reading	r 1915
Main St	North Reading	c 1905
Main St	North Reading	1903
25 Main St	North Reading	c 1900
27 Main St	North Reading	c 1900
29 Main St	North Reading	c 1900
160 Main St	North Reading	c 1960
18 Mill St	North Reading	c 1849
25 Mill St	North Reading	r 1720
10 Mount Vernon St	North Reading	1781
10 Mount Vernon St	North Reading	
22 Mount Vernon St	North Reading	c 1910
22 Mount Vernon St	North Reading	c 1910
47 Mount Vernon St	North Reading	c 1860
51 Mount Vernon St	North Reading	c 1860
55 Mount Vernon St	North Reading	c 1862
58 Mount Vernon St	North Reading	c 1875
59 Mount Vernon St	North Reading	r 1865
62 Mount Vernon St	North Reading	r 1865
63 Mount Vernon St	North Reading	r 1865
16 North St	North Reading	1753
31 North St	North Reading	c 1890
117 North St	North Reading	r 1825
178 North St	North Reading	r 1790
220 North St	North Reading	c 1795
Park St	North Reading	1957
Park St	North Reading	r 1741
Park St	North Reading	1903
85 Park St	North Reading	c 1850
85 Park St	North Reading	r 1870
95 Park St	North Reading	1841
95 Park St	North Reading	r 1850
95 Park St	North Reading	r 1870
98 Park St	North Reading	r 1860
100 Park St	North Reading	c 1870
102 Park St	North Reading	c 1850
121 Park St	North Reading	1905
122 Park St	North Reading	1958
128 Park St	North Reading	1819
129 Park St	North Reading	1894
130 Park St	North Reading	1847
131 Park St	North Reading	1837

132 Park St	North Reading	1839
132a Park St	North Reading	1958
133 Park St	North Reading	1971
134 Park St	North Reading	1874
136 Park St	North Reading	1837
140 Park St	North Reading	1840
144 Park St	North Reading	1906
146 Park St	North Reading	c 1929
148 Park St	North Reading	1818
155 Park St	North Reading	1829
156 Park St	North Reading	1969
158 Park St	North Reading	1889
160 Park St	North Reading	1961
162 Park St	North Reading	1842
168 Park St	North Reading	1973
172 Park St	North Reading	1965
176 Park St	North Reading	1965
207 Park St	North Reading	r 1770
219 Park St	North Reading	c 1806
251 Park St	North Reading	c 1910
251 Park St	North Reading	r 1870
253 Park St	North Reading	c 1800
263-265 Park St	North Reading	c 1760
273 Park St	North Reading	r 1860
369 Park St	North Reading	r 1835
373 Park St	North Reading	r 1840
376 Park St	North Reading	c 1845
379 Park St	North Reading	1792
382 Park St	North Reading	c 1850
383 Park St	North Reading	1713
471 Park St	North Reading	1765
474 Park St	North Reading	1821
1 Peabody St	North Reading	c 1761
2 Peabody St	North Reading	1917
7 Peabody St	North Reading	1854
10 Peabody St	North Reading	1857
12 Peabody St	North Reading	1867
13 Peabody St	North Reading	1896
18 Peabody St	North Reading	1858
21 Riverside Dr	North Reading	1937
2 Upton Ave	North Reading	c 1906
7 Upton Ave	North Reading	c 1825
10 Upton Ave	North Reading	c 1900

11 Upton Ave	North Reading	r 1750
12 Upton Ave	North Reading	r 1850
7 Washington St	North Reading	c 1855
10 Washington St	North Reading	r 1850
11 Washington St	North Reading	1859
13 Washington St	North Reading	c 1855
23 Washington St	North Reading	r 1895
24 Washington St	North Reading	1879
5 Willow St	North Reading	r 1740
19 Willow St	North Reading	1901
3 Winter St	North Reading	r 1935
5 Winter St	North Reading	r 1790
5 Winter St	North Reading	r 1880
21 Winter St	North Reading	1924
25 Winter St	North Reading	c 1860