# 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:

1. Name of site:	Site address: 95 Concord Street					
YRC (Formerly Roadway Express) Terminal	Street:					
	City: North Reading	State: MA	Zip: 01864			
2. Site owner	Contact Person: Ruben Byerley					
YRC Inc.	Telephone: 913-344-3644	oen.byerley@yrcfreight.com				
	Mailing address: 10990 Roe Avenue					
	Street:					
Owner is (check one): □ Federal □ State/Tribal ■ Private □ Other; if so, specify:	City: Overland Park		State: KS	<sup>Zip:</sup> 66211		
3. Site operator, if different than owner	Contact Person: Charles Castelluccio					
CCC Environmental Services LLC	Telephone: 978-505-1123 Email: charles.castelluccio@gmail.com					
	Mailing address:					
	Street: 62 Wescroft Road					
	City: Reading		State: MA	Zip: 01867		
4. NPDES permit number assigned by EPA:	5. Other regulatory program(s) that apply to the site (check all that apply):					
MAG910000	■ MA Chapter 21e; list RTN(s):	□ CERCL	Α			
AMPERS - 11 (1 1 111 ( - 1 - E DODE DODE COD	RTN 3-2363	□ UIC Pro	ogram			
NPDES permit is (check all that apply: ■ RGP □ DGP □ CGP	☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:	$\square$ POTW	Pretreatment			
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Groundwater Release Detection Ferrill.	☐ CWA Section 404				

B. Receiving water information:									
1. Name of receiving water(s):	Waterbody identification of receiving water	(s): Classif	cation of receiving water(s):						
Ipswich River	Source to Salem Be	verly Class E	3						
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.									
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.									
6. Has the operator received confirmation from the all If yes, indicate date confirmation received: 6/29/17	ppropriate State for the 7Q10and dilution factor indi	icated? (check one): Yes	□ No						
7. Has the operator attached a summary of receiving (check one): ■ Yes □ No	water sampling results as required in Part 4.2 of the	RGP in accordance with the	instruction in Appendix VIII?						
C. Source water information:									
1. Source water(s) is (check any that apply):									
Contaminated groundwater	☐ Contaminated surface water	☐ The receiving water	☐ Potable water; if so, indicate municipality or origin:						
Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP	Has the operator attached a summary of influent sampling results as required in Part 4.2 of the	☐ A surface water other than the receiving water; if							
in accordance with the instruction in Appendix VIII? (check one):	RGP in accordance with the instruction in Appendix VIII? (check one):	so, indicate waterbody:	☐ Other; if so, specify:						
■ Yes □ No	□ Yes □ No								

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	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						
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.	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	v discharge □ New source						
Outfall(s):	Outfall location(s): (Latitude, Longitude)						
Storm water catch basin	42 33' 30"N						
	71 07' 58"W						
Discharges enter the receiving water(s) via (check any that apply): □ Direct dis	scharge to the receiving water Indirect discharge, if so, specify:						
Water discharges to an on-site storm water catch basin which discharge	es 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 sew	er system:						
Has notification been provided to the owner of this system? (check one): ■ Ye	es 🗆 No						
Has the operator has received permission from the owner to use such system for obtaining permission:	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						
Has the operator attached a summary of any additional requirements the owner							
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	2 months ■ 12 months or more □ is an emergency discharge						
Has the operator attached a site plan in accordance with the instructions in D, a	bove? (check one): ■ Yes □ No						

2. Activity Category: (check all that apply)	3. Contamination Type Category: (check all that apply)					
	a. If Activity Categ	gory I or II: (check all that apply)				
	<ul> <li>□ A. Inorganics</li> <li>□ B. Non-Halogenated Volatile Organic Compounds</li> <li>■ C. Halogenated Volatile Organic Compounds</li> <li>□ D. Non-Halogenated Semi-Volatile Organic Compounds</li> <li>□ E. Halogenated Semi-Volatile Organic Compounds</li> <li>□ F. Fuels Parameters</li> </ul>					
☐ I – Petroleum-Related Site Remediation ■ II – Non-Petroleum-Related Site Remediation	b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)					
<ul> <li>□ III – Contaminated Site Dewatering</li> <li>□ IV – Dewatering of Pipelines and Tanks</li> <li>□ V – Aquifer Pump Testing</li> <li>□ VI – Well Development/Rehabilitation</li> <li>□ VII – Collection Structure Dewatering/Remediation</li> <li>□ VIII – Dredge-Related Dewatering</li> </ul>	☐ G. Sites with Known Contamination  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	☐ H. Sites with Unknown Contamination  d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply				

4.	Influent	and	Effluent	Characteristics
----	----------	-----	----------	-----------------

own Know or or believed believed prese	# of samples and a samples	Test method (#)	Detection limit (µg/l)	Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEI
	1	SM4500-1	1000	I 41000			
	1	SM4500-N	1000	1 (1000			
/			1000	<1000	0	Report mg/L	T
	6	E300	10000	420000	385000	Report µg/l	
,	1	M4500-Cl	100	<100	0	0.2 mg/L	213
1	1	SM2540D	4000	4	4	30 mg/L	
,	1	200.8	20	<20	O	206 μg/L	12418
	1	E200.9_As	2.0	<2	0	104 μg/L	194
	1	200.8	4.0	<4	0	10.2 μg/L	4.6354
	1	7196A	10		0	323 μg/L	1456.9
	1	M3500-Cr	10	<10	U	323 μg/L	221.9
	1	200.8	25	<25	0	242 μg/L	156.8
	1	E200.7	100	<100	0	5,000 μg/L	19403
	1	E200.9_Pb	2.0	<2	U	160 μg/L	49.83
ra	1	E245.1	0.20	<0.2	0	0.739 μg/L	17.58
·	1	E200.7	40	<40	0	1,450 µg/L	877.8
	1	E200.9_Se	5	<5	0	235.8 μg/L	97.0
	1	200.8	7	<7	0	35.1 μg/L	55.0
1	1	E200.7	20	23	23	420 μg/L	2914.0
	1	SM4500-G	10	<10	0	178 mg/L	100.9
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 200.8 1 E200.9_As 1 200.8 1 7196A 1 7196A 1 M3500-Cr 1 200.8 1 E200.7 1 E200.9_Pb 1 E245.1 1 E200.7 1 E200.9_Se 1 200.8	1 200.8 20 1 E200.9_As 2.0 1 200.8 4.0 1 7196A 10 1 M3500-Cr 10 1 200.8 25 1 E200.7 100 1 E200.9_Pb 2.0 1 E245.1 0.20 1 E200.7 40 1 E200.9_Se 5 1 200.8 7	1 200.8 20 <20 1 E200.9_As 2.0 <2 1 200.8 4.0 <4 1 7196A 10 <10 1 M3500-Cr 10 <10 1 200.8 25 <25 1 1 E200.7 100 <100 1 E200.9_Pb 2.0 <2 1 E245.1 0.20 <0.2 1 E200.7 40 <40 1 E200.9_Se 5 <5 1 200.8 7 <7 1 E200.7 20 23	1 200.8 20 <20 0 1 E200.9_As 2.0 <2 0 1 200.8 4.0 <4 0 1 7196A 10 <10 0 1 M3500-Cr 10 <10 0 1 200.8 25 <25 0 1 E200.7 100 <100 0 1 E200.9_Pb 2.0 <2 0 1 E205.9 Pb 2.0 <2 0 1 E200.7 40 <40 0 1 E200.9 Se 5 <5 0 1 E200.8 7 <7 0 1 E200.7 20 23 23 23	1 200.8 20 <20 0 206 μg/L  1 E200.9_As 2.0 <2 0 104 μg/L  1 200.8 4.0 <4 0 0 10.2 μg/L  1 7196A 10 <10 0 323 μg/L  1 M3500-Cr 10 <10 0 323 μg/L  1 200.8 25 <25 0 242 μg/L  1 E200.7 100 <100 0 5,000 μg/L  1 E200.9_Pb 2.0 <2 0 160 μg/L  1 E245.1 0.20 <0.2 0 0.739 μg/L  1 E200.7 40 <40 0 1,450 μg/L  1 E200.9_Se 5 <5 0 235.8 μg/L  1 200.8 7 <7 0 35.1 μg/L

	Known	Known				In	fluent	Effluent Li	mitations
Parameter	or believed absent	or or believed	# of samples	Test method (#)	Detection limit (µg/l)	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		1	6	SW8260C	2.0	<2	0	600 μg/L	
1,3 Dichlorobenzene		1	6	SW8260C	2.0	<2	0	320 μg/L	
1,4 Dichlorobenzene		1	6	SW8260C	2.0	<2	0	5.0 μg/L	
Total dichlorobenzene		1	6	SW8260C	2.0	<2	0	763 μg/L in NH	
1,1 Dichloroethane		1	6	SW8260C	2.0	<2	0	70 μg/L	
1,2 Dichloroethane	1		6	SW8260C	2.0	<2	0	5.0 μg/L	
1,1 Dichloroethylene		1	6	SW8260C	1.0	<1	0	3.2 μg/L	
Ethylene Dibromide	1		6	SW8260C	0.05	<0.05	U	0.05 μg/L	
Methylene Chloride	1		6	SW8260C	5.0	<5	0	4.6 μg/L	
1,1,1 Trichloroethane		1	6	SW8260C	2.0	<2	U	200 μg/L	
1,1,2 Trichloroethane	1		6	SW8260C	2.0	<2	0	5.0 μg/L	
Trichloroethylene		1	6	SW8260C	2.0	7.7	7.2	5.0 μg/L	
Tetrachloroethylene		1	6	SW8260C	2.0	150	93.7	5.0 μg/L	64.0
cis-1,2 Dichloroethylene		1	6	SW8260C	2.0	<2	0	70 μg/L	
Vinyl Chloride	1		6	SW8260C	2.0	<2	0	2.0 μg/L	
D. Non-Halogenated SVO	Cs								
Total Phthalates	1							190 μg/L	
Diethylhexyl phthalate	1							101 μg/L	
Total Group I PAHs	1							1.0 μg/L	
Benzo(a)anthracene	1								
Benzo(a)pyrene	1								10.000
Benzo(b)fluoranthene	1								
Benzo(k)fluoranthene	1							As Total PAHs	
Chrysene	1								
Dibenzo(a,h)anthracene	1								
Indeno(1,2,3-cd)pyrene	1								

Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit	Daily	Daily		
		- CONTRACTOR AND ADDRESS OF		(µg/l)	maximum (μg/l)	average (μg/l)	TBEL	WQBEL
✓							100 μg/L	
							20 μg/L	
✓							0.000064 μg/L	
1							1.0 μg/L	
1							5.0 mg/L	
1							Report mg/L	
1							70 μg/L	
1								
1							90 μg/L in MA 140 μg/L in NH	
e, hardness,	salinity, LC	6	SW8260B	2.0	7	4.7		
	1	6						
	1	6		Control of the second	-2			
	1	6	SM4500-H					
	1	1				13.3		
	1	1	E200.7	17	370	370		
<b> </b>								
1								
<b></b>								
+								
	\frac{1}{\sqrt{1}}	e, hardness, salinity, LC	e, hardness, salinity, LC <sub>50</sub> , addition	e, hardness, salinity, LC <sub>50</sub> , additional pollutan	e, hardness, salinity, LC <sub>50</sub> , additional pollutants present);  v 6 SW8260B 2.0  v 6 SW8260B 2.0  v 6 SW8260B 1.0  v 6 SW8260B 1.0	e, hardness, salinity, LC <sub>50</sub> , additional pollutants present); if so, specify:	e, hardness, salinity, LC <sub>50</sub> , additional pollutants present); if so, specify:    V   6   SW8260B   2.0   7   4.7     V   6   SW8260B   2.0   3   2.2     V   6   SW8260B   1.0   0   0     V   6   SM4500-H   6.9   6.7     V   6   SM4500-H   13.3   13.3	1.0 μg/L

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 inc vapors and discharge of treated groundwater to the storm water basin.	ludes air stripping, venting of low level
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.	10
Indicate the most limiting component: size of piping and transfer pump	40
Is use of a flow meter feasible? (check one): ■ Yes □ No, if so, provide justification:	10
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 NA
2. Provide the following information for each chemical/additive, using attachments, if necessary:
NA 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)).
1. If available, the vehicle's reported aquatic toxicity (NOVIDE and/or ECSO 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)  $\blacksquare$  the operator  $\square$  EPA  $\square$  Other; if so, specify:

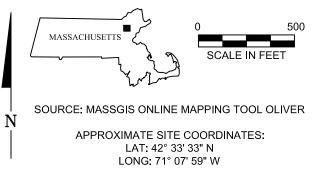
□ NMFS Criterion: A determination made by EPA is affirmed by the operator that the discharges and related activities will have "no effect" or are "not likely to adversely affect" any federally threatened or endangered listed species or critical habitat under the jurisdiction of NMFS and will not result 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):
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):
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 a that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and be no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are information, including the possibility of fine and imprisonment for knowing violations.	persons who manage elief, true, accurate, a	the system, or thos and complete. I hav	se ve
	A BMPP has been developed, implemented, and maintained for the case of the case of the second statement: previous permit for this site and have been updated for this general process.		ed under the	
	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 ■	
Sig		e: June 13, 2017		
Prir	t Name and Title: Lance Collins, Director - Properties			

# ATTACHMENT A

**Site Location Map** 



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

# **NOI LOCATION MAP**

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

CCC Environmental Services, LLC

FIGURE

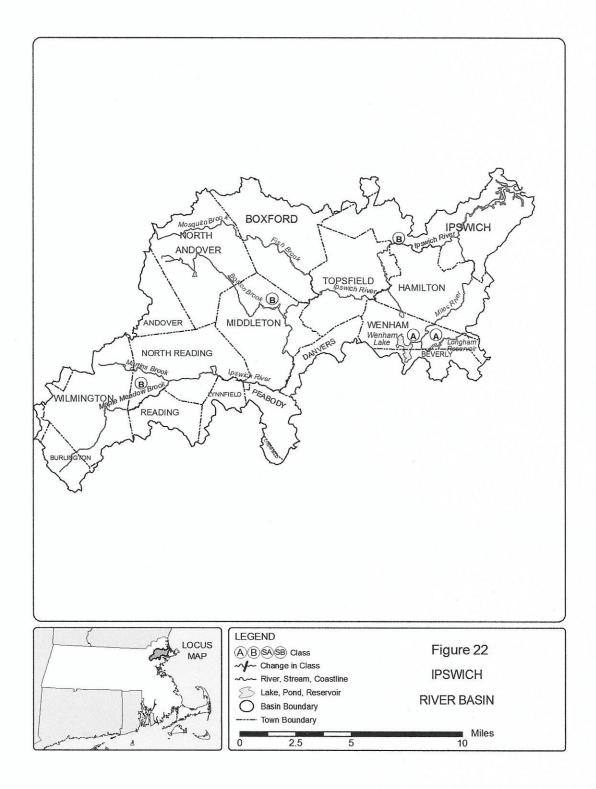
1

JOIL

# **ATTACHMENT B**

**Impaired Water** 

## 4.06: continued



4.06: continued

# TABLE 22 IPSWICH RIVER BASIN

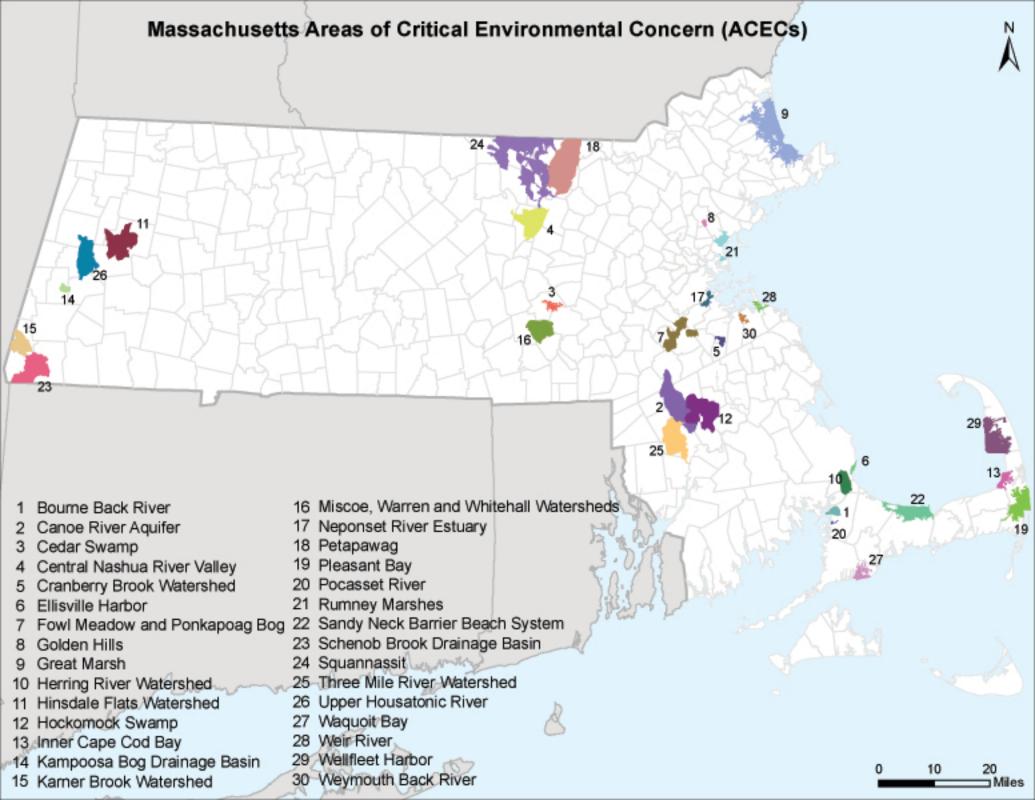
BOUNDARY	MILE POINT	CLASS	<b>QUALIFIERS</b>
Ipswich River			
Source to Salem Beverly Waterway Canal	41.1 - 16.4	В	Treated Water Supply Warm Water High Quality Water
Salem Beverly Waterway Canal to tidal portion	16.4 - 4.5	В	Warm Water High Quality Water
Tidal portion and tributaries thereto	4.5 - 0.0	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	2.796	MILES	Fecal Coliform	
		confluence with Ipswich River, Topsfield.			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 MA92-0		Source at confluence of Maple Meadow Brook	20.415	MILES	(Low flow alterations*)	
	and Lubbers Brook, Wilmington, to Salem Beverly Waterway Canal, Topsfield.				Mercury in Fish Tissue	
		Beveriy waterway Cariai, Topsileid.			Oxygen, Dissolved	
lpswich River	MA92-15	Salem Beverly Waterway Canal, Topsfield to	10.977 MILES		(Low flow alterations*)	
		Ipswich Dam (formerly known as Sylvania Dam),			Fishes Bioassessments	
		lpswich.			Mercury in Fish Tissue	1
					Oxygen, Dissolved	
Kimball Brook	MA92-21	Headwaters, west of Scott Hill, Ipswich to	2.241	MILES	Fecal Coliform	
		confluence with Ipswich River, Ipswich.			Oxygen, Dissolved	
Labor In Vain Creek	MA92-22	South of Argilla Road, Ipswich to confluence with			Fecal Coliform	
		lpswich River Estuary, Ipswich.		MILES	Oxygen, Dissolved	1
Lowe Pond	MA92034	Boxford	35.761	ACRES	(Non-Native Aquatic Plants*)	1
					Mercury in Fish Tissue	1
Martins Brook	MA92-08	Outlet of Martins Pond, North Reading to the confluence with the Ipswich River, North	4.561	561 MILES	Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	
		Reading.			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	8.892	MILES	Aquatic Macroinvertebrate Bioassessments	
		confluence with Ipswich River, Ipswich.			Fecal Coliform	
					Oxygen, Dissolved	
Norris Brook	MA92-11	Outlet of Elginwood Pond, Peabody to	1.541	MILES	Oxygen, Dissolved	
		confluence with Ipswich River, Danvers			Total Suspended Solids (TSS)	
		(Danvers/Middleton town line).			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

Final Massachusetts Year 2014 Integrated List of Waters December, 2015 (2) CN 450.1

\* TMDL not required (Non-pollutant)



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

Fowl Meadow and Ponkapoag Bog Neponset River Estuary

Milton

# ATTACHMENT C

Streamstats Report for 7Q10 Flow and Dilution Factor Calculation

## StreamStats Report

Region ID:

Workspace ID:

Clicked Point (Latitude, Longitude):

MA MA20170413083920941000 42.55471, -71.12851



asin 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	ó	dimensionless
BSLDEM250	Mean basin slope computed from 1:250K DEM	0.895	percent

Low-Flow Statistics Pa	rameters [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

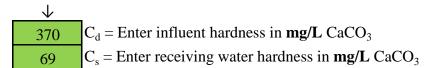
Enter values in the units specified

$\downarrow$	_
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



Enter values in the units specified



Enter receiving water concentrations in the units specified

$\downarrow$	-
6.05	pH in <b>Standard Units</b>
12.7	Temperature in °C
0.1	Ammonia in <b>mg/L</b>
69	Hardness in <b>mg/L</b> CaCO <sub>3</sub>
0	Salinity in <b>ppt</b>
0	Antimony in <b>µg/L</b>
0	Arsenic in μg/L
0	Cadmium in <b>µg/L</b>
0	Chromium III in µg/L
0	Chromium VI in <b>µg/L</b>
0	Copper in <b>µg/L</b>
0	Iron in <b>μg/L</b>
0	Lead in <b>µg/L</b>
0	Mercury in <b>µg/L</b>
0	Nickel in <b>µg/L</b>
0	Selenium in <b>µg/L</b>
0	Silver in <b>µg/L</b>
0.1	Zinc in µg/L

# Enter influent concentrations in the units specified

	ı
$\overline{}$	1
0	TRC in <b>µg/L</b>
0	Ammonia in <b>mg/L</b>
0	Antimony in μg/L
0	Arsenic in μg/L
0	Cadmium in <b>µg/L</b>
0	Chromium III in µg/L
0	Chromium VI in <b>µg/L</b>
0	Copper in <b>µg/L</b>
0	Iron in <b>μg/L</b>
0	Lead in <b>µg/L</b>
0	Mercury in <b>µg/L</b>
0	Nickel in <b>μg/L</b>
0	Selenium in µg/L
0	Silver in <b>μg/L</b>
23	Zinc in <b>µg/L</b>
0	Cyanide in <b>µg/L</b>
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 <b>µg/L</b>
0	Benzo(a)anthracene in <b>µg/L</b>
0	Benzo(a)pyrene in µg/L
0	Benzo(b)fluoranthene in µg/L
0	Benzo(k)fluoranthene in µg/L
0	Chrysene in <b>µg/L</b>
0	Dibenzo(a,h)anthracene in µg/L
0	Indeno(1,2,3-cd)pyrene in μg/L
0	Methyl-tert butyl ether in <b>μg/L</b>

## **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<sub>r</sub>; 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:  $Df = Q_R + Q_P$ 

 $Q_{P}$ 

 $Q_R = 7Q10$  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:

 $C_r = \underline{Q_d C_d + Q_s C_s}$ 

Q

 $C_r = Downstream hardness in mg/L$ 

 $Q_d$  = Discharge flow in MGD

C<sub>d</sub> = Discharge hardness in mg/L

 $Q_s$  = Upstream flow (7Q10) in MGD

C<sub>s</sub> = 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:

WQC in 
$$\mu$$
g/L = dissolved WQC in  $\mu$ g/L dissolved to total recoverable factor

# **B.** Calculate WQBEL:

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

$$C_d = \underline{Q_r C_r - Q_s C_s}$$

$$Q_d$$

 $C_r$  = Water quality criterion in  $\mu$ g/L

 $Q_d$  = Discharge flow in MGD

 $C_d = WQBEL \text{ in } \mu g/L$ 

 $Q_s$  = Upstream flow (7Q10) in MGD

 $C_s$  = Ustream (receiving water) concentration in  $\mu$ g/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  $\mu$ g/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

$$C_r = \underline{Q_d C_d + Q_s C_s}$$

 $C_r$  = Downstream concentration in  $\mu g/L$ 

 $Q_d$  = Discharge flow in MGD

 $C_d$  = Influent concentration in  $\mu$ g/L

 $Q_s = \text{Upstream flow (7Q10) in MGD}$ 

 $C_s = \text{Upstream}$  (receiving water) concentration in  $\mu g/L$ 

 $Q_r$  = 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.l 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.



tep 1, above, ilculated 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			μдЪ		μβД
		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	$\mu g/L$	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		49.83			
		μg/L		μg/L		
Mercury	0.739	μg/L	17.58	μg/L		
Nickel	1450	μg/L	877.8	μg/L		
Selenium	235.8	$\mu$ g/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		8		1.0		1.0
Total BTEX	100	μg/L				
Benzene	5.0	μg/L				
1,4 Dioxane	200	$\mu g/L$				
Acetone	7970	$\mu g/L$				
Phenol	1,080	$\mu g/L$	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 1,1 Dichloroethane	 70	μg/L				
1,2 Dichloroethane	5.0	μg/L μg/L				
1,1 Dichloroethylene	3.2	μg/L μg/L				
Ethylene Dibromide	0.05	μg/L 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	$\mu g/L$	64.0	μg/L		
cis-1,2 Dichloroethylene	70	$\mu$ g/L				
Vinyl Chloride	2.0	$\mu g/L$				
D. Non-Halogenated SVOCs						
Total Phthalates	190	$\mu$ g/L		μg/L		
Diethylhexyl phthalate	101	μg/L	42.7	μg/L		
Total Group I Polycyclic						
Aromatic Hydrocarbons	1.0	$\mu g/L$				
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

1.0	μg/L	0.0737	μg/L		μg/L
1.0	μg/L	0.0737	μg/L		μg/L
100	μg/L				
20	μg/L				
0.000064	μg/L			0.5	μg/L
1.0	μg/L				
5.0	mg/L				
Report	mg/L				
70	μg/L	388	μg/L		
120	μg/L				
90	$\mu g/L$				
	1.0 100 20 0.000064 1.0 5.0 Report 70 120	1.0 μg/L  100 μg/L  20 μg/L  0.000064 μg/L  1.0 μg/L  5.0 mg/L  Report mg/L  70 μg/L  120 μg/L	1.0 μg/L 0.0737  100 μg/L 20 μg/L  0.000064 μg/L 1.0 μg/L  5.0 mg/L  Report mg/L 70 μg/L 388 120 μg/L	1.0 μg/L 0.0737 μg/L  100 μg/L 20 μg/L  0.000064 μg/L 1.0 μg/L  5.0 mg/L  Report mg/L 70 μg/L 388 μg/L 120 μg/L	1.0 μg/L 0.0737 μg/L  100 μg/L  20 μg/L  0.000064 μg/L  1.0 μg/L  5.0 mg/L  Report mg/L  70 μg/L 388 μg/L  120 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



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). 1f 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.

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	

Lab Order:	1612041						
Client:	Charles Castelluccio Consulting, LLC	3, LLC		DAT	DATES REPORT		
Project:	YRC North Reading					!	
Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name		Analysis Date	
				Preparatory Test Name	Prep Date		TCLP Date
1612041-01A	Influent	12/22/2016 10:17:00 Alv	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	
3						RS9145	
				Standard Methods - pH, Water		12/23/2016	
					ļ	R59120	
1612041-03A	Midfluent	12/22/2016 10:15:00 AM		EPA 200.7 ICP METALS, TOTAL		9102/12/21	
			:	200 Series Prep: ICP/GFAA	9102/22/21	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 Merri

CHAIN-OF-CUSTODY RECORD

Merrinack, NH 03054	054					COSTODI RECORD	J.KD	NO: 66839		Office: (603) 424-2022 Fax: (603) 429-8496
Project No.:	Project Name	•	1						web: w	web: www.amrolabs.com
	YRC North Review		Froject State:	MA	Project	Project Manager:	<i>(</i>	Samplers (Signature):	e):	AMRO Project No.:
P.O.#;	Results Needed by:		┰		2	3	×	74		161204
	Standard Jum.						REOUESTED'AN	ANALYSES		Remarks
:						<u> </u>				
0001£#:	Seal intact? Yes No N/A		əzi		18	, '2)2\				
			3 26. úno		1970	05 4 W				
Sample ID.:	Date/Time Sampled	xi'	) ]o # [		* # ¢	UI 12				·
		itsM	gioT	moD Grab		KT —				
いいいから	10/1/2/21	¥	3	ጳ			  -  -			
かけこれが	9	4	٧.	X	7		 		-	
MIGHINENT	12/22 16 1015	¥	)\	X	2		-		-	
								-	-	
4				+	+				-	
				-	+	+				
				+	+	+				
				+		-				
					<del> </del>	-	-		_	
rreservative: CI-HCI, MeOH, N-HN03, S-H2SO4,	I-HN03, S-H2SO4, Na	, Na-NaOH, O- Other	Other							
The Mer Cast Victo	Cama. Con	RIORITY TUI	RNAROUND R Samples fo	TIME AU	PRIORITY TURNAROUND TIME AUTHORIZATION Before submitting samples for execution TAT	METALS	☐ SRA	13 PP	AL 14 MCP	Į.
		have a coded AUTHORIZATION NUMBER	UTHORIZA	TTON NE	MBER	Method:	6010	200.7 Other Metals:		]
PHONE #: 978-505-1123	FAX#:	AUTHORIZATION No.:	FION No.:		BY:	Dissolved Me	Dissolved Metals Field Filtered?		ON [	
E-mail;						MCP Presum	MCP Presumptive Certainty Required?		MCP Methods Needed:	Required Reporting Limits:
Relinguished By		ır	me		, s	Received Rv	7 7 01		X ON	
the sea may	7	71/22/10	7375		N. Vaure			level needed:	level needed:	S-2 GW-2 S-3 GW-3
Picase print clearly, legibly and completely. Samples can not	pletely. Samples can not	123/16	1700		\ \ \		1	EDD required:	ired:	] ;;
be logged in and the turnaround time clock will not start until any ambiguities are resolved.  White: Lab Cony	e clock will not start until	<u> </u>	received on the following day.		t:UV noop will b z day.	e tracked and billed	sa	AMNO policy requires notification in writing to the laboratory in cases where the samples were collected from binks	n in writing to samples were	KNOWN SITE CONTAMINATION:
	I GIIOW: CITEMI COPY					COURT		on mighty contaminated sites,	d siles.	701

Merrimack, NH 03054

Cur.			•	Weilinack, 14H 03054
Client: Chartes Castellieccio	AMR	O ID:	1675	(603) 424-2022
project Name: \Pr No art Paradition	Date			042
Ship via: (circle one) Fed Ex., UPS AMRO Couries	Date i			22//6
Hand Del., Other Courier, Other:	2010	Duc.	-12/	36/16
Items to be Checked Upon Receipt				
A stray Sampler seed in the transport	Yes	No	NA	Comment
Army Samples received in individual plastic bags?			121	Comments
2. Custody Seals present?			12-1-	- 1
3. Custody Seals Intact?			1	
4. Air Bill included in folder if received?	<u> </u>	<del></del>	<del>    -</del>	
5. Is COC included with samples?			+	
6. Is COC signed and dated by client?	<u> </u>	-}	<del>  </del> -	
7. Laboratory receipt temperature.	<u> </u>	<del> </del>	╀╾╼┼╾	
Dampies rec. With ice vince marks maiskage.	<del> </del>	<del></del> -		
3. Were samples received the same day they were sampled?		<del></del>		
Is client temperature = or <6°C?	I V			
If no obtain authorization from the client for the analyses.	V		$\Box \Box \top$	
E TIAMP Authorization P				
Is the COC filled out correctly and completely?				
O. Does the info on the COC match the samples?	V			
Were samples are within that it is a samples?	V			
1. Were samples rec. within holding time?	V			
2. Were all samples properly labeled?	V			9
3. Were all samples properly preserved?	V	<del>                                     </del>	<del></del>	
Were proper sample containers used?		<del>                                     </del>		
5. Were all samples received intact? (none broken or leaking)		<del>                                     </del>	<del> -</del> -	
o. Were VOA vials rec. with no air bubbles?		<del>                                     </del>	<del></del>	
7. Were the sample volumes sufficient for requested analysis?	7	<del>  </del>		
were all samples received?	V-			
P. VPH and VOA Soils only:				
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container	、 <b></b>		<b>√</b>	W 1
Sampling Method VOA (circle one): M=Methanol, SR=Sodium Rigulfota E=E=C	) !a.a. D. D. II.			
· · · · · · · · · · · · · · · · · · ·	ore, B=Bulk,	D= DI wa	ter	
Does preservative cover the soil?	<del> </del>			
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 MIST be about				
Was dry weight aliquot provided?	Irom clien	<u>t                                    </u>		
Subcontracted Samples	the VOA In	ASAP.		
observation descriptions:	T		1/1	
What samples sent:			<del></del>	
Where sent:				
Date:	<del></del>			
Analysis:	<del> </del>			
TAT:				
Information entered into:	+			
Internal Tracking Log?				
Dry Weight Log?	IV.			
Client Log?		1	/	
Composite Log?		IV	_	
		1		
Filtration Log?	_ <del></del>		<del></del> -	
ived By: 1/5 Date: 12/22/16 Logged in By: 12/		٧ ا م	1	

Please Circle if: Sample= Soil

pH Checked By:

AMRO ID: 16/2 0 4/

mple= Waste										
					[	List		1		Fina
		102	i .			Preserv.	1	Volume	Final	adjusted
53		Volume		Initial	Acceptable?	Added by	Solution ID#	Preservative	adjusted	(after to
Sample 1D	Analysis		Listed	pH*	Y or N	AMRO	of Preserv.	Added	pH	24 hou
-01A.02A	VOC	2x40	HCl	-						
- CIB 02P	DH.CLL	J. 1x5		7	y				<del>                                     </del>	<del> </del>
C3 A	Medals	1x500	HNC	22	w				<del> </del>	<del> </del>
D 7 FT	1-11/100/	1 7 200	11117	1	y		<del> </del>		<del> </del>	
				<del> </del>						
								<u> </u>	<u></u>	
							<u> </u>			
								-		
									<b>_</b>	
									<del>                                     </del>	<del> </del>
		72.5								
				<u> </u>						
					-	-				
								· · ·		
				<del>                                     </del>						
				<del>  </del>						
	-									
		ſ								<u> </u>
						39-				
- 1				ĺ		List	1			
]		1			ľ	Preserv.	J	Volume	Final	
		Volume	Preserv.	Initial	Acceptable?	Added by	Solution 1D#	Preservative	adjusted	Acceptab
Sample ID	Analysis	Sample	Listed	TRC	Y or N	AMRO	of Preserv.	Added	TRC	Y or N
										<del> </del>
if the laborator	y preserve:	s the drin	king water	sample i	(s) for EPA Men	thod 200 ser	les, sample (c) e	hould be held	at lacet	
ours prior to a	nalusis ar	24 hours	for water c	amnia (e		200 361	ies, sumpte (s) s	<i>७६ घराप</i>	ut teast	
ours prior to a	muyaa or .	4 T HUMIS J	D1 15 H161 30	umpie (3,	<b>/•</b>					

Date:

\_\_\_\_pH adj.(16 or 24hrs)By:\_\_\_

Date:

Date: 10-Jan-17

CLIENT:

Charles Castelluccio Consulting, LLC

Project:

YRC North Reading

Lab Order:

1612041

CASE NARRATIVE

### 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.

		Ma	ssDEP Analytic	al Protocol Certifi	cation Form	
Lab	oratory Na	ame: AMRO Enviro	onmental Lab. Corp	).	Project #:	
Proj	ect Locati	ion: JR C N	orth Reac	ding	RTN:	
This	Form pro	ovides certificatio		ng ďata set: ilst Lat	poratory Sample ID Nu	mber(s):
Matri	ices: KGi	roundwater/Surface	e Water □ Soil/Se	diment 🛭 Drinking \	Water ☐ Air ☐ Other:	
CAN	1 Protoc	ol (check all that a	pply below):			
	VOC 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 🗓
	SVOC 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
	Metals III A □	6020 Metais CAM iii D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchiorate CAM VIII B	
4	<i>Affirmati</i> v	e Responses to (	Questions A throu	igh F are required t	or "Presumptive Cert	aiņty" status
A	Custody,	samples received properly preserve Vanalyzed within me	ed (including temp	istent with those des perature) in the fie	cribed on the Chain-of- id or laboratory, and	Yes 🖸 No
В		e analytical method( tocol(s) followed?	(s) and all associate	ed QC requirements s	specified in the selected	Yes II No
С				cal response actions s formance standard no	specified in the selected n-conformances?	Yes 🗆 No
D		Assurance and Qu			specified in CAM VII A, ition and Reporting of	Yes I No
Ε	a. VPH, modificat	ion(s)? (Refer to the	ethods only: Was individual method(s)	each method condu ) for a list of significant ete analyte list reported		D Yes D No
F	Were ail and evail	appilcable CAM pro lated in a laboratory	ntocol QC and performantative (including	rmance standard non- ail "No" responses to (	conformances Identified Questions A through E)?	Yes 🗆 No
Res	sponses t	to Questions G, H	l and i below are i	required for "Presu	mptive Certainty" stat	lus
G	Were the protocol(s		below aii CAM repo	orting limits specified in	the selected CAM	Yes Ii No <sup>1</sup>
<u>Da</u> re	eta User No presentativ	te: Data that achieve eness requirements	"Presumptive Certa described in 310 CMF	inty" status may not ne 9 40. 1056 (2)(k) and W5	cessarily meet the data us. SC-07-350.	ability and
Н	Were all	QC performance sta	ndards specified in t	he CAM protocoi(s) ac	hieved?	☐ Yes × No¹
i	Were res	ults reported for the	complete analyte list	specified in the select	ed CAM protocol(s)?	Yes I3 No1
¹All r	negative re	sponses must be a	ddressed in an atta	ched laboratory narra	ntive.	
respor	ısible for o	ed, attest under the btaining the informa ite and complete.	pains and penaitle tion, the material col	s of perjury that, bas ntained in this analytic	sed upon my personal in al report is, to the best of	quiry of those my knowledge
Sign	ature:	h,94		Positio	n: Vice President	
Print	ed Name	: Nancy Stewart		8 <b>Date:</b> _	1-11-17	

### DATA COMMENT PAGE

## **Organic Data Qualifiers**

- ND Indicates compound was analyzed for, but not detected at or above the reporting limit.
- 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.

Date: 05-Jan-17

**CLIENT:** 

Charles Castelluccio Consulting, LLC

Lab Order:

Diethyl ether

1612041

Client Sample ID: Influent

Collection Date: 12/22/2016 10:17:00 AM

12/27/2016 5:26:00 PM

Project:

YRC North Reading

Matrix: AQUEOUS

110011011111111111111111111111111111111	B			1414	min. van	2003
Lab ID: 1612041-01A						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUND	S 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
Senzene	ND	1.0		µg/L	1	12/27/2016 5:26:00 PN
Bromobenzene	ND	2.0		µg/L	1	12/27/2016 5:26:00 PM
Bromochioromethane	ND	2.0		µg/L	1	12/27/2016 5:26:00 PN
Bromodichioromethane	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	DN	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-chioropropane	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-Dichiorobenzene	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
Ph.1 - 11 - 1 - 11					4	40/07/0040 E-50-00 DM

5.0

µg/L

ND

Date: 05-Jan-17

**CLIENT:** 

Charles Castelluccio Consulting, LLC

1612041

Client Sample ID: Influent

Lab Order:

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
Isopropyibenzene	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-Trichioropropane	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

Date: 05-Jan-17

**CLIENT:** 

Charles Castelluccio Consulting, LLC

Lab Order:

1612041

Client Sample ID: Effluent

1,3-Dichloropropane

2,2-Dichloropropane

1,1-Dichloropropene

Diethyl ether

cis-1,3-Dichloropropene

trans-1,3-Dichloropropene

Project: Lab ID: YRC North Reading

1612041-02A

Collection Date: 12/22/2016 10:25:00 AM

Matrix: AQUEOUS

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

2.0

2.0

2.0

1.0

1.0

5.0

µg/L

µg/L

µg/L

µg/L

µg/L

µg/L

1

1

1

1

1

1

12/27/2016 6:05:00 PM

ND

ND

ND

ND

ND

ND

Date: 05-Jan-17

**CLIENT:** 

Charles Castelluccio Consulting, LLC

Lab Order:

1612041

Client Sample ID: Effluent

Project:

YRC North Reading

Matrix: AQUEOUS

Collection Date: 12/22/2016 10:25:00 AM

La	h	ID:
	υ	w.

1612041-02A

Analyses	Result	RL Q	ual 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 PN
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 PN
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 PN
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 PN
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
л-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-Tetrachioroethane	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-Trichiorobenzene	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-Xylena	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

Date: 10-Jan-17

Method Blank QC SUMMARY REPORT Charles Castelluccio Consulting, LLC YRC North Reading 1612041 Work Order: CLIENT: Project:

Sample ID: mb-12/27/16	Batch ID: R59121	Test Cod	Test Code: SW8260C	Units: µg/L			Analysis D	ate: 12/27/2	Analysis Date: 12/27/2016 3:26:00 PM	Prep Date	Prep Date: 12/27/2016	
Client ID:		Run 1D:	V-3_161227A				SeqNo:	992377				
e de la companya de l	QC Sample	č	_	QC Spike Original Sample			;	_	Original Sample			
Analyte	Kesur	귛	Onits	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Ğ
Acetone	Q	9	μg/L								i	
Tertiary Amyl Methyl Ether	Q	2.0	µ9/L									
Benzene	Q	1.0	pg/									
Bromobenzene	QN	2.0	hg/L									
Bromochloromethane	Q	2.0	Jer T									
Bromodichloromethane	QN	2.0	hg/L									
Вготобот	2	2.0	hg/L									
Bromomethane	Q	2.0	1/gr									
sec-Butylbenzene	9	2.0	µg∕L									
n-Butylbenzene	S	2.0	µg/L									
tert-Butylbenzene	Q	2.0	J/6d									
Carbon disulfide	욮	2.0	µ9/L									
Carbon tetrachloride	Q	2.0	µg/L									
Chlorobenzene	Q	2.0	hg/L									
Dibromochloromethane	9	2.0	₽g∕L									
Chloroethane	9	2.0	µg/L									
Chloroform	QN	2.0	μg/L									
Chloromethane	Q	2.0	hg/L									
2-Chlorotoluene	Q	2.0	hg∕L									
4-Chlorotoluene	QN	2.0	μg/L									
1,2-Dibromo-3-chloropropane	9	5.0	Joh T									
1,2-Dibromoethane	Q	2.0	hg/L									
Dibromornethane	Q	2.0	₽Ø/L									
1,3-Dichlorobenzene	2	2.0	μg/L									
1,2-Dichlorobenzene	QN	2.0	µg/L									
Qualifiers: ND - Not Detected	ND - Not Detected at the Reporting Limit	S	- Spike Recove	- Spike Recovery outside accepted recovery limits	f recovery l	imits	B - Analyte	e detected in	B - Analyte detected in the associated Method Blank	od Blank		
J - Analyte detecta	J - Analyte detected below quantitation limits	~	- RPD outside	RPD outside accepted recovery limits	limits		NA - Not a	nnlicable wh	NA - Not annijeshte where I value as MD - MD	and the contract		
RI - Reporting 1	RI - Reporting I imit defined as the former on	normbrotion the	1-hometonicon	4.0	f		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	mhineann air	11 11 15 Can tall 11 11 11 11 11 11 11 11 11 11 11 11 1	Sulls occur		

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

CLIENT.	Charles Cartalluccio Concultica 110	011		
Wind Only		ر ا		OC SIIMMARY REPORT
Work Order:	[6] 2041			THE THE THIRD AND A
Project:	YRC North Reading			Method Blank
1,4-Dichlorobenzene	GN at	2.0	µ9/L	
Dichlorodifluoromethane	thane	5.0	µg/L	
1,1-Dichloroethane	QN	2.0	hg/L	
1,2-Dichloroethane	Q	2.0	µg/L	
1,1-Dichloroethene	QN	1.0	Hg/L	
cis-1,2-Dichloroethene	ON Pub	2.0	hg/L	
trans-1,2-Dichloroethene	thene ND	2.0	µ9/L	
1,2-Dichloropropane	QN Q	2.0	µg/L	
1,3-Dichloropropane	QN e	2.0	hg/L	
2,2-Dichloropropane	QN PD	2.0	µg/L	
1,1-Dichloropropene	ON e	2.0	hg/L	
cis-1,3-Dichloropropene	QN eued	1.0	µg/L	
trans-1,3-Dichloropropene	ON ND	1.0	hg/L	
Diethyl ether	QN	5.0	hg/L	
Diisopropyl ether	Q	2.0	µg/L	
1,4-Dioxane	QN	20	hg/L	
Ethyl Tertiary Butyl Ether	Ether ND	2.0	ng/L	
Ethylbenzene	Q	2.0	µg/L	
Hexachlorobutadiene	ON 9u	2.0	µg/L	
2-Hexanone	QN	9	µg/L	
Isopropylbenzene	QN	2.0	J/Brl	
4-Isopropyttoluene	QV	2.0	lpd/L	
2-Butanone	QN	<b>6</b>	hg/L	
4-Methyl-2-pentanone	nne ND	\$	µ9/L	
Methyl tert-butyl ether	ne <i>r</i> ND	2.0	µg/L	
Methylene chloride	QN	5.0	hg/L	
Naphthalene	QN	5.0	pg/L	
n-Propylbenzene	Q	2.0	μg/L	
Styrene	Q	2.0	µg/L	
1,1,1,2-Tetrachloroethane		2.0	µg/L	
1, 1, 2, 2-Tetrachloroethane	ethane	2.0	µg/L	
Qualifiers: ND-	ND - Not Detected at the Reporting Limit		S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
J.A	J - Analyte detected below quantitation limits		R - RPD outside accepted recovery limits	NA . Not applicable where I reference ND secults
				INA - MOL Applicable where J values of INLJ results occul

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

CLIENT:	Charles Castelluccio Consulting, LLC	Consulting,	LLC						10.00	
Work Order:	1612041									UC SUMMARY REPORT
Project:	YRC North Reading									Method Blank
Tetrachloroethene		Ş	2.0	Joh Tight						
Tetrahydrofuran		Q	9	µg/L						
Toluene		QN	2.0	µg/L						
1,2,4-Trichtorobenzene	ine	Q	2.0	µg/L						
1,2,3-Trichlorobenzene	eu:	Q	2.0	hg/L						
1,1,1-Trichloroethane	•	Q	2.0	hg∕L						
1,1,2-Trichloroethane	•	2	2.0	µg∕L						
Trichloroethene		Q	2.0	ng/L						
Trichlorofluoromethane	ine	Q	2.0	hg/L						
1,2,3-Trichloropropane	<b>19</b>	Q	2.0	ug/L						
1,2,4-Trimethylbenzene	ane	9	2.0	hg/L						
1,3,5-Trimethylbenzene	ane ane	2	2.0	ng/L						
Vinyl chloride		ð	2.0	por						
o-Xylene		Q	2.0	rg/L						
m,p-Xylene		Q	2.0	µg/L						
Surr. Dibromofluoromethane		25.61	2.0	µg∕L	25	0	102		130	c
Surr. 1,2-Dichloroethane-d4		29.26	2.0	µ∂/L	25	0	17		230	
Surr: Toluene-d8	.7	26.72	2.0	µ9∕L	52	0	20		30	, ,
Surr: 4-Bromofluorobenzene		24.07	2.0	rg/L	25	0	96.3	. 2	130	· •
									}	•

•		NA - Not enalisable mineral factors at the
RL - Reporting Limit defined as the lowest concentration	is the lowest concentration the Jahonston, one personal and second of	
	the larger attention of the second attention attention attention of the second attention atten	

•		3 5 5	•
	Shoretorio		
•	nivironmente		

Parco   Parc	CLIENT:		Charles Castelluccio Consulting, LLC	TTC							QC SUMMARY REPORT	MARY	REPO	RT
Part   December   De	Project:		orth Reading								Lat	oratory (	Control Sp	pike
Comparison   Com						П								П
Complete	Sample ID: ICs	-12/27/16	Batch ID: R59121	Test Cod	e: SW8260C		_		Analysis D.	ate: 12/27/24	016 1:25:00 PM	Prep Date	12/27/2016	
According the Result   According Name	Client ID:			Run ID:	V-3_16122	A2			SeqNo:	992379				
Second   Result   RL   Unids			QC Sample		9	2C Spike Origin	al Sample			J	Original Sample			
53.5         10         µg/L         40         0         134           Amyl Metnyl Ether         20.64         2.0         µg/L         20         0         103           nonzene         17.31         2.0         µg/L         20         0         100           notromethane         17.31         2.0         µg/L         20         0         108           m         17.39         2.0         µg/L         20         0         108           ethane         21.63         2.0         µg/L         20         0         108           increne         15.5         2.0         µg/L         20         0         77.5           thenzene         15.69         2.0         µg/L         20         0         77.5           thenzene         15.69         2.0         µg/L         20         0         77.5           thenzene         15.69         2.0         µg/L         20         0         77.5           hance         15.89         2.0         µg/L         20         0         76.7           hance         15.33         5.0         µg/L         20         0         76.7 <t< th=""><th>Analyte</th><th></th><th>Result</th><th>귙</th><th>Units</th><th>Amount</th><th>Result</th><th>%REC</th><th>LowLimit</th><th></th><th>or MS Result</th><th>%RPD</th><th>RPDLimit</th><th>Ö</th></t<>	Analyte		Result	귙	Units	Amount	Result	%REC	LowLimit		or MS Result	%RPD	RPDLimit	Ö
Ny Ether         20.64         20         µg/L         20         0         103           ane         20.09         1.0         µg/L         20         0         100           17.31         2.0         µg/L         20         0         93.1           thane         18.62         2.0         µg/L         20         0         93.1           thane         17.39         2.0         µg/L         20         0         108           17.39         2.0         µg/L         20         0         77.5           15.36         2.0         µg/L         20         0         77.5           15.36         2.0         µg/L         20         0         77.5           de         19.4         2.0         µg/L         20         0         77.5           thane         16.49         2.0         µg/L         20         0         76.7           thane         16.49         2.0         µg/L         20         0         76.7           thane         16.49         2.0         µg/L         20         0         76.7           thane         16.53         2.0         µg/L         20 <td>Acetone</td> <td></td> <td>53.5</td> <td>10</td> <td>µg∕L</td> <td>4</td> <td>0</td> <td><u>\$</u></td> <td>4</td> <td>160</td> <td>0</td> <td></td> <td></td> <td></td>	Acetone		53.5	10	µg∕L	4	0	<u>\$</u>	4	160	0			
20.09 1.0 μg/L 20 0 100 17.31 2.0 μg/L 20 0 100 17.31 2.0 μg/L 20 0 89.6  hane 18.62 2.0 μg/L 20 0 93.1 17.39 2.0 μg/L 20 0 108 17.39 2.0 μg/L 20 0 77.5 15.36 2.0 μg/L 20 0 87.6 17.01 2.0 μg/L 20 0 86.5 15.33 2.0 μg/L 20 0 86.5 15.33 2.0 μg/L 20 0 86.5 15.34 2.0 μg/L 20 0 86.5 15.35 2.0 μg/L 20 0 86.5 15.35 2.0 μg/L 20 0 86.5 15.30 2.0 μg/L 20 0 86.5 15.31 2.0 μg/L 20 0 86.5 15.32 2.0 μg/L 20 0 86.5 15.33 2.0 μg/L 20 0 86.5 16.33 2.0 μg/L 20 0 86.5 16.33 2.0 μg/L 20 0 86.5 16.43 2.0 μg/L 20 0 86.5 16.43 2.0 μg/L 20 0 86.5 16.41 20 μg/L 20 0 86.5	Tertiary Amyl N	Aethyl Ether	20.64	2.0	µg/L	20	0	103	2	130	0			
ane 18.62 2.0 μg/L 20 0 83.6 hg/l hane 21.56 2.0 μg/L 20 0 93.1 hg/l 20 108 17.39 2.0 μg/L 20 0 0 93.1 17.39 2.0 μg/L 20 0 0 108 17.39 2.0 μg/L 20 0 0 108 14.03 2.0 μg/L 20 0 0 70.2 15.5 2.0 μg/L 20 0 0 77.5 15.69 2.0 μg/L 20 0 78.5 15.33 2.0 μg/L 20 0 0 76.7 16.6 2.0 μg/L 20 0 0 82.5 15.33 2.0 μg/L 20 0 0 82.5 15.33 2.0 μg/L 20 0 0 82.5 15.33 2.0 μg/L 20 0 0 82.5 16.6 20 μg/L 20 0 0 83.1 17.26 2.0 μg/L 20 0 0 86.3 17.26 16.6 2.0 μg/L 20 0 0 86.3 17.26 16.10 20 μg/L 20 0 0 86.3 17.26 16.10 1	Benzene		20.09	1.0	µg∕L	20	0	100	92	130	0			
ane 18.62 2.0 μg/L 20 0 93.1 hg/L bhane 21.56 2.0 μg/L 20 0 0 108 17.39 2.0 μg/L 20 0 0 108 17.39 2.0 μg/L 20 0 0 108 14.03 2.0 μg/L 20 0 0 108 15.5 2.0 μg/L 20 0 0 77.5 15.89 2.0 μg/L 20 0 77.5 17.5 15.89 2.0 μg/L 20 0 0 78.5 hg/L 20 0 0 108 17.5 15.30 2.0 μg/L 20 0 0 78.5 hg/L 20 19.4 20 0 108 17.5 15.33 5.0 μg/L 20 0 0 82.5 hg/L 20 19.4 20 0 108 17.5 15.33 5.0 μg/L 20 0 0 82.5 hg/L 20 19.4 20 0 108 17.5 hg/L 20 0 0 109 17.5 hg/L 20 19.6 hg/L 20 19.	Bromobenzene		17.91	2.0	µg∕L	29	0	89.6	2	130	0			
thane 21.56 2.0 μg/L 20 0 108  17.39 2.0 μg/L 20 0 108  21.63 2.0 μg/L 20 0 108  14.03 2.0 μg/L 20 0 77.5  15.56 2.0 μg/L 20 0 77.5  15.69 2.0 μg/L 20 0 77.5  15.69 2.0 μg/L 20 0 77.5  thane 16.49 2.0 μg/L 20 0 82.5  thane 20.01 2.0 μg/L 20 0 108  the 10.05 20 μg/L 20 0 108  the 10.05 20 μg/L 20 0 108  the 10.05 20 μg/L 20 0 108  the 16.11 2.0 μg/L 20 0 0 83.5  thane 16.11 2.0 μg/L 20 0 0 83.5  thanyte detected below quantitation limits  R-RPD outside accepted recovery limits	Bromochlorom	ethane	18.62	2.0	µg/L	70	0	93.1	2	130	0			
17.39 2.0 lg/L 20 0 87 21.63 2.0 lg/L 20 0 108 14.03 2.0 lg/L 20 0 107.2 15.5 2.0 lg/L 20 0 77.5 15.36 2.0 lg/L 20 0 77.5 15.69 2.0 lg/L 20 0 77.5 15.89 2.0 lg/L 20 0 78.5 15.33 5.0 lg/L 20 0 82.5 15.33 5.0 lg/L 20 0 82.5 15.33 5.0 lg/L 20 0 82.5 15.33 5.0 lg/L 20 0 88.3 17.26 2.0 lg/L 20 0 88.3 17.26 2.0 lg/L 20 0 88.3 17.26 2.0 lg/L 20 0 108 16.6 2.0 lg/L 20 0 108 16.95 2.0 lg/L 20 0 88.3 17.26 2.0 lg/L 20 0 88.3 16.90 lg/L 20 0 88.3 17.26 2.0 lg/L 20 0 88.3 16.95 2.0 lg/L 20 0 88.3	Bromodichloros	теthапе	21.56	2.0	µg/L	20	0	108	2	130	0			
21.63 2.0 µg/L 20 0 108 14.03 2.0 µg/L 20 0 70.2 15.5 2.0 µg/L 20 0 77.5 15.69 2.0 µg/L 20 0 77.5  thane 15.49 2.0 µg/L 20 0 78.5  thane 16.49 2.0 µg/L 20 0 85 15.33 5.0 µg/L 20 0 85 16.53 5.0 µg/L 20 0 86 10.89 2.0 µg/L 20 0 88 16.53 5.0 µg/L 20 0 88 17.26 2.0 µg/L 20 0 88 16.5 2.0 µg/L 20 0 88 16.5 2.0 µg/L 20 0 89 16.6 2.0 µg/L 20 0 88 16.5 20 µg/L 20 0 88	Bromoform		17.39	2.0	µg/L	20	0	87	2	130	0			
14.03 2.0 µg/L 20 0 70.2 15.5 2.0 µg/L 20 0 77.5 15.36 2.0 µg/L 20 0 77.5 15.69 2.0 µg/L 20 0 76.8 15.49 2.0 µg/L 20 0 78.5  thane 16.49 2.0 µg/L 20 0 85 15.33 5.0 µg/L 20 0 85 15.33 5.0 µg/L 20 0 86.3  oropropane 20.5 10.9 µg/L 20 0 86.3  oropropane 20.5 10.9 µg/L 20 0 86.3  17.26 20 µg/L 20 0 10.8  16.5 20 µg/L 20 0 86.3  oropropane 20.5 5.0 µg/L 20 0 86.3  17.26 20 µg/L 20 0 86.3  oropropane 20.5 5.0 µg/L 20 0 88.3  17.26 20 µg/L 20 0 88.3  oropropane 20.5 5.0 µg/L 20 0 88.3  17.26 20 µg/L 20 0 88.3  oropropane 16.95 2.0 µg/L 20 0 88.3  oropropane 20.5 5.0 µg/L 20 0 88.3  oropropane 16.95 2.0 µg/L 20 0 88.3	Bromomethane	gs.	21.63	2.0	μg/L	20	0	108	4	160	•			
15.5 2.0 µg/L 20 0 77.5 15.69 2.0 µg/L 20 0 76.8 15.69 2.0 µg/L 20 0 78.5 19.4 2.0 µg/L 20 0 78.5 17.01 2.0 µg/L 20 0 82.5 15.33 5.0 µg/L 20 0 82.5 15.33 5.0 µg/L 20 0 82.5 15.33 5.0 µg/L 20 0 82.5 16.5 2.0 µg/L 20 0 86.3 20.0 µg/L 20 0 86.3 20.0 µg/L 20 0 99.4 16.6 2.0 µg/L 20 0 100 19.05 20.5 µg/L 20 0 86.3 20.01 µg/L 20 0 100 19.05 20.5 µg/L 20 0 86.3 16.11 2.0 µg/L 20 0 89.6 16.95 2.0 µg/L 20 0 89.6 16.95 2.0 µg/L 20 0 89.6 16.95 2.0 µg/L 20 0 89.8	sec-Butylbenze	зпе	14.03	2.0	µg/L	20	0	70.2	2	130	0			
15.69 2.0 µg/L 20 0 76.8 15.69 2.0 µg/L 20 0 78.5 19.4 2.0 µg/L 20 0 78.5 17.01 2.0 µg/L 20 0 85.5 15.33 5.0 µg/L 20 0 76.7 19.89 2.0 µg/L 20 0 82.5 16.6 2.0 µg/L 20 0 10 89.4 16.6 2.0 µg/L 20 0 10 86.3 20.01 2.0 µg/L 20 0 10 86.3 20.01 2.0 µg/L 20 0 10 86.3 20.01 2.0 µg/L 20 0 86.3 20.01 2.0 µg/L 20 0 103 19.05 2.0 µg/L 20 0 86.3 16.95 2.0 µg/L 20 0 86.3 16.95 2.0 µg/L 20 0 86.5 16.95 2.0 µg/L 20 0 80.6 16.95 20 µg/L 20 0 80.6	n-Butylbenzent	ф	15.5	2.0	µg/L	20	0	77.5	70	130	0			
15.69 2.0 µg/L 20 0 78.5  19.4 2.0 µg/L 20 0 78.5  17.01 2.0 µg/L 20 0 85.5  15.33 5.0 µg/L 20 0 82.5  19.89 2.0 µg/L 20 0 82.5  16 2.0 µg/L 20 0 86.3  20 µg/L 20 0 10 86.3  20 µg/L 20 0 10 86.3  20.01 2.0 µg/L 20 0 86.3  20.01 2.0 µg/L 20 0 86.3  20.01 20 µg/L 20 0 86.3  Not Detected at the Reporting Limit S - Spike Recovery limits  R-RPD outside accepted recovery limits	tert-Butylbenze	a.	15.36	2.0	µg∕L	20	0	76.8	2	130	0			
19.4         2.0         μg/L         20         0         97           17.01         2.0         μg/L         20         0         82.5           15.33         5.0         μg/L         20         0         76.7           19.89         2.0         μg/L         20         0         76.7           19.89         2.0         μg/L         20         0         82.5           16.6         2.0         μg/L         20         0         83.3           17.26         2.0         μg/L         20         0         86.3           propane         20.5         μg/L         20         0         103           19.05         2.0         μg/L         20         0         103           19.05         2.0         μg/L         20         0         95.2           16.11         2.0         μg/L         20         0         86.6           16.95         2.0         μg/L         20         0         86.6           16.95         2.0         μg/L         20         0         86.6           16.95         2.0         μg/L         20         0         86.8	Carbon disulfid	9	15.69	2.0	µg∕L	8	0	78.5	2	130	0			
thane         17.01         2.0         μg/L         20         0         85           ethane         16.49         2.0         μg/L         20         0         82.5           15.33         5.0         μg/L         20         0         76.7           19.89         2.0         μg/L         20         0         76.7           16.6         2.0         μg/L         20         0         83.4           hloropropane         20.5         2.0         μg/L         20         0         86.3           nne         20.01         2.0         μg/L         20         0         103           e         19.05         2.0         μg/L         20         0         103           zene         16.11         2.0         μg/L         20         0         86.5           zene         16.95         2.0         μg/L         20         0         86.6           zene         16.95         2.0         μg/L         20         0         86.6           zene         16.95         2.0         μg/L         20         0         86.8           Analyte detected below quantitation limits         R - RPD out	Carbon tetrach	loride	19.4	2.0	hg/L	20	0	97	20	130	0			
tethane         16.49         2.0         μg/L         20         0         82.5           15.33         5.0         μg/L         20         0         76.7           19.89         2.0         μg/L         20         0         99.4           16.6         2.0         μg/L         20         0         86.3           hloropropane         20.5         5.0         μg/L         20         0         86.3           ine         20.01         2.0         μg/L         20         0         103           e         19.05         2.0         μg/L         20         0         103           cene         16.11         2.0         μg/L         20         0         86.6           cene         16.95         2.0         μg/L         20         0         86.6           D- Not Detected at the Reporting Limit         3- Spike Recovery outside accepted recovery limits         8-8.8           - Analyte detected below quantitation limits         R- RPD outside accepted recovery limits	Chlorobenzene		17.01	2.0	hg/L	8	0	82	70	130	0			
15.33       5.0       μg/L       20       0       76.7         19.89       2.0       μg/L       20       0       99.4         16.6       2.0       μg/L       20       0       86.3         hloropropane       20.5       2.0       μg/L       20       0       86.3         nne       20.01       2.0       μg/L       20       0       103         e       19.05       2.0       μg/L       20       0       100         cene       16.11       2.0       μg/L       20       0       84.8         ID - Not Detected at the Reporting Limit       S - Spike Recovery outside accepted recovery limits         - Analyte detected below quantitation limits       R - RPD outside accepted recovery limits	Dibromochloro	теthале	16.49	2.0	µ9∕L	20	0	82.5	20	130	0			
19.89       2.0       μg/L       20       0       99.4         16       2.0       μg/L       20       0       80         16.6       2.0       μg/L       20       0       86.3         hloropropane       20.5       5.0       μg/L       20       0       103         e       20.01       2.0       μg/L       20       0       100         e       19.05       2.0       μg/L       20       0       95.2         zene       16.11       2.0       μg/L       20       0       84.8         ID - Not Detected at the Reporting Limit       S - Spike Recovery outside accepted recovery limits         - Analyte detected below quantitation limits       R - RPD outside accepted recovery limits	Chloroethane		15.33	5.0	µ9∕L	20	0	7.97	2	130	0			
16         2.0         μg/L         20         0         80           16.6         2.0         μg/L         20         0         83           hloropropane         20.5         5.0         μg/L         20         0         163           nne         20.01         2.0         μg/L         20         0         103           e         19.05         2.0         μg/L         20         0         95.2           zene         16.11         2.0         μg/L         20         0         80.6           zene         16.95         2.0         μg/L         20         0         84.8           ID - Not Detected at the Reporting Limit         S - Spike Recovery outside accepted recovery limits    Analyte detected below quantitation limits  R - RPD outside accepted recovery limits	Chloroform		19.89	2.0	µ9∕L	20	0	99.4	2	130	0			
16.6         2.0         μg/L         20         6         83           hloropropane         20.5         5.0         μg/L         20         0         86.3           nine         20.01         2.0         μg/L         20         0         103           e         19.05         2.0         μg/L         20         0         95.2           zene         16.11         2.0         μg/L         20         0         80.6           zene         16.95         2.0         μg/L         20         0         84.8           ID - Not Detected at the Reporting Limit         S - Spike Recovery outside accepted recovery limits           - Analyte detected below quantitation limits         R - RPD outside accepted recovery limits	Chloromethane	AL	16	2.0	hg∕L	20	0	88	4	160	0			
17.26         2.0         μg/L         20         0         86.3           Ine         20.5         5.0         μg/L         20         0         103           e         19.05         2.0         μg/L         20         0         100           cene         16.11         2.0         μg/L         20         0         80.6           cene         16.95         2.0         μg/L         20         0         84.8           ID - Not Detected at the Reporting Limit         S - Spike Recovery outside accepted recovery limits           - Analyte detected below quantitation limits         R - RPD outside accepted recovery limits	2-Chlorotoluen	<b>6</b>	16.6	2.0	µg/L	20	0	83	2	130	0			
loropropane 20.5 5.0 µg/L 20 0 103  le 20.01 2.0 µg/L 20 0 100  19.05 2.0 µg/L 20 0 95.2  ane 16.11 2.0 µg/L 20 0 80.6  ane 16.35 2.0 µg/L 20 0 84.8  O Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits  R - RPD outside accepted recovery limits	4-Chlorotofuen	ø.	17.26	2.0	μg/L	20	0	86.3	20	130	0			
19.05         2.0         μg/L         20         0         100           19.05         2.0         μg/L         20         0         95.2           ane         16.11         2.0         μg/L         20         0         80.6           D- Not Detected at the Reporting Limit         S - Spike Recovery outside accepted recovery limits         S - Spike Recovery outside accepted recovery limits	1,2-Dibromo-3-	chloropropane	20.5	5.0	µg∕L	20	0	103	20	130	0			
19.05         2.0         μg/L         20         0         95.2           ane         16.11         2.0         μg/L         20         0         80.6           O - Not Detected at the Reporting Limit         S - Spike Recovery outside accepted recovery limits         S - Spike Recovery outside accepted recovery limits	1,2-Dibromoett	nane	20.01	2.0	µg/L	20	0	9	20	130	0			
16.11 2.0 µg/L 20 0 80.6 16.95 2.0 µg/L 20 0 84.8  Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits  R - RPD outside accepted recovery limits	Dibromometha	ne L	19.05	2.0	µg∕L	20	0	95.2	70	130	0			
16.95 2.0 µg/L 20 0 84.8  Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits alyte detected below quantitation limits R - RPD outside accepted recovery limits	1,3-Dichlorober	nzene	16.11	2.0	µg/L	20	0	80.6	2	130	0			
ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits  J - Analyte detected below quantitation limits  R - RPD outside accepted recovery limits	1,2-Dichlomber	nzene	16.95	2.0	hg/L	20	0	84.8	70	130	0			
R - RPD outside accepted recovery limits		ND - Not Detector	2d at the Reporting Limit	S	- Spike Recove	rry outside accept	ed recovery	limits	B - Analyte	detected in t	he associated Metho	od Blank		
		J - Analyte detect	ted below quantitation limits		- RPD outside	accepted recovery	y limits		NA - Mot	anticotto ut.		-		
		DI Denesia		•					TON - UNI	ppucable win		estills occur		

AMRO Environmental Laboratories Corp.

CLIENT:	Charles Castelluccio Consulting, LLC	ng, LLC							
Work Order:	1612041	ò						QC SUMMARY REPORT	REPORT
Project:	YRC North Reading							Laboratory Control Spike	ntrol Spike
1,4-Dichlorobenzene	15.97	2.0	Hg/L	20	0 79.8	8 70	130	0	
Dichlorodifluoromethane	lane 19.15	5.0	µg/L	20	0 95.8	8 40	160	0	
1,1-Dichlomethane	19.19	2.0	₽9⁄L	20	96 0	9 70	130	0	
1,2-Dichloroethane	21.16	2.0	₽Ø√L	20	0 106	5 70	130	0	
1,1-Dichloroethene	20.55	1.0	µg/L	20	0 103	3 70	130	0	
cis-1,2-Dichloroethene	ne 20.35	2.0	μg/L	20	0 102	•	130	0	
trans-1,2-Dichloroethene	tene 21.22	2.0	µg/L	20	0 106		130	0	
1,2-Dichloropropane	18.46	2.0	µg/L	20	0 92.3	3 70	130	0	
1,3-Dichloropropane	17.07	2.0	µg/L	50	0 85.4	Ť	130	0	
2,2-Dichloropropane	22.48	2.0	hg/L	20	0 112		130	0	
1,1-Dichloropropene	19.31	2.0	hg/L	20	0 96.6		130	0	
cis-1,3-Dichloropropene	ene 17.93	1.0	hg/L	29	0 89.7		130	0	
trans-1,3-Dichloropropene	pene 18.06	0.	µg/L	20	0 90.3	3 70	130	0	
Diethyl ether	17.68	9.0	µg/L	50	0 88.4	4 70	130	0	
Diisopropyl ether	18.73	2.0	µg/L	20	0 93.6	3 70	130	0	
1,4-Dioxane	122.5	20	µg/L	001	0 122	2 40	160	0	
Ethyl Tertiary Butyl Ether	Ether 20.42	2.0	µg/L	70	0 102	2 70	130	0	
Ethylbenzene	16.93	2.0	μg/L	20	0 84.6	9 20	130	0	
Hexachlorobutadiene	11.21	2.0	µg/L	50	0 56	5 70	130	0	Ø
2-Hexanone	46.49	<b>t</b>	µg/L	40	0 116	5 40	160	0	
Isopropylbenzene	16.13	2.0	µ9/L	20	0 80.6	9 70	130	0	
4-Isopropyttoluene	15.38	2.0	µg/L	23	0 76.9	9 20	130	0	
2-Butanone	55.82	9	µg/L	40	0 140	9	160	0	
4-Methyl-2-pentanone	e 46.57	2	µg∕L	40	0 116	5 40	160	0	
Methyl tert-butyl ether	er 20.8	2.0	µg/L	70	0 104	4 70	130	0	
Methylene chloride	18.6	9.0	µ9/L	20	0 93	3 70	130	0	
Naphthalene	17.06	5.0	µ9/L	20	0 85.3	3 70	130	0	
n-Propylbenzene	16.56	2.0	µg/L	20	0 82.8	3 70	130	0	
Styrene	15.83	2.0	µg∕L	20	0 79.2	2 70	130	0	
1,1,1,2-Tetrachloroethane	thane 17.07	2.0	µg/L	20	0 85.4	1 20	130	0	
1,1,2,2-Tetrachloroethane	18.02	2.0	μg/L	20	0 90.1	02	130	0	
Qualifiers: ND-P	ND - Not Detected at the Reporting Limit		S - Spike Recover	S - Spike Recovery outside accepted recovery limits	covery limits	B - Analyt	e detected in th	B - Analyte detected in the associated Method Blank	
J-An	J - Analyte detected below quantitation limits	t T	R - RPD outside	R - RPD outside accepted recovery limits	żi	NA - Mot	amicohla mha	and the second seconds	
RL - R	RL - Renorting Limit: defined as the formest concentration the laborators can accurately amoustions	nonnentration	the lehoratory can			1911 - UNI	สมุทยเฉพาะ พาก	IVA - IVOLAPPICADIE WHEIE J VAINES OF NLJ TESUIS OCCUF	
}	יכלמותות דיוווור תפזווית עם חום ומארים:	Concentation	INC INDUITABLE CON	accurately quantitate					

AMRO Environmental Laboratories Corp.

CLIENT:	Charles Castelluccio Consulting, LLC	cio Consulting,	TTC							OC SUMMARY REPORT
Project:	YRC North Reading	Bu								Laboratory Control Spike
Tetrachloroethene		17.24	2.0	星	20	-	86.2	<u>و</u>	130	0
Tetrahydrofuran		20.86	5	µg/L	20	0	\$	2	130	0
Toluene		19.63	2.0	µg/L	20	0	98.2	2	130	0
1,2,4-Trichlorobenzene	ane.	13.65	5.0	µg/L	20	0	68.2	20	130	<i>v</i> ,
1,2,3-Trichlombenzene	ne	14.28	2.0	rg/L	20	0	71.4	20	9	. 0
1,1,1-Trichloroethane	9	22.42	2.0	ηδη.	20	0	112	2	130	0
1,1,2-Trichloroethane	ø	19	2.0	µg∕L	20	0	95	02	130	0
Trichloroethene		20.05	2.0	µg/L	8	0	100	2	130	0
Trichlorofluoromethane	ine	24	2.0	µg/L	20	0	120	2	130	•
1,2,3-Trichloropropane	ne	17.5	2.0	µg/L	20	0	87.5	20	130	. 0
1,2,4-Trimethylbenzene	епе	16.67	2.0	hg/L	20	0	83.4	2	130	0
1,3,5-Trimethylbenzene	ene	16.22	2.0	µg∕L	20	0	81.1	2	130	•
Vinyl chloride		20.56	2.0	иgЛ	20	0	103	20	130	0
o-Xylene		15.9	2.0	µg∕L	8	0	79.5	2	130	0
m,p-Xylene		32.2	2.0	μg/L	40	0	80.5	2	130	0
Surr. Dibromofluoromethane	romethane	25.04	2.0	µg/L	25	0	90	20	130	0
Surr. 1,2-Dichloroethane-d4	ethane-d4	27.21	2.0	µg/L	25	0	109	20	130	0
Surr: Toluene-d8		25.97	2.0	hg/L	25	0	\$	92	130	0
Surr: 4-Bromofluarobenzene	robenzene	23.4	2.0	hg/L	25	0	93.6	02	130	0

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

AMRO Environmental Laboratories Corp.

CLIENT: Ch	Charles Castelluccio Consulting, LLC	LLC										[]
Work Order: 16	1612041								QC SUMMARY REPORT	MARY	REPOR	
Project: YF	YRC North Reading							T	Laboratory Control Spike Duplicate	ontrol Spi	ke Duplica	ate
												ı
Sample ID: 1csd-12/27/16	16 Batch ID: R59121	Test Co	Test Code: SW8260C	Units: µg/L			Analysis D.	ate: 12/27/20	Analysis Date: 12/27/2016 2:05:00 PM	Prep Date:	Prep Date: 12/27/2016	
Client ID:		Run ID:	V-3_161227A	<b>A</b> 2			SeqNo:	992378				
	QC Sample		•	QC Spike Original Sample	al Sample			0	Original Sample			
Analyte	Result	귙	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	ő
Acetone	52.15	6	16d	40	0	130	40	160	53.5	258	5	
Tertiary Amyl Methyl Ether	ter 20.27	2.0	µg/L	8	0	5	2	130	20.64	181	3 8	
Benzene	19.18	1.0	µg/L	20	0	95.9	2	130	20.09	4.63	2	
Bromobenzene	17.24	2.0	μg/L	20	0	86.2	20	130	17.91	3.81	2	
Bromochloromethane	18.54	2.0	hg/L	20	0	92.7	20	130 80	18.62	0.431	20	
Bromodichloromethane	20.63	2.0	hg∕L	20	0	103	20	130	21.56	4.41	70	
	17.54	2.0	μg/L	20	0	87.7	20	130	17.39	0.859	8	
S Bromomethane	20.5	2.0	hg/L	20	0	103	4	160	21.63	5.36	8	
sec-Butylbenzene	14.18	2.0	µg∕L	20	0	70.9	2	130	14.03	1.06	20	
n-Butylbenzene	15.23	2.0	μg/L	20	0	76.2	2	130	15.5	1.76	20	
tert-Butylbenzene	15.56	2.0	µg∕L	20	0	77.8	2	130	15.36	1.29	20	
Carbon disulfide	14.51	2.0	hg/L	20	0	72.6	2	130	15.69	7.81	20	
Carbon tetrachloride	19.33	2.0	hg/L	20	0	96.7	20	130	19.4	0.361	23	
Chlorobenzene	16.72	2.0	µg∕L	20	0	83.6	20	130	17.01	1.72	20	
Dibromochloromethane	16.79	2.0	hg/L	20	0	8	2	130	16.49	1.8	8	
Chloroethane	14.25	5.0	μg/L	20	0	71.3	20	130	15.33	7.3	70	
Chloroform	19.52	2.0	µg/L	20	0	97.6	2	130	19.89	1.88	20	
Chloromethane	14.89	2.0	hg/L	20	0	74.4	<b>\$</b>	160	16	7.19	8	
Z-Chiorototuene	16.92	2.0	µg/L	20	0	84.6	2	130	16.6	1.91	70	
4-Chiomtoluene		2.0	μg/L	20	0	85.2	20	130	17.26	1.28	20	
1,2-Dibromo-3-chloropropane		5.0	μg/L	20	0	99.7	20	130	20.5	2.77	20	
1,2-Dibromoethane	20.23	2.0	μg/L	20	0	101	2	130	20.01	1.09	50	
Dibromomethane	19.44	2.0	µ9/L	20	0	97.2	2	130	19.05	2.03	50	
1,3-Dichlorobenzene	16.2	2.0	hg∕L	20	0	<del>.</del>	2	130	16.11	0.557	2 8	
1,2-Dichlorobenzene	17.15	2.0	hg/L	20	0	85.8	20	130	16.95	1.17	8	
Qualifiers: ND-Not ]	ND - Not Detected at the Reporting Limit		S - Spike Recove	S - Spike Recovery outside accepted recovery limits	d recovery l	imits	B - Analyte	detected in th	B - Analyte detected in the associated Method Blank	d Blank		1
J - Analyk	J - Analyte detected below quantitation limits		R - RPD outside	R - RPD outside accepted recovery limits	limits		NA - Not a	sahu aldasilan	NA - Not conditional and an included the second			
RL - Repo	RL - Reporting Limit; defined as the lowest concentration	ncentration t	ne laboratory can	the laboratory can accurately quantitate.	atc.					auto occur		

AMRO Environmental Laboratories Corp.

Project:         Isignosti         Projectical projection of the projection of	CLIENT:	Charles Castelluccio Consulting, LLC	nsulting, LLC									
16.5   2.0   1901.   20   0   62.5   70   130   18.85   5.0   1901.   20   0   62.5   70   130   18.85   5.0   1901.   20   0   64.2   4.0   160   18.37   2.0   1901.   20   0   94.2   4.0   130   13.83   2.0   1901.   20   0   90.8   70   130   13.85   2.0   1901.   20   0   90.8   70   130   13.85   2.0   1901.   20   0   90.8   70   130   13.85   2.0   1901.   20   0   90.8   70   130   13.85   2.0   1901.   20   0   90.8   70   130   130   13.85   2.0   1901.   20   0   90.8   70   130   130   13.85   2.0   1901.   20   0   90.8   70   130   130   13.85   2.0   1901.   20   0   90.8   70   130   130   13.85   2.0   1901.   20   0   90.8   70   130   130   13.85   2.0   1901.   20   0   130   130   13.85   2.0   1901.   20   0   130   130   13.85   2.0   1901.   20   0   130   130   13.85   2.0   1901.   20   0   130   130   13.85   2.0   1901.   20   0   130   130   13.85   2.0   1901.   20   0   130   130   13.85   2.0   1901.   20   0   130   130   13.85   2.0   1901.   20   0   130   130   13.85   2.0   1901.   20   0   130   130   13.85   2.0   1901.   20   0   130   130   13.85   2.0   1901.   20   0   130   130   13.85   2.0   1901.   20   0   13	Work Order:	1612041	i						<b>~</b>	CSCM	MARY	<b>EPORT</b>
16.5   2.0   1991.   2.0   6.25   7.0   15.0   15.97   3.26   2.0   19.0   19.0   2.0	Project:	YRC North Reading		i					Labo	oratory Co	ntrol Spik	Duplicate
18.85   5.0   149/L   20   0   642   40   160   1915   1.58   20   1.59   20	1,4-Dichlorobenzen		2.0	hg/L	20	0	12.5	2	130	15.97	3.26	20
19.37 2.0 Hg/L 20 0 666 70 130 191 191 0.894 20 20. 21.16 2.0 Hg/L 20 0 105 70 130 191 191 191 0.894 20 20. 20. 4 Hg/L 20 0 105 70 130 20.55 0.733 20 18.85 2.0 Hg/L 20 0 0 105 70 130 20.55 0.733 20 18.85 2.0 Hg/L 20 0 0 105 70 130 20.55 0.733 20 20 18.85 2.0 Hg/L 20 0 0 105 70 130 18.46	Dichlorodifluoromet		5.0	hg/L	20	0	4.2	6	160	19.15	1.58	8
21.16 2.0 µg/l, 20 0 106 70 130 21.16 0 0 20 20 20 4 193 2.0 µg/l, 20 0 106 70 130 20.35 0.733 20 1938 2.0 µg/l, 20 0 1921 70 130 20.35 0.733 20 20 1934 2.0 µg/l, 20 0 106 9.0	1,1-Dichloroethane		2.0	⊅6rt	20	0	9.9	20	130	19.19	0.934	2
204 1 10 1 1997 2 20 1 10 1 10 1 10 1 10 1 10 1 10 1 1	1,2-Dichloroethane		2.0	μg/L	20	0	106	20	130	21.16	0	<b>70</b>
1835   2.0   199L   20   0 93.7   70   130   20.35   2.09   20   20   18.55   2.0   199L   20   0 92.6   70   130   21.22   13.6   20   20   18.55   2.0   199L   20   0 92.6   70   130   21.22   13.6   20   20   17.57   2.0   199L   20   20   20   20   20   20   20   2	1,1-Dichloroethene		1.0	hg/L	20	0	102	2	130	20.55	0.733	8
1852 2.0 Igg/L 20 0 926 770 130 21.22 13.5 20 15.1 15.1 15.2 2.0 Igg/L 20 0 90.8 770 130 12.22 13.5 20 15.1 15.2 2.0 Igg/L 20 0 17.0 70 130 17.0 7.0 2.89 20 17.5 2.0 Igg/L 20 0 14.0 70 130 17.0 7.0 2.89 20 17.7 2.89 20 17.2 2.0 Igg/L 20 0 17.2 2.0 17.8 20 17.2 2.0 Igg/L 20 0 17.2 2.0 17.2 2.0 17.2 2.0 Igg/L 20 0 17.2 2.0 17.2 2.0 Igg/L 20 0 17.2 2.0 17.2 2.0 Igg/L 20 0 17.2 2.0 Igg/L 20	cis-1,2-Dichloroethe		2.0	μg/L	20	0	9.7	2	130	20.35	2.09	20
18.16   2.0   149/L   2.0   6.90.8   70   130   18.46   1.64   2.89   2.0   1.57   2.289   2.0   1.57   2.0   1.90/L   2.0   2.0   1.90/L   2.0   2.0   2.248   1.30   2.248   1.30   2.248   1.30   2.248   1.30   2.248   1.30   2.248   1.30   2.248   1.30   2.248   1.30   2.248   1.30   2.248   1.30   2.248   1.30   2.248   1.30   2.248   2.0   1.90/L   2.0   0.98.7   7.0   1.30   1.753   1.29   2.0   1.774   1.0   1.90/L   2.0   0.98.7   7.0   1.30   1.753   1.29   2.0   1.744   2.0   1.90/L   2.0   0.98.7   7.0   1.30   1.245   2.24	trans-1,2-Dichloroe		2.0	µg/L	20	0	37.6	20	130	21.22	13.6	8
17.57   2.0   1991.   20   0   67.8   70   150   17.07   2.89   2.0     17.58   2.0   1991.   2.0   0   110   70   130   17.07   2.89   2.0     17.74   1.0   1991.   2.0   0   88.5   70   130   12.48   1.18   2.0     17.74   1.0   1991.   2.0   0   88.5   70   130   17.83   1.29   2.0     18.67   2.0   1991.   2.0   0   88.5   70   130   18.05   1.79   2.0     18.68   2.0   1991.   2.0   0   84.8   70   130   18.73   1.29   2.0     18.38   2.0   1991.   2.0   0   124   40   160   17.24   5.23   2.0     18.58   2.0   1991.   2.0   0   134   40   160   16.33   3.3   2.0     18.58   2.0   1991.   2.0   0   134   40   160   16.39   3.3   2.0     18.58   1.0   1991.   2.0   0   130   16.30   16.33   3.3   2.0     18.58   1.0   1991.   2.0   0   130   16.30   16.30   1.31   2.0     18.58   1.0   1991.   2.0   0   140   160   160   16.30   1.31   2.0     18.58   1.0   1991.   2.0   0   140   160   16.30   16.30   1.31   2.0     18.58   1.0   1991.   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2	1,2-Dichloropropan		2.0	hg/L	20	0	90.8	2	130	18.46	<del>7</del>	50
22.08         2.0         µg/L         2.0         of 140         70         130         22.48         1.8         20           17.38         2.0         µg/L         2.0         0.83         70         130         193.1         7.13         20           17.74         1.0         µg/L         2.0         0.845         70         130         17.68         1.29         20           16.57         5.0         µg/L         2.0         0.845         70         130         18.06         1.73         20           16.57         5.0         µg/L         2.0         0.845         70         130         17.68         4.1         20           16.38         2.0         µg/L         2.0         0.952         70         130         17.83         2.1         20           16.38         2.0         µg/L         2.0         0.953         70         130         16.33         3.7         20           16.53         2.0         µg/L         2.0         0.954         70         130         16.33         3.3         20           16.54         2.0         µg/L         2.0         0.954         70         130         <	1,3-Dichloropropan		2.0	hg/L	20	0	17.8	20	130	17.07	2.89	20
17.89   17.90   1991   20   1994   20   1985   70   130   17.93   1.29   20   17.74   1.0   1991   20   0   88.5   70   130   17.93   1.29   20   17.74   1.0   1991   20   0   88.5   70   130   17.63   1.29   20   1.79   1.00   1805   2.0   1991   20   20   20   20   124   20   20   124   20   20   20   20   20   20   20	2,2-Dichloropropant		2.0	μg⁄L	20	0	110	20	130	22.48	1.8	20
17.7 1.0 μg/L 20 0 885 70 130 17.93 1.29 20 17.74 1.0 μg/L 20 0 88.7 70 130 18.05 1.29 20 18.05 2.0 μg/L 20 0 84.8 7 70 130 18.73 3.7 20 18.05 2.0 μg/L 20 0 84.8 7 70 130 18.73 3.7 20 19.38 2.0 μg/L 20 0 96.9 70 130 18.73 3.7 20 19.38 2.0 μg/L 20 0 96.9 70 130 18.73 3.7 20 11.67 2.0 μg/L 20 0 96.9 70 130 140.2 20.2 20 15.63 2.0 μg/L 20 0 17.3 40 140 140 140 140 140 140 140 140 140	1,1-Dichloropropen		2.0	hg/L	20	0	9.9	70	130	19.31	7.13	20
11774 1.0 μg/L 20 0 887 70 130 18.06 1.79 20 16.57 5.0 μg/L 20 0 84.8 70 130 17.68 4.1 20 18.65 2.0 μg/L 20 0 96.9 70 130 17.69 4.1 20 18.38 2.0 μg/L 20 0 96.9 70 130 122.5 1.23 20 18.38 2.0 μg/L 20 0 96.9 70 130 16.93 3.3 20 11.56 3 2.0 μg/L 20 0 96.9 170 130 16.33 3.3 20 15.63 2.0 μg/L 20 0 96.9 170 130 16.33 3.3 20 15.63 2.0 μg/L 20 0 143 40 160 16.3 20 15.63 2.0 μg/L 20 0 143 40 160 16.3 20 15.63 2.0 μg/L 20 0 17.9 170 130 15.39 1.31 20 μg/L 20 1 12 1 20 17.3 20 20.44 5.8 10 μg/L 20 0 1.3 20 17.3 20 20.44 5.8 10 μg/L 20 0 1.3 20 17.3 20 20.44 5.8 10 μg/L 20 0 1.3 20 17.3 20 20.44 5.9 19 μg/L 20 1.3 20 17.3 20 20.44 5.0 19 μg/L 20 1.3 20 17.0 130 15.8 20 20.44 5.0 μg/L 20 1.3 20 17.0 130 17.0 20 20.44 5.0 μg/L 20 1.3 20 17.0 130 17.0 20 20.44 5.0 μg/L 20 1.3 20 17.0 130 17.0 20 20.44 5.0 μg/L 20 1.3 20 17.0 130 17.0 20 20.45 2.0 μg/L 20 1.3 20 17.0 130 17.0 20 20.45 2.0 μg/L 20 1.3 20 17.0 130 17.0 20 20.45 2.0 μg/L 20 1.3 20 17.0 130 17.0 20 20.45 2.0 μg/L 20 1.3 20 17.0 130 17.0 20 20.45 2.0 μg/L 20 1.3 20 17.0 130 17.0 20 20.45 2.0 μg/L 20 1.3 20 17.0 130 17.0 20 20.45 2.0 μg/L 20 1.3 20 20.45 2.0	cis-1,3-Dichloroprop		1.0	µ9/L	20	0	38.5	2	130	17.93	1.29	20
16.97         5.0         µg/L         20         94.8         70         130         17.68         4.1         20           18.05         2.0         µg/L         20         0         96.2         70         130         18.75         3.7         20           19.38         2.0         µg/L         100         0         96.9         70         130         162.5         1.23         2.7         20           19.38         2.0         µg/L         20         0         96.9         70         130         162.5         2.2         2.2           45.23         1.0         µg/L         20         0         96.9         70         130         162.5         2.2         2.2           45.23         1.0         µg/L         20         0         130         160         46.49         2.7         2.2         2.2           15.63         2.0         µg/L         40         0         70         160         46.49         2.75         2.0           15.48         2.0         µg/L         40         0         130         16.13         131         2.0         2.0         2.0         2.0         2.0         2.0<	trans-1,3-Dichloropi		1.0	μg/L	20	0	18.7	92	130	18.06	1.79	70
18.05         2.0         µg/L         20         90.2         70         130         18.73         3.7         20           12.4         50         µg/L         100         0.24         40         160.42         1.23         2.0           16.38         2.0         µg/L         20         96.9         70         130         16.25         1.23         2.0           45.23         2.0         µg/L         20         0.81.9         70         130         16.35         2.2         2.0           45.23         2.0         µg/L         20         0.81.9         70         130         16.39         2.75         2.0           45.23         2.0         µg/L         40         0.70         130         16.13         2.75         2.0           46.58         10         µg/L         20         70         130         16.13         2.75         2.0           46.58         10         µg/L         40         16.2         70         130         15.3         2.71         2.0           46.58         10         µg/L         40         16.2         70         15.0         15.1         2.0         15.0         15	Diethyl ether	16.97	5.0	µ9/L	20	0	8.4	2	130	17.68	4.1	50
124 56 μg/L 100 0 124 40 160 1225 123 20 19.38 2.0 μg/L 20 0 68.9 70 130 16.93 3.3 20 116.38 2.0 μg/L 20 0 68.9 70 130 16.93 3.3 20 116.38 2.0 μg/L 20 0 58.4 70 130 11.21 40.2 15.63 2.0 μg/L 20 0 78.2 70 130 11.21 40.2 15.63 2.0 μg/L 20 0 78.2 70 130 16.13 3.15 20 15.138 10 μg/L 20 0 14.6 40 160 156.8 13.1 20 15.138 10 μg/L 20 0 14.6 40 160 156.8 13.1 20 15.138 10 μg/L 20 0 14.6 40 160 156.8 13.1 20 15.138 10 μg/L 20 0 14.6 40 160 156.8 13.1 20 15.138 10 μg/L 20 0 14.6 40 160 156.8 13.1 20 15.138 10 μg/L 20 0 14.6 160 156.8 13.6 20 15.138 10 μg/L 20 0 17.6 130 156.8 156	Diisopropyl ether	18.05	2.0	hg/L	8	0	0.2	20	130	18.73	3.7	20
19.38         2.0         µg/L         2.0         96.9         70         130         20.42         5.23         2.0           16.38         2.0         µg/L         2.0         61.9         7.0         130         16.93         3.3         20           16.38         2.0         µg/L         2.0         0 61.9         7.0         130         16.93         3.3         20           45.23         1.0         µg/L         2.0         0 78.2         7.0         130         16.13         3.15         20           15.38         2.0         µg/L         2.0         7.2         7.0         130         16.3         1.31         20           46.58         1.0         µg/L         4.0         0         7.0         130         16.3         1.3         2.0           46.58         1.0         µg/L         4.0         0         7.0         130         16.3         2.0         2.0           46.58         1.0         µg/L         4.0         0         130         16.0         46.5         2.0         2.0         2.0         2.0         2.0         2.0         2.0         2.0         2.0         2.0         2.0 </td <td>1,4-Dioxane</td> <td></td> <td>20</td> <td>μg/L</td> <td>100</td> <td>0</td> <td>124</td> <td>40</td> <td>160</td> <td>122.5</td> <td>1.23</td> <td>20</td>	1,4-Dioxane		20	μg/L	100	0	124	40	160	122.5	1.23	20
16.38         2.0         µg/L         20         61.9         70         130         16.93         3.3         20           11.67         2.0         µg/L         20         6.84         70         130         11.21         4.02         20           45.23         10         µg/L         40         6.84         70         130         11.21         4.02         20           45.23         10         µg/L         20         13         46.49         2.75         20           45.23         20         µg/L         20         7.2         70         130         16.13         2.75         20           46.58         10         µg/L         40         70         130         15.36         7.12         20           20.64         2.0         µg/L         40         16         46.57         0.0215         20           19.46         5.0         µg/L         20         0         130         46.57         0.0215         20           17.67         5.0         µg/L         20         0         130         130         13.6         4.52         20           15.22         20         µg/L         <	Ethyl Tertiary Butyl		2.0	hg/L	20	0	6.9	2	130	20.42	5.23	20
11.67         2.0         µg/L         20         6.84         70         130         11.21         4.02         20           45.23         10         µg/L         40         0         78.2         70         130         16.13         3.15         20           15.63         2.0         µg/L         20         0         78.2         70         130         16.13         3.15         20           15.13         2.0         µg/L         20         0         78.2         70         130         16.13         3.15         20           46.58         10         µg/L         40         130         16.0         55.82         7.12         20           46.58         10         µg/L         40         130         16.0         46.57         0.0215         20           20.64         2.0         µg/L         40         103         70         130         18.6         4.52         20           19.46         5.0         µg/L         20         103         70         130         16.6         6.68         20           15.49         5.0         µg/L         20         130         15.0         15.4	Ethylbenzene		2.0	μg⁄L	20	0	1.9	02	130	16.93	3.3	50
45.23         10         μg/L         40         113         40         160         46.49         275         20           15.63         2.0         μg/L         20         78.2         70         130         16.13         3.15         20           15.18         2.0         μg/L         20         0         75.9         70         130         15.38         1.31         20           46.58         10         μg/L         40         0         146         46.57         0.0215         20           20.64         2.0         μg/L         20         130         70         130         20.8         7.12         20           19.46         5.0         μg/L         20         0         130         70         130         20.8         0.772         20           17.67         5.0         μg/L         20         0         97.3         70         130         16.6         6.68         20           15.49         2.0         μg/L         20         0         97.3         70         130         15.6         6.68         20           15.22         2.0         μg/L         20         19.4         70 </td <td>Hexachlorobutadien</td> <td></td> <td>2.0</td> <td>μg/L</td> <td>20</td> <td>0</td> <td>8.4</td> <td>2</td> <td>130</td> <td>11.21</td> <td>4.02</td> <td></td>	Hexachlorobutadien		2.0	μg/L	20	0	8.4	2	130	11.21	4.02	
15.63         2.0         μg/L         20         76.2         70         130         16.13         3.15           15.18         2.0         μg/L         20         0         75.9         70         130         15.38         1.31           46.58         10         μg/L         40         0         146         40         66         55.82         7.12           20.64         20         μg/L         20         0         146         40         160         46.57         0.0215           20.64         20         μg/L         20         0         173         70         130         20.8         0.772           17.67         50         μg/L         20         0         77.4         70         130         16.66         6.68           15.22         2.0         μg/L         20         77.4         70         130         16.56         6.68           15.22         2.0         μg/L         20         76.1         70         130         17.06         3.51           18.3         2.0         μg/L         20         9         70         130         17.07         1.54           18.3 <t< td=""><td>2-Hexanone</td><td>45.23</td><td>9</td><td>µ9/L</td><td>9</td><td>•</td><td>113</td><td>40</td><td>160</td><td>46.49</td><td>2.75</td><td></td></t<>	2-Hexanone	45.23	9	µ9/L	9	•	113	40	160	46.49	2.75	
15.18 2.0 µg/L 20 0 75.9 70 130 15.38 1.31  46.58 10 µg/L 40 0 130 40 160 55.82 7.12  46.58 10 µg/L 20 0 103 70 130 20.8  19.46 5.0 µg/L 20 0 97.3 70 130 20.8  17.67 5.0 µg/L 20 0 88.4 70 130 18.6 8.51  17.62 2.0 µg/L 20 0 77.4 70 130 16.56 6.68  15.22 2.0 µg/L 20 0 77.4 70 130 16.56 6.68  17.02 2.0 µg/L 20 0 77.4 70 130 16.56 6.68  18.3 2.0 µg/L 20 0 86.1 70 130 15.83 3.93  17.02 2.0 µg/L 20 0 86.1 70 130 15.83 3.93  18.3 2.0 µg/L 20 0 91.5 70 130 15.83 3.93  18.3 2.0 µg/L 20 0 91.5 70 130 15.83 3.93  18.3 8- Spike Recovery outside accepted recovery limits  R-RPD outside accepted recovery limits  R-RPD outside accepted recovery limits  NA-Not applicable where J values or ND results occur	Isopropylbenzene	15.63	2.0	μg/L	8	0	8.2	2	130	16.13	3.15	20
51.98         10         µg/L         40         0         130         40         160         55.82         7.12           46.58         10         µg/L         40         116         40         160         46.57         0.0215           20.64         2.0         µg/L         20         0         103         70         130         20.8         0.772           19.46         5.0         µg/L         20         0         97.3         70         130         17.06         3.51           17.67         5.0         µg/L         20         0         88.4         70         130         17.06         3.51           15.22         2.0         µg/L         20         76.1         70         130         16.56         6.68           17.02         2.0         µg/L         20         76.1         70         130         17.07         0.293           18.3         2.0         µg/L         20         0         91.5         70         130         17.07         0.293           18.3         2.0         µg/L         20         0         91.5         70         130         18.02         1.54	4-Isopropyitoluene	15.18	2.0	µ9/L	8	0	5.9	2	130	15.38	1.3	20
46.58         10         µg/L         40         16         46.57         0.0215           20.64         2.0         µg/L         20         0         103         70         130         20.8         0.772           19.46         5.0         µg/L         20         0         97.3         70         130         18.6         4.52           17.67         5.0         µg/L         20         0         88.4         70         130         17.06         3.51           15.49         2.0         µg/L         20         0         77.4         70         130         16.56         6.68           15.22         2.0         µg/L         20         0         76.1         70         130         15.83         3.93           17.02         2.0         µg/L         20         0         95.1         70         130         17.07         0.293           18.3         2.0         µg/L         20         0         91.5         70         130         18.02         1.54           tetected below quantitation limits         R RPD outside accepted recovery limits         R Analyte detected in the associated Method Blank	2-Butanone		0	µ9∕L	4	0	130	40	<del>6</del>	55.82	7.12	20
20.64         2.0         µg/L         20         0         103         70         130         20.8         0.772           19.46         5.0         µg/L         20         0         97.3         70         130         18.6         4.52           17.67         5.0         µg/L         20         0         77.4         70         130         17.06         3.51           15.22         2.0         µg/L         20         0         76.1         70         130         15.83         3.93           17.02         2.0         µg/L         20         0         95.1         70         130         17.07         0.293           18.3         2.0         µg/L         20         0         91.5         70         130         18.02         1.54           steected at the Reporting Limit         S - Spike Recovery outside accepted recovery limits         B - Analyte detected in the associated Method Blank	4-Methyl-2-pentano		5	µ9/L	40	0	116	<b>\$</b>	160	46.57	0.0215	20
19.46         5.0         µg/L         20         0         97.3         70         130         18.6         4.52           17.67         5.0         µg/L         20         0         77.4         70         130         16.56         6.68           15.22         2.0         µg/L         20         0         76.1         70         130         16.56         6.68           17.02         2.0         µg/L         20         0         76.1         70         130         17.07         0.293           18.3         2.0         µg/L         20         0         91.5         70         130         18.02         1.54           etected at the Reporting Limit         S - Spike Recovery outside accepted recovery limits         B - Analyte detected in the associated Method Blank           Indicate the Alman of the Journal of Alman of Alman of the Journal of Alman of A	Methyl tert-butyl eth		2.0	µ9/L	8	•	103	20	130	20.8	0.772	<del>2</del> 0
17.67         5.0         µg/L         20         0         88.4         70         130         17.06         3.51           15.49         2.0         µg/L         20         0         77.4         70         130         16.56         6.68           15.22         2.0         µg/L         20         0         76.1         70         130         15.83         3.93           17.02         2.0         µg/L         20         0         85.1         70         130         17.07         0.293           18.3         2.0         µg/L         20         0         91.5         70         130         18.02         1.54           cected at the Reporting Limit         S - Spike Recovery outside accepted recovery limits         B - Analyte detected in the associated Method Blank           NA - Not applicable where J values or ND results occur	Methylene chloride	19.46	5.0	μg/L	20	6	7.3	2	130	18.6	4.52	50 50
15.49 2.0 µg/L 20 0 77.4 70 130 16.56 6.68 15.22 2.0 µg/L 20 0 76.1 70 130 15.83 3.93 17.02 2.0 µg/L 20 0 85.1 70 130 17.07 0.293 18.3 2.0 µg/L 20 0 91.5 70 130 17.07 0.293 18.3 2.0 µg/L 20 91.5 70 130 17.07 0.293 16.54 Photostring Limit S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur	Naphthalene	17.67	5.0	hg/L	20	0	8.4	20	130	17.06	3.51	50
15.22 2.0 µg/L 20 0 76.1 70 130 15.83 3.93 17.02 2.0 µg/L 20 0 85.1 70 130 17.07 0.293 18.3 2.0 µg/L 20 0 91.5 70 130 17.07 0.293 steeded at the Reporting Limit S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur	n-Propylbenzene	15.49	2.0	µg∕L	8	0 7	7.4	2	130	16.56	6.68	50
17.02 2.0 µg/L 20 0 85.1 70 130 17.07 0.293  18.3 2.0 µg/L 20 0 91.5 70 130 18.02 1.54  Elected at the Reporting Limit S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur	Styrene		2.0	LIG/L	20	0	6.1	2	130	15.83	3.93	50 20
tected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank letected below quantitation limits R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur	1,1,1,2-Tetrachloroe	-	2.0	µ9∕L	50	0	5.1	2	130	17.07	0.293	2 2
ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits  J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits  RI - Reporting I imit defined as the former accepted in the latest accepted recovery limits	1,1,2,2-Tetrachloroe		2.0	µg∕L	20	6	1.5	20	130	18.02	1.54	<b>50</b>
iits		Not Detected at the Reporting Limi	_	S - Spike Recove	ry outside accepted	recovery limit		Analyte de	lected in the ass	Sociated Method	Blank	
}	J-A	nafyte detected below quantitation li	mits	R - RPD outside	accepted recovery 1	mits		, = ;	•			
Kt - Kotoffing i their defined of the latestand assessment the latestand	Id	Danmakin I limite defined on the factor	•	•			Ž	- Not appli	cable where J v	alues or ND res	ults occur	

AMRO Environmental Laboratories Corp.

CLIENT:	Charles Castelluccio Consulting, LLC	ulting, LLC							O CITIVE	AT A DAY	
Work Order:	1612041								C SUMIMARY KEPOK	MAKY	<b>KEPOKI</b>
Project:	YRC North Reading							Lab	oratory Co	ntrol Spik	aboratory Control Spike Duplicate
Tetrachloroethene	16.84	2.0	hg/L	20	0	84.2	2	130	17.24	2.35	20
Tetrahydrofuran	17.69	10	hg/L	20	0	88.4	92	130	20.86	16.4	8
Toluene	18.77	2.0	μg/L	20	0	93.8	2	130	19.63	4.48	20
1,2,4-Trichlorobenzene	ane 14.59	2.0	μg/L	20	0	73	2	130	13.65	999	50
1,2,3-Trichlorobenzene	ene 15.19	2.0	µg/L	20	0	92	2	130	14.28	6.18	50
1,1,1-Trichloroethane	21.4	2.0	µg/L	20	0	107	2	130	22.42	4.66	20
1,1,2-Trichloroethane	le 18.73	2.0	µg∕L	8	0	93.6	2	130	19	1.43	50 50
Trichloroethene	19.77	2.0	µg/L	8	0	98.8	2	130	20.05	1.41	50
Trichlorofluoromethane	апе 24.02	2.0	μg/L	20	0	120	92	130	24	0.0833	20
1,2,3-Trichloropropane	1ne 21.26	2.0	µg/L	20	0	901	2	130	17.5	19.4	<b>50</b>
1,2,4-Trimethylbenzene	ene 16.76	2.0	1/6rl	70	0	83.8	20	£	16.67	0.538	20 1
1,3,5-Trimethylbenzene	ene 15.68	2.0	µ9∕L	20	0	78.4	2	130	16.22	3.39	20
Vinyl chloride	18.35	2.0	µg/L	20	0	91.8	20	55	20.56	11.4	20
o-Xylene	15.49	2.0	µg∕L	8	0	77.4	20	130	15.9	2.61	30 20
m.p-Xylene	31.7	2.0	μg/L	40	0	79.2	2	130	32.2	1.56	20
Surr. Dibromofluoromethane	promethane 25.58	2.0	pg/L	22	0	102	20	130	0	0	2
Surr: 1,2-Dichloroethane-d4	ethane-d4 26.02	2.0	µ9/L	52	0	40	2	130	0		
Surr: Toluene-d8	26.12	2.0	hg/L	25	0	\$	2	130	c	•	
Surr. 4-Bromofluorobenzene	probenzene 23.94	2.0	hg/L	22	0	95.8	20	130		c	o c
			•						1	•	•

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

Date: 05-Jan-17

CLIENT: Project:	Charles Castelluccio (YRC North Reading	Consulting,	LLC			Lab Order	: 1612041
Lab ID:	1612041-01				Collection Da		016 10:17:00 AM
Client Sample ID	: Influent				Matr	ix: AQUEC	DUS
Analyses		Result	R	L Qu	al Units	DF	Date Analyzed
ION CHROMATO	GRAPHY		E300			<u>-</u> -	Analyst: REB
Chloride		390	1	0	mg/L	20	1/4/2017 10:49:18 AM
PH			SM4500-H	, в			Analyst: MB
рН		6.5		э н	pH Units	1	12/23/2016 10:05:00 AN
Lab ID:	1612041-02				Collection Date		016 10:25:00 AM
Client Sample ID:	: Effluent					x: AQUEO	ous
Analyses		Result	RI	. Qu	al Units	DF	Date Analyzed
ON CHROMATO	SRAPHY		E300				Analyst: REB
Chloride		390	10	)	mg/L	20	1/4/2017 10:49:18 AM
PH			SM4500-H	, B			Analyst: MB
рН		7.7	(	<u>н</u>	pH Units	1	12/23/2016 10:05:00 AM
Lab ID:	1612041-03						16 i0:15:00 AM
Client Sample ID:	Midfluent				Collection Time	e: K: AQUEO	TIS
Analyses		Result	RL	Qua	l Units	DF	Date Analyzed
ICP- TOTAL MET	ALS 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

CLIENT: C Work Order: 1 Project: Y	Charles Castelluccio Consulting, LLC 1612041 YRC North Reading	g, LLC						QC SUMMARY REPORT Method Blank	MARY	Y REPORT Method Blank	≡ ₹ ¥
Sample ID: mb-27124 Client ID:	Batch ID: 27124	Test Code: E200.7 Run ID: ICP-OF	E200.7	E200.7 Units: µg/L ICP-OPTIMA_161227A		Analysis D SeqNo:	ate: 1 <i>2/27/2</i> 992296	Analysis Date: 12/27/2016 7:16:53 PM SeqNo: 992296	Prep Date	Prep Date: 12/27/2016	11
Analyte	QC Sample Result	RL 100	Units µg/L	OC Spike Original Sample Amount Result %REC	REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ã
Sample ID: MB-010417 Client ID:	7 Batch ID: R59145	Test Code: Run ID:	le: E300 DIONEX	E300 Units: mg/L DIONEX_170104A		Analysis D SeqNo:	ate: 1/4/201	Analysis Date: 1/4/2017 10:49:18 AM SeqNo: 992747	Prep Date:		1
Analyte Chloride	QC Sample Result ND	RL 0.50	Units mg/L	QC Spike Original Sample Amount Result %REC	REC	LowLimit	LowLimit HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Que
Sample ID: mb-27127 Client ID:	Batch ID: 27127	Test Code: Run ID:	e: E245.1 HG-FIMS	E245.1 Units: µg/L HG-FIMS_161228A		Analysis D SeqNo:	ate: 12/28/20	Analysis Date: 12/28/2016 5:22:12 PM SeqNo: 992501	Prep Date:	Prep Date: 12/28/2016	1
Analyte	QC Sample Result ND	RL 0.20	Units µg/L	OC Spike Original Sample Amount Result %REC LowLimit	REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ő

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits RL - Reporting Limit, defined as the lowest concentration the laboratory can accurately quantitate. J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit Qualifiers:

CLIENT: Work Order: Project:	Charles Castelluccio Consulting, LLC 1612041 YRC North Reading	ing, LLC							QC SUMMARY REPORT Laboratory Control Spike	MARY soratory (	JMMARY REPORT Laboratory Control Spike	RT oike
Sample ID: 1cs-27124 Client ID:	4 Batch ID: 27124	Test Code: E200.7 Run ID: ICP-OF	: E200.7	E200.7 Units: µg/L ICP-OPTIMA_161227A			Analysis E SeqNo:	ate: 12/27/2	Analysis Date: 12/27/2016 7:21:28 PM SeqNo: 992297	Prep Date	Prep Date: 12/27/2016	il
Analyte	QC Sample Result	R	Units	QC Spike Original Sample Amount Result	al Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ő
Iron	4111	100	μg/L	4004	0	103	82	115	0			
Sample ID: LCS-010417 Client ID:	417 Batch ID: R59145	Test Code: E300 Run ID: DION	E300 DIONEX	E300 Units: mg/L DIONEX_170104A	_		Analysis D SeqNo:	ate: 1/4/201 992748	Analysis Date: 1/4/2017 10:49:18 AM SeqNo: 992748	Prep Date:	   	
Analyte	QC Sample Result	R	Units	QC Spike Original Sample Amount Result	al Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Ö
Chloride	12.16	0.50	тдЛ	12.5	0	97.3	89	110	0			
Sample ID: LCSD-010417 Client ID:	0417 Batch ID: R59145	Test Code: E300 Run ID: DION	E300 DIONEX	E300 Units: mg/L DIONEX_170104A			Analysis D SeqNo:	ate: 1/4/201 992753	Analysis Date: 1/4/2017 10:49:18 AM SeqNo: 992753	Prep Date:		
Analyte	QC Sample Resuft	쿈	Units	QC Spike Original Sample Amount Result	al Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Öľí
Chloride	12.13	0:20	mg/L	12.5	0	46	88	110	12.16	0.255	50	
Sample ID: Ics-27127 Client ID:	Batch ID: 27127	Test Code: E245.1 Run ID: HG-FIN	: E245.1 HG-FIMS	E245.1 Units: µg/L HG-FIMS_161228A			Analysis D SeqNo:	ate: 12/28/2 992502	Analysis Date: 12/28/2016 5:25:57 PM SeqNo: 992502	Prep Date	Prep Date: 12/26/2016	
Analyte	QC Sample Resuft	궚	Units	QC Spike Original Sample Amount Result		%REC	LowLimit	, HighLimit	Original Sample or MS Resutt	%RPD	RPDLimit	ă
Mercury	4.214	0.20	ng/L	4	0	105	82	115	0			1

B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

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

ND - Not Detected at the Reporting Limit J - Analyte detected below quantitation limits

Qualifiers:

<sup>25</sup> 

CLIENT: Charles Work Order: 1612041 Project: YRC No	Charles Castelluccio Consulting, LLC 1612041 YRC North Reading	g, LLC							QC SUMMARY REPORT Laboratory Control Spike Duplicate	IMARY ontrol Sp	REPO ike Dupli	RT cate
Sample ID: Icsd-27127 Client ID:	Batch (D: 27127	Test Co Run ID:	ë	E245.1 Units: µg/L HG-FIMS 161228A	µg/L		Analysis E	)ate: 12/28/2	Analysis Date: 12/28/2016 5:29:43 PM SeaNo: 892503	Prep Date	Prep Date: 12/28/2016	11.
Analyte	QC Sample Result	궚	Units	QC Spike Or Amount	QC Spike Original Sample Amount Result	Sample Result %REC	LowLimit	至	Original Sample or MS Result	%RPD	RPDLimit	ä
Mercury	4.338	0.20	μg/L	4	0	108	82	115	4.214	2.88	20	
Sample ID: LCS-R59120 Client ID:	Batch ID: R59120	Test Co Run ID:	de: SM4500- ING-WET	Test Code: SM4500-H, B Units: pH Units Run ID: ING-WET_161223A	pH Units		Analysis E SeqNo:	Jate: 12/23/2 992353	Analysis Date: 12/23/2016 10:05:00 A SeqNo: 992353	Prep Date:		
Analyte	QC Sample Result	₽ .	Units	QC Spike Or	QC Spike Original Sample Amount Result	8	LowLimit	I .	Original Sample or MS Result	%RPD	RPDLimit	ñ
Sample ID: LCSD-R59120 Client ID:	Batch ID: R59120	Test Co Run ID:	de: SM4500-1	Test Code: SM4500-H, B Units: pH Units Run ID: ING-WET_161223A	DH Units	<u> </u>	99 Analysis E SeqNo:	101 late: 12/23/2 992356	99 101 0 Analysis Date: 12/23/2016 10:05:00 A SeqNo: 992356	Prep Date:		
Analyte pH	QC Sample Result 6.01	- R	Units PH Units	QC Spike Or Amount 6	Amount Result 6 0	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ŏ
		>		D	>	9	66	5	6.02	0.166		ĸ

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

Corp.
Laboratories
<b>Environmental</b>
MRO

CLIENT: Work Order: Project:		Charles Castelluccio Consulting, LLC 1612041 YRC North Reading	g, LLC							QC SUMMARY REPORT Sample Duplicate	MARY	ARY REPORT Sample Duplicate	RT cate
Sample ID: 16 Client ID: M	Sample ID: 1612041-03ad Client ID: Midfluent	Batch ID: 27124	Test Code Run ID:	Test Code: E200.7 Run ID: ICP-OPTI	E200.7 Units: µg/L	=		Anafysis D SeqNo:	)ate: 12/27/2	Analysis Date: 12/27/2016 7:59:21 PM SeqNo: 992303	Prep Date	Prep Date: 12/27/2016	
Analyte		QC Sample Resuft	꿊	Units	QC Spike Original Sample Amount Resutt	inal Sample Resutt	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Öñ
lon		10.38	100	µg/L	0	0	0	0	0	12.34	17.2	20	7
Sample ID: 16 Client ID: In	Sample ID: 1612041-01BD Client ID: Influent	Batch ID: R59145	Test Code: E300 Run ID: DION	E300 DIONEX	E300 Units: mg/L DIONEX_170104A	8		Analysis D SeqNo:	ate: 1/4/201	Analysis Date: 1/4/2017 10:49:18 AM SeqNo: 992754	Prep Date:		
Analyte		QC Sample Result	굾	Units	QC Spike Original Sample Amount Result	inal Sample Result	%REC	LowLimit	CowLimit HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Ö
Chloride		387.2	0	mg/L	0	0	0	0	0	387	0.0542	20	
Sample ID: 1612041-03ad Client ID: Midfluent	1612041-03ad Midfluent	Batch ID: 27127	Test Code: E245.1 Run ID: HG-FIN	3: E245.1 HG-FIMS	E245.1 Units: µg/L HG-FIMS_161228A	로		Analysis D SeqNo:	late: 12/28/20	Analysis Date: 12/28/2016 5:37:15 PM SeqNo: 992505	Prep Date	Prep Date: 12/28/2016	
Analyte		QC Sample Result	궚	Units	QC Spike Original Sample Amount Result	inal Sample Result	%REC	LowLimit	C HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Ö
Mercury		ON	0.20	hg/L	0	0	0	0	0	0	0	20	
Sample ID: 1612041-01BD Client ID: Influent	1612041-01BD Influent	Batch ID: R59120	Test Code Run ID:	Test Code: SM4500-H, B Run ID: ING-WET_161	SM4500-H, B Units: pH Units ING-WET_161223A	4 Units		Analysis D SeqNo:	ate: 12/23/20	Analysis Date: 12/23/2016 10:05:00 A SeqNo: 992357	Prep Date:		
Analyte		QC Sample Result	귊	Units	QC Spike Original Sample Amount Result	inal Sample Result	%REC	LowLimit	C HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ð
Æ		6.51	0	pH Units	0	0	0	0	0	6.5	0.154	ໝ	I

NA - Not applicable where J values or ND results occur B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

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

J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit

Qualifiers:

<sup>27</sup> 

Date: 10-Jan-17

CLIENT: C: Work Order: 16	Charles C 1612041	Charles Castelluccio Consulting, LLC	g, LLC			7				QC SUMMARY REPORT	MARY	REPO	<b>₩</b>
Project: Yi	TC Nor	YRC North Reading									Sample	Sample Matrix Spike	ike
Sample ID: 1612041-03ams	3ams	Batch ID: 27124	Test Code: <b>E200.7</b>	E200.7	Units: µg/L			Analysis	late: 12/27/2	Analysis Date: 12/27/2016 8:06:00 PM	Pren Date	Prec Date: 42/27/2016	H
Client ID: Midfluent			Run ID:	ICP-OPT	ICP-OPTIMA_161227A			SeqNo:	992304				
Analyte		QC Sample Result	굲	Units	QC Spike Original Sample Amount Resutt	al Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDI imit	Ğ
Iron		3789	100	hg∕L	4004	12.34	94.3	20	130	0			<b>\$</b>
Sample ID: 1612041-03amsd	3amsd	Batch ID: 27124	Test Code: E200.7	E200.7	Units: µg/L			Analysis D	ate: 12/27/2	Analysis Date: 12/27/2016 8:12:42 PM	Prep Date	Prep Date: 12/27/2016	
Client ID: Midfluent			Run ID:	ICP-OPT	ICP-OPTIMA_161227A			SeqNo:	992305		•		
Analyte		QC Sample Result	굺	Units	QC Spike Original Sample Amount Result	al Sample Result	%REC	LowLimit	CowLimit HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Ö
Iron		4094	001	µg∕L	4004	12.34	102	20	130	3789	7.73	8	
Sample ID: 1612041-01BMS Client ID: Influent	1BMS	Batch ID: R59145	Test Code: E300	E300 Un	Units: mg/L			Analysis D	ate: 1/4/201	Analysis Date: 1/4/2017 10:49:18 AM	Prep Date:		
		OC Sample		בא ה	OC Snike Origina	Species is		SedNo:	992755				
Analyte	Ď	Result	교	Units	Amount Result	Result	%REC	LowLimit	HighLimit	Onginal Sample or MS Result	%RPD	RPDLimit	Ö
Chloride		655.3	10	mg/L	250	387	107	89	134	0			
Sample ID: 1612041-03ams	зать	Batch ID: 27127	Test Code: E245.1	E245.1	Units: µg/L			Analysis D.	ate: 12/28/2	Analysis Date: 12/28/2016 5:41:03 PM	Prep Date:	Prep Date: 12/28/2016	ı
Client ID: Midfluent			Run ID:	HGFIMS	HG-FIMS_161228A			SeqNo:	992506		•		
Analyte		QC Sample Result	ᄙ	Chits	QC Spike Original Sample Amount Result		%REC	LowLimit	C HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ŏ
Mercury		4.385	0.20	hg/L	4	0	110	2	130	0			

B - Analyte detected in the associated Method Blank NA - Not applicable where J values or ND results occur

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

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

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

Qualifiers:

Date: 10-Jan-17

Sample Matrix Spike Duplicate QC SUMMARY REPORT

Charles Castelluccio Consulting, LLC CLIENT:

1612041 Work Order: Project:

YRC North Reading

												ı
Sample ID: 1612041-03amsd	Batch ID: 27127	Test Code: E245.1	E245.1	Units: µg/L	<b>1</b>		Analysis D	ate: 12/28/20	Analysis Date: 12/28/2016 5:44:51 PM Prep Date: 12/28/2016	Preo Date	12/28/2016	
Client ID: Midfluent		Run ID:	HG-FIRS	HG-FIMS_161228A			SeqNo:	992507				
	QC Sample			QC Spike Original Sample	nal Sample			0	Original Sample			
Analyte	Result	궚	Units	Amount	Result	%REC	LowLimit	HighLimit	Result %REC LowLimit HighLimit or MS Result	%RPD	%RPD RPDI imit	Č
Mercury	4.362	0.20	J/6rl	4	0	109	22	130	4.385	0.532	20	š

29

S - Spike Recovery outside accepted recovery limits J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit

Qualifiers:

R - RPD outside accepted recovery limits RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

B - Analyte detected in the associated Method Blank

NA - Not applicable where J values or ND results occur



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

February 08, 2017

### **ANALYTICAL TEST RESULTS**

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.

Date: 08-Feb-17

CLIENT: Charles Castelluccio Consulting, LLC

Project: YRC North Reading

**Lab Order:** 1701022 **Date Received:** 1/24/2017

_			
Lab Sample ID	Client Sample ID	Collection Date	Collection Time
170 1022-01A	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
170 1022-02B	Influent	1/24/2017	10:40 AM
1701022-03A	Trip Blank	1/24/2017	12:00 AM

~
~
1
-6
e,
K,
Т.
8
0

TCLP Date Analysis Date 1/24/2017 1/24/2017 1/24/2017 1/24/2017 1/24/2017 Batch ID 7102/2/2 7102/2/2 R59212 R59249 R59249 R59207 R59207 R59212 R59212 DATES REPORT Prep Date 1/24/2017 1/24/2017 1/24/2017 MCP VOCs 8260C, EPA 5030C MCP VOCs 8260C, EPA 5030C MCP VOCs 8260C, EPA 5030C Ion Chromatography, EPA 300 Ion Chromatography, EPA 300 Standard Methods - pH, Water Standard Methods - pH, Water Preparatory Test Name Analytical Test Name **EPA 5030B EPA 5030B EPA 5030B** Aqueous Matrix 1/24/2017 10:15:00 AM 1/24/2017 10:40:00 AM Collection Date 1/24/2017 Charles Castelluccio Consulting, LLC YRC North Reading Client Sample ID 1701022 Trip Blank Effluent Influent Lab Order: 1701022-01A 1701022-03A 1701022-01B 1701022-02A 1701022-02B Sample ID Project: 3 Client:

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. (A)	Project Name: Regel m		Project MA	4		Project Menager:	Inagér:	H,	$  \   \  $	1		Sandlers (Sighty he).	1		AMRO Project No.	No.:
**			State: 1	<u>.</u>											110+1	1/1/
r.O.#:	Results Needed by:	,					1	ROUL	REQUESTED	ANALYSES	YSES			!	Remarks	S
	- Share								L		-			L		
											-		200			
QUOTE #:	al Inta		ą						20		,		us.		_	
	Xes No N/A		zis							77,975						
			וני פצ		<u> </u>											
	Date/Time		Con		0	7					2					
Sample ID.:	Sampled	x	jo #	•	2/	_			.0.3							
•	•	ittsM	[R10]	Comp Grab		lall		_			-					
14 No	12117 DIS	×	<b>M</b>	.P	7		F	+	1		-		-			
JAN CES	011 1117	Z	~	X	7					$\vdash$	+		+			Ī
mod divi			V		7								+			
Ô								+		L	+		-			
4								$\vdash$					+	-		
												_				T
								+			-					T
								-			$\vdash$		_			
								-			_		L			
				$\exists$				H			Н	П				
Preservative: CI-HCI, MeOH, N-HN03, S-H2SO4, Na-NaOH, O-Other	N-HN03, S-H2SO4, N	a-NaOH, O-	Other					H								
Send Results To:	Darres Co	PRIORITY TURNAROUND TIME AUTHORIZATION	JRNAROUNI	TIME	AUTHORIZ	ATTON	METALS	İ	8 RCRA	<u> </u>	13 PP		23 TAL		14 MCP	
المراجعة المحمد	-l	before submitting samples for expedited 1A1, you must have a coded AITHORIZATION NITMREP	AITHORIZ	or exped	IIICO IAI,)	on must	Method:	3	6010	7.00.7		Odber	Other Metals:			,
		AUTHORIZATION No.:	TTON No.:		BY:		Dissolved Metals Field Filtered?	Metals 1	Field Filt	ered?		YES		No.		
PHONE #478-305-1123	YY FAX#:						MCP Presymptive Certainty Required?	symptive	r Certain	ty Requi	ired?	MCP	MCP Methods Needed:	Veeded:	Required Reporting Limits:	Limits
t-mail:				L			VES	2				YES	NO	N C		Q
Relinguished Be		Date/Time	Time	1			Received By					AMR	AMRO report package	package		
and the		1/24/7	1270	<u> </u>	10x10x	-						level	level needed:		]S-3	
11 / ( // Chieston		1/1/1/2	150	1	+	Ŋ	K		1			<u>ED</u>	EDD required:		Other:	
Please print clearly, legibly and completely. Samples can no	pletely. Samples can not		Samples arriving a	ving aft	fer 12:00 noon n		III be tracked and billed as	illed as	F	IRO poli	Cy requi	res notifi	II AMRO policy requires notification in writing to	vriting to	IKNOWN SITE	
be logged in and the turnaround time clock will not start until any ambiguities are resolved.	ne clock will not start unt		received on the following day.	he follo	ving day.				45	lected for	ory in ca.	ises when	the laboratory in cases where the samples were collected from highly contaminated sites.	les were	CONTAMINATION:	- ino
White: Lab Copy	Yellow: Client Copy						SHEET		OF			AMROC	AMROCOC2004, Rev.3 08/18/04	v.3 08/18/04		

# **AMRO Environmental Laboratorles Corporation**

# SAMPLE RECEIPT CHECKLIST

111 Herrick Street Merrimack, NH 03054

				(603) 424-2022
Client: Charles Castell acces	AMRO		/	701022
Project Name: YRC North Reading	Date Re	c.:		-24-14
Ship via: (circle one) Fed Ex., UPS, AMRO Courier,	Date Du	e:	<u></u>	31-17
Hand Del., Other Courier, Other:				
Items to be Checked Upon Receipt	Yes	` No	NA	Comments
Army Samples received in individual plastic bags?			V	
2. Custody Seals present?			\ 	
3. Custody Seals Intact?			\ <u>\</u>	40
4. Air Bill included in folder if received?				
5. Is COC included with samples?	7			
6. Is COC signed and dated by client?	V			
7. Laboratory receipt temperature TEMP = 5°C				
Samples rec. with ice ice packs neither				
8. Were samples received the same day they were sampled?	1/	<del>                                     </del>		
ls client temperature = or <6°C?	1			
If no obtain authorization from the client for the analyses.				
•			-	<del></del>
	<u> </u>			
9. Is the COC filled out correctly and completely?	V .			
10. Does the info on the COC match the samples?	<u> </u>			
11. Were samples rec, within holding time?	<u> </u>	ļ		
12. Were all samples properly labeled?	V		33	
13. Were all samples properly preserved?	J		_	
14. Were proper sample containers used?	J			
15. Were all samples received intact? (none broken or leaking)	V			
16. Were VOA vials rec. with no air bubbles?				
17. Were the sample volumes sufficient for requested analysis?	7			
18. Were all samples received?	V	i		
19. VPH and VOA Soils only:			V	1/12
19. VPH and VOA Soils only:  Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container)			V	141
l		, D= DI wa		182
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container)		, D= DI w		142
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo		, D= D1 w		<b>\rangle</b>
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo If M, SB, DI:		, D= D1 wa		<b>V</b> 2
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo If M, SB, DI: Does preservative cover the soil?		, D= DI w		<b>V</b> 2
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo If M, SB, DI: Does preservative cover the soil? Does preservation level come close to the fill line on the vial?		, D= DI w		<b>V2</b>
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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?		, D= DI w		
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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?	re, B=Bulk			<b>V</b>
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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 obtaine	re, B=Bulk			<b>V</b>
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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 obtaine Was dry weight aliquot provided?	re, B=Bulk	nt		<b>Va</b>
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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 obtaine Was dry weight aliquot provided?  If NO then notified client and inform	re, B=Bulk	nt	ater	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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 was dry weight aliquot provided?  If NO then notified client and inform  20. Subcontracted Samples:	re, B=Bulk	nt		
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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 obtaine Was dry weight aliquot provided?  If NO then notified client and inform  20. Subcontracted Samples: What samples sent:	re, B=Bulk	nt	ater	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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 obtaine Was dry weight aliquot provided?  If NO then notified client and inform  20. Subcontracted Samples: What samples sent: Where sent:	re, B=Bulk	nt	ater	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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 obtaine Was dry weight aliquot provided?  If NO then notified client and inform  20. Subcontracted Samples: What samples sent: Where sent: Date:	re, B=Bulk	nt	ater	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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 obtaine Was dry weight aliquot provided?  If NO then notified client and inform  20. Subcontracted Samples: What samples sent: Where sent: Date: Analysis:	re, B=Bulk	nt	ater	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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 obtaine Was dry weight aliquot provided?  If NO then notified client and inform  20. Subcontracted Samples: What samples sent: Where sent: Date: Analysis: TAT:	re, B=Bulk	nt	ater	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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 obtaine Was dry weight aliquot provided?  If NO then notified client and inform  20. Subcontracted Samples: What samples sent: Where sent: Date: Analysis: TAT:	d from clie	nt	ater	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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 obtaine Was dry weight aliquot provided?  If NO then notified client and inform  20. Subcontracted Samples: What samples sent: Where sent: Date: Analysis: TAT:  21. Information entered into: Internal Tracking Log?	re, B=Bulk	nt	ater	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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 obtaine Was dry weight aliquot provided?  If NO then notified client and inform  20. Subcontracted Samples: What samples sent: Where sent: Date: Analysis: TAT:  21. Information entered into: Internal Tracking Log? Dry Weight Log?	d from clie	nt	ater	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo If M, SB, Dl: Does preservative cover the soil? Does preservation level come close to the fill line on the vial? Date/Time Dl Preserved vials Frozen on: Frozen by Client? Were vials provided by AMRO?  If NO then weights MUST be obtaine Was dry weight aliquot provided?  If NO then notified client and inform  20. Subcontracted Samples: What samples sent: Where sent: Date: Analysis: TAT:  21. Information entered into: Internal Tracking Log? Dry Weight Log? Client Log?	d from clie	nt	ater	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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 obtaine Was dry weight aliquot provided?  If NO then notified client and inform  20. Subcontracted Samples: What samples sent: Where sent: Date: Analysis: TAT:  21. Information entered into: Internal Tracking Log? Dry Weight Log?	d from clie	nt	ater V	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo If M, SB, Dl: Does preservative cover the soil? Does preservation level come close to the fill line on the vial? Date/Time Dl Preserved vials Frozen on: Frozen by Client? Were vials provided by AMRO?  If NO then weights MUST be obtaine Was dry weight aliquot provided?  If NO then notified client and inform  20. Subcontracted Samples: What samples sent: Where sent: Date: Analysis: TAT:  21. Information entered into: Internal Tracking Log? Dry Weight Log? Client Log?	d from clie	nt	V	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo 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 obtaine Was dry weight aliquot provided?  If NO then notified client and inform  20. Subcontracted Samples: What samples sent: Where sent: Date: Analysis: TAT:  21. Information entered into: Internal Tracking Log? Dry Weight Log? Composite Log? Filtration Log? Received By:	d from clie	nt ab ASAP.	V	- 24-17
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight container) Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=EnCo  If M, SB, Dl:  Does preservative cover the soil?  Does preservation level come close to the fill line on the vial?  Date/Time Dl Preserved vials Frozen on:  Frozen by Client?  Were vials provided by AMRO?  If NO then weights MUST be obtaine  Was dry weight aliquot provided?  If NO then notified client and inform  20. Subcontracted Samples:  What samples sent:  Where sent:  Date:  Analysis:  TAT:  21. Information entered into:  Internal Tracking Log?  Client Log?  Composite Log?  Filtration Log?	d from clie	nt ab ASAP.	V	74-17

# AMRO Environmental Laboratories Corporation

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

Please Circle if: Sample= Soil

AMROID: 1701022

Sample ID Analysis Sample Listed Preserv. Listed Ph Preserv. Added by AMRO of Preserv. Added by AMRO of Preserv. Preserv. Preserv. Added by AMRO of Preserv. Added by Preservative adjusted Acceptable? Added by Preservative Preservative adjusted Acceptable? Preserv.	ample— Son										
Sample ID Analysis Sample Volume Sample ID Analysis Solution ID # Preserv. Added by Solution ID # Preservative adjusted PH Added by Added by Solution ID # Preservative adjusted Added by Solution ID # Preservati	ample= waste	<u> </u>			1		List				Final
Sample ID Analysis Added by Solution ID # Preservative Added pH  Added pH  24 h  24 h  25 h  26 h  27 h  28 h  29 h  20 h  2							II .		Volume	Final	adjusted p
Sample ID Analysis Sample Listed pH* YorN AMRO of Preserv. Added pH 24 h  OA > OBA VOC LYON HU.  OB > OZ B pH, (0			Volume	Dracery	Initial	Accentable?	(I	Solution 1D#			(after 16
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable?	c 1 7D	Aushuis							N .		24 hours
Volume Preserv. Initial Acceptable? Added by Solution ID # Volume argust Acceptable?					- P11	7 07 14	-Allineo	0			27 11001.
Volume Presery. Initial Acceptable? Acceptable? Solution ID # Preservative adjusted Acceptable.	9/14 7/03/1	VUC	LYYUM				//	-1			
Volume Preserv. Initial Acceptable? Acceptable? Acceptable Solution ID # Preservative adjusted Acceptable Acceptable Acceptable Solution ID # Preservative adjusted Acceptable Acceptable Acceptable Solution ID # Preservative adjusted Acceptable Acceptable Solution ID # Preservative Acceptable Acceptable Solution ID # Preservative Acceptable Acceptable Solution ID # Preservative Acceptable Solution ID # Preserv	1167028	PH.CO	500 m	now	an	almost c	necke	7			
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO		γ ´ <u> </u>	<b>1</b>			U					
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO						-					
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO										ı	
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO	,		<del>                                     </del>								
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO					-		<b></b>	-			
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO							<b></b>				
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO							<u></u>				
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO							<u> </u>				
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO				·							
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO	· · · · · · · · · · · · · · · · · · ·										
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO											
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO											
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO	31	ļ					<b></b>				
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO											
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO							<b> </b>				
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO					2.		<u> </u>				
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO											
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO									-		
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable TRO											
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable Added TRO		<u> </u>		•							
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable Added TRO											
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable Added TRO			ļ				<b> </b>				
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable Acceptable Added TRO							<b> </b>				
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable Acceptable Added TRO	•		100								
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable Acceptable Added TRO							1				
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable Acceptable Added TRO				1.5							
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable Accepta											
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable Acceptable Added TRO		[			1		List		1		
Volume Preserv. Initial Acceptable? Added by Solution ID # Preservative adjusted Acceptable Added by Solution ID # Preservative Added Added By Solution ID		ŀ	2/3				FI .		Volume	Final	
TDC V			Volume	Preserv.	Initial	Acceptable?		Solution ID#			Acceptable
Sample ID Analysis - A	Sample ID	Anglucia	ا ما								Y or N
	Sample 10	Viigilani	p		1						
	<del></del>		10							-	
					<u> </u>						
							<u> </u>				
, I I I I I I I I I I I I I I I I I I I								it.			

* = 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 B	y: (G)	Date: 12417	pH adjusted By:	Date:
•		<del></del>	<del>-</del>	
pH Checked B	v:	Date: pH	I adj.(16 or 24hrs)By:	Date:
pri Chocket B				-

Date: 08-Feb-17

CLIENT:

Charles Castelluccio Consulting, LLC

Project:

YRC North Reading

Lab Order:

1701022

CASE NARRATIVE

## 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.

		Ma	ssDEP Analytic	al Protocol Certifi	cation Form	
Labo	oratory Na	ame: AMRO Enviro	nmental Lab. Corp	).	Project #:	
Proj	ect Locati	on: JRCN	forth Read	ling	RTN:	8
This	Form pro	vides certificatio	ns for the following $-\mathcal{O} / - \mathcal{O}$	ng data set: list Lab	oratory Sample ID Nu	mber(s):
Matri	ces: 🏻 Gı				Water ☐ Air ☐ Other:	
CAN	Protoc	ol (check ail that a	oply below):			
8260 CAM	VOÇ 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
	SVOC II B [	7010 Metais CAM III C	MassDEP EPH CAM IV B	8151 Herblcides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
	Metals III A 🗆	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchiorate CAM VIII B	
	A <i>ffirmati</i> v	ve Responses to (	Questions A thro	ugh F are required t	for "Presumptive Certa	ainty" status
A	Custody,		ed (including tem		cribed on the Chain-of- id or laboratory, and	Yes 🗆 No
В		e analyticai method( tocoi(s) foilowed?	s) and all associate	ed QC requirements s	specified in the selected	Yes II No
С				cal response actions of the community of	specified in the selected n-conformances?	Yes 🗆 No
D	Does the "Quality Analytica	Assurance and Qu	omply with all the ruality Control Guid	eporting requirements elines for the Acquis	specified in CAM VII A, sition and Reporting of	Yes □ No
E	a. VPH, modifical	tion(s)? (Refer to the	lethods only: Was Individual method(s	s each method condu s) for a list of significant ete analyte list reporte	ucted without significant t modifications). d for each method?	Yes II No
ا	Were all and eval	applicable CAM pro uated in a laboratory	otocoi QC and performantive (including	ormance standard non ali "No" responses to (	-conformances identified Questions A through E)?	Yes ill No
Res		<u>-</u>			ımptive Certainty" sta	tus
G	Were the protocol(		r below all CAM repo	orting limits specified in	the selected CAM	Yes Ii No¹
				ainty" status may not no IR 40. 1 <sub>.</sub> 056 (2)(k) and W	ecessarily meet the data us SC-07-350.	ability and
H	Were all	QC performance sta	indards specified in	the CAM protocoi(s) ad	chleved?	I.] Yes X No
1	Were res	ults reported for the	complete analyte lis	t specified in the selec	ted CAM protocol(s)?	Yes ⊟ No¹
¹All r	negative re	esponses must be a	iddressed in an atta	ached laboratory narr	ative.	
respor	nsible lor d	ed, attest under the btaining the information and complete.	pains and penaition, the material co	es of perjury that, ba entained in this analytic	sed upon my personal li cal report is, to the best of	nquiry of those f my knowledge
Sign	ature:	ling	d-h	Position	on: Vice President	
Print	ed Name	: Nancy Stewart		8 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.
- 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.

Date: 08-Feb-17

**CLIENT:** 

Charles Castelluccio Consulting, LLC

Lab Order:

1701022

Client Sample ID: Effluent

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
OLATILE ORGANIC COMPOUND	S 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 PN
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
Bromodichioromethane	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 PN
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	NĐ	2.0		μg/L	1	1/24/2017 5:39:00 PN
1,1-Dichloroethene	ND	1.0		μg/L	1	1/24/2017 5:39:00 PN
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 7	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

Date: 08-Feb-17

CLIENT:

Charles Castelluccio Consulting, LLC

1701022

Client Sample ID: Effluent

Lab Order:

Coilection 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
Hexachiorobutadiene	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 PN
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 PN
n-Propyibenzene	ND	2.0	μg/L	1	1/24/2017 5:39:00 PN
Styrene	ND	2.0	µg/L	1	1/24/2017 5:39:00 PN
1,1,1,2-Tetrachloroethane	ND	2.0	µg/L	1	1/24/2017 5:39:00 PN
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1	1/24/2017 5:39:00 PN
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 PN
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 PN
1,1,2-Trichloroethane	ND	2.0	μg/L	1	1/24/2017 5:39:00 PN
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 PN
1,2,3-Trichloropropane	ND	2.0	μg/L	1	1/24/2017 5:39:00 PN
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

Date: 08-Feb-17

CLIENT:

Charles Castelluccio Consulting, LLC

Lab Order:

1701022

Client Sample 1D: Influent

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
OLATILE ORGANIC COMPOUND	S 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 PN
Benzene	ND	1.0		µg/L	1	1/24/2017 6:19:00 PN
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 PN
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
Bromomethane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
sec-Butylbenzene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
n-Butylbenzene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
tert-Butylbenzene	ND	2.0		μg/L	1	1/24/2017 6:19:00 PN
Carbon disulfide	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Carbon tetrachloride	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Chlorobenzene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PN
Dibromochloromethane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PN
Chloroethane	ND	5.0		µg/L	1	1/24/2017 6:19:00 PN
Chloroform	ND	2.0		µg/L	1	1/24/2017 6:19:00 PN
Chloromethane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PN
2-Chlorotoluene	ND	2.0		μ <b>g/L</b>	1	1/24/2017 6:19:00 PM
4-Chlorotoluene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PN
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	1/24/2017 6:19:00 PN
1,2-Dibromoethane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
Dibromomethane	ND	2.0		µg/L	1	1/24/2017 6:19:00 PM
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 PN
cis-1,2-Dichloroethene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PN
trans-1,2-Dichloroethene	ND	2.0		µg/L	1	1/24/2017 6:19:00 PN
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 PN
cis-1,3-Dichloropropene	ND	1.0		μg/L	1	1/24/2017 6:19:00 PN
trans-1,3-Dichloropropene	ND	1.0		μg/L	1	1/24/2017 6:19:00 PN
Diethyl ether	ND	5.0		µg/L	1	1/24/2017 6:19:00 PM

Date: 08-Feb-17

CLIENT:

Charles Castelluccio Consulting, LLC

1701022

Client Sample ID: Influent

Lab Order:

Collection Date: 1/24/2017 10:40:00 AM

Project:

YRC North Reading

Matrix: AQUEOUS

Lab ID:

1701022-02A

Analyses	Resuit	RL	Qual Units	DF	Date Analyzed
Disopropyl ether	ND	2.0	µg/L	1	1/24/2017 6:19:00 PM
1,4-Dioxane	ND	50	μg/L	1	1/24/2017 6:19:00 PM
Ethyl Tertlary 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
Isopropyibenzene	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 PN
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	1/24/2017 6:19:00 PN
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 PN
Toluene	ND	2.0	μg/L	1	1/24/2017 6:19:00 PN
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 PN
1,1,2-Trichloroethane	ND	2.0	μg/L	1	1/24/2017 6:19:00 PN
Trichloroethene	6.6	2.0	µg/L	1	1/24/2017 6:19:00 PN
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 PN
o-Xylene	ND	2.0	μg/L	1	1/24/2017 6:19:00 PN
m,p-Xylene	ND	2,0	µg/L	1	1/24/2017 6:19:00 PN
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 PN
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

Date: 08-Feb-17

CLIENT:

Charles Castelluccio Consulting, LLC

Lab Order:

1701022

Client Sample ID: Trip Blank

Collection Date: 1/24/2017

Project:

YRC North Reading

Matrix: AQUEOUS

Lab ID:

1701022-03A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUND	S 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 PN
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 PN
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 PN
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 PN
tert-Butylbenzene	ND	2.0		μg/L	1	1/24/2017 4:59:00 PN
Carbon disulfide	ND	2.0		µg/L	1	1/24/2017 4:59:00 PN
Carbon tetrachloride	ND	2.0		μg/L	1	1/24/2017 4:59:00 PN
Chlorobenzene	ND	2.0		μg/L	1	1/24/2017 4:59:00 PN
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 PN
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-Dichioropropane	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

Date: 08-Feb-17

CLIENT:

Charles Castelluccio Consulting, LLC

Lab Order:

1701022

Client Sample ID: Trip Blank

Collection Date: 1/24/2017

Project:

YRC North Reading

Matrix: AQUEOUS

Lab ID:

1701022-03A

Analyses	Result	$\mathbf{RL}$	Qual Units	DF	Date Analyzed
Disopropyl ether	ND	2.0	µg/L	1	1/24/2017 4:59:00 PM
1,4-Dloxane	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 PN
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 PN
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
Tetrachioroethene	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 PN
Toluene	ND	2.0	μg/L	1	1/24/2017 4:59:00 PN
1,2,4-Trichlorobenzene	ND	2.0	μg/L	1	1/24/2017 4:59:00 PN
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	hâ/r	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

Date: 26-Jan-17

CLIENT: Charles	Charles Castelluccio Consulting, LLC	TIC							<b>QC SUMMARY REPORT</b>	MARY	REPO	Ϋ́
Work Order: 1701022	77								,	2	Mathod Diont	1
Project: YRC N	YRC North Reading				20				!	AT		<b>[</b> ]
												1
Sample ID: mb-01/24/17	Batch ID: R59212	Test Co	Test Code: SW8260C	Units: µg/L			Analysis [	late: 1/24/20	Analysis Date: 1/24/2017 4:19:00 PM	Prep Date:	Prep Date: 1/24/2017	
Client ID:		Run 1D:	V-3_170124A	4A			SedNo:	993638				
	QC Sample		•	QC Spike Original Sample	1 Sample				Original Sample			
Analyte	Result	귍	Chrits	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	ð
Acetone	9	10	µ9/L									
Tertiary Amyl Methyl Ether	Q	2.0	µg/L									
Benzene	Q	1.0	μ9/L									
Bromobenzene	Q	2.0	µ9∕L									
Bromochloromethane	2	2.0	µg/L									
Bromodichloromethane	2	2.0	µg/L									
. Вготобет	Q	2.0	7∕6ri									
Bromomethane	2	2.0	µg∕L									
sec-Butylbenzene	2	2.0	µg/L									
n-Butylbenzene	9	2.0	µg/L									
tert-Butylbenzene	2	2.0	µg∕L									
Carbon disulfide	Q	2.0	µg∕L									
Carbon tetrachloride	Q	2.0	µg/L									
Chlorobenzene	<u>Q</u>	2.0	μg⁄L									
Dibromochloromethane	ON	2.0	hg/L									
Chloroethane	QN	5.0	µ9/L									
Chloroform	Q	2.0	µg/L									
Chloromethane	Q	2.0	hg/L									
2-Chiorotoluene	Q	2.0	µg/L									
4-Chiorotoluene	Q	2.0	µ9/L									
1,2-Dibromo-3-chloropropane	SO NO	5.0	µg/L									
1,2-Dibromoethane	S	2.0	µ9∕L									
Dibromomethane	Q	2.0	µg/L									
1,3-Dichlorobenzene	Q	2.0	µg/L									
1,2-Dichlorobenzene	Q	2.0	µg√L		       							
Qualifiers: ND - Not Dete	ND - Not Detected at the Reporting Limit		S - Spike Recov	S - Spike Recovery outside accepted recovery limits	ed recovery	·limits	B - Anal	yte detected ir	B - Analyte detected in the associated Method Blank	hod Blank		
J - Analyte de	J - Analyte detected below quantitation limits		R - RPD outsid	R - RPD outside accepted recovery limits	' limits		NA - No	l applicable w	NA - Not applicable where J values or ND results occur	results occur		
				•								

ė.
Corp
ries
rato
abo
alI
ent
onme
Envir
E E
MR
8

	Citaties Castelluctio Collisuituig, LLC	ווי		
Work Order: 17	1701022			
Project: YI	YRC North Reading			Method Blank
1,4-Dichlorobenzene	QN	2.0	μg/L	
Dichlorodifluoromethane	QN	9.0	µg/L	
1,1-Dichloroethane	Q	2.0	hg/L	
1,2-Dichloroethane	QV	2.0	hg/L	
1,1-Dichloroethene	QV	1.0	hg∕L	
cis-1,2-Dichloroethene	Q	2.0	µg/L	
trans-1,2-Dichloroethene	e ND	2.0	µg/L	
1,2-Dichloropropane	<del>Q</del>	2.0	hg/L	
1,3-Dichloropropane	QN	2.0	µg∕L	
2,2-Dichloropropane	QN	2.0	µg/L	
1,1-Dichloropropene	QN	2.0	µ9∕L	
cis-1,3-Dichloropropene	QN	1.0	µg/L	
trans-1,3-Dichloropropene	ON en	1.0	µg/L	
<ul> <li>Diethyl ether</li> </ul>	QN	9.0	µg/L	
Diisopropyl ether	Q.	2.0	µg/L	
1,4-Dioxane	Q	S	μg/L	
Ethyl Tertiary Butyl Ether		2.0	µg/L	
Ethylbenzene	Q	2.0	µg/L	
Hexachlorobutadiene	Q	2.0	µg/L	
2-Hexanone	ON	9	µ9/L	
Isopropylbenzene	Q	2.0	µg/L	
4-Isopropyltoluene	QN	2.0	hg∕L	
2-Butanone	QV	5	hg/L	
4-Methyt-2-pentanone	Q	5	µg/L	
Methyl tert-butyl ether	Q	2.0	μg/L	
Methylene chloride	Q	5.0	µg/L	
Naphthalene	Q	5.0	µg/L	
n-Propylbenzene	Q	2.0	µg/L	
Styrene	QN	2.0	µg/L	
1,1,1,2-Tetrachloroethane	ine ND	2.0	µg/L	
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	
Qualifiers: ND-No	ND - Not Detected at the Reporting Limit		S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
J - Analy	J - Analyte detected below quantitation limits		R - RPD outside accepted recovery limits	NA - Not applicable where I values or ND results occur

CLIENT: Charles C Work Order: 1701022 Project: YRC No	Charles Castelluccio Consulting, LLC 1701022 YRC North Reading	ng, LLC						OÒ	QC SUMMARY REPORT Method Blank
Tetrachlomethene Tetrahydrofuran	O Q	2.0	ug/L						
Toluene	9	2.0	rg/L						
1,2,4-Trichlorobenzene 1,2,3-Trichlorobenzene	<u>8</u> 8	2:0 2:0	176/L 116/L						
1,1,1-Trichloroethane	Q	2.0	hg/L						
1,1,2-Trichloroethane	Q	2.0	µg/L						
Trichloroethene	9	2.0	hg/L						
Trichlorofluoromethane	Q	2.0	hg/L						
1,2,3-Trichioropropane	Q.	2.0	hg/L						
1,2,4-Trimethylbenzene	문	2.0	µg/L						
1,3,5-Trimethylbenzene	Q	2.0	µg/L						
Vinyl chloride	오	2.0	hg/L						
o-Xylene	g	2.0	µ9∕L						
m,p-Xylene	9	2.0	µg/L						
Surr. Dibromofluoromethane	25.03	2.0	µg/L	25	0	9	20	130	0
Surr: 1,2-Dichloroethane-d4	29.81	2.0	µ9/L	25	0	119	20	130	0
Surr. Toluene-d8	24.63	2.0	µg∕L	52	0	98.5	20	130	0
Surr. 4-Bromofluorobenzene	23.48	2.0	T/Grl	25	0	93.9	20	130	0

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

NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

CLIENT:	Charles C	Charles Castelluccio Consulting, LLC	rrc							<b>QC SUMMARY REPORT</b>	MARY	<b>REPO</b>	RT
Work Order:	1701022									ر ا	I showstowy Control Snile	Control Co	ile
Project:	YRC Nor	YRC North Reading								ופיז	Julation	de ionilo	¥
					Hand Salah			S. cicules A.	100 41241204	Analysis Date: 419419047 9-40-60 DM	Orang Option	Date: 4/24/2047	Ī
Sample ID: Ics-01/24/17	4117	Batch ID: R59212	lest Code	Lest Code: SW8260C	Omics: pg/L			Circles C	מוס. וובייובטו	II 2:13:00 LW	20.		
Client ID:			Run (D:	V-3_170124A	4			SedNo:	993640				
		QC Sample		J	QC Spike Original Sample	I Sample			U	Original Sample			
Analyte		Result	귎	Onits	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Ö
Acetone		43.79	9	rg/L	40	0	109	40	160	0			
Tertiary Amyl Methyl Ether	! Ether	19.84	2.0	µg/L	20	0	99.2	20	130	0			
Benzene		19.23	1.0	µg/L	20	0	96.2	20	130	0			
Bromobenzene		21.59	2.0	rg/L	20	0	108	2	130	0			
Bromochloromethane	ð	17.95	2.0	µg/L	20	0	83.8	2	130	0			
Bromodichloromethane	ane	19.23	2.0	µg/L	20	0	96.2	2	130	0			
1 Bromoform		18.92	2.0	µg∕L	20	0	94.6	2	130	0			
G Bromomethane		16.97	2.0	µg∕L	20	0	84.8	4	160	0			
sec-Butylbenzene		18.53	2.0	µg/L	20	0	92.6	2	<b>€</b>	0			
n-Butylbenzene		20.88	2.0	µg/L	20	0	\$	2	130	0			
tert-Butylbenzene		20.24	2.0	µ9∕L	29	0	턴	2	130	0			
Carbon disulfide		14.29	2.0	µg/L	8	0	71.5	2	130	0			
Carbon tetrachloride	ø.	18.43	2.0	µg∕L	20	0	92.2	2	130	0			
Chlorobenzene		20.68	2.0	µg/L	70	0	103	20	130	0			
Dibromochloromethane	ane	19.06	2.0	hg/L	20	0	95.3	2	130	0			
Chloroethane		14.02	5.0	µg/L	20	0	70.1	2	130	0			
Chloroform		18.87	2.0	ng/L	20	0	94.4	2	130	0			
Chloromethane		19.44	2.0	µg/L	20	0	97.2	4	160	0			
2-Chlorotoluene		21.4	2.0	рg/Ľ	20	0	107	2	130 02	0			
4-Chiorotoluene		21.64	2.0	µg∕L	20	0	108	20	130	0			
1,2-Dibromo-3-chloropropane	ropropane	23	5.0	µ9∕L	20	0	115	20	130	0			
1,2-Dibromoethane		19.08	2.0	µg/L	20	0	95.4	2	130	0			
Dibromomethane		18.5	2.0	µg/L	20	0	92.5	2	130	0			
1,3-Dichlorobenzene	•	20.44	2.0	µ9∕L	20	0	102	2	130	0			
1,2-Dichlorobenzene	Ф	22.39	2.0	µg/L	20	0	112	2	130	0	1		
Qualifiers: ND-	Not Detecte	ND - Not Detected at the Reporting Limit	S	- Spike Recov	S - Spike Recovery outside accepted recovery limits	ed recovery	· Jimits	B - Analy	te detected in	B - Analyte detected in the associated Method Blank	hod Blank		
<b>∀-</b> [	nalyte detect	I - Analyte detected below quantitation limits		: - RPD outside	R - RPD outside accepted recovery limits	, limits		NA - Not	annlicable wh	NA - Not applicable where I values or ND results occur	results occur		
1				1	•			*** - 1 ***	appuramu				

AMRO Environmental Laboratories Corp.

CLIENT:	Charles Castelluccio Consulting, LLC	ng, LLC						OC SUMMARY REPORT	ORT
Work Order:	1701022						Y		! ! :
Project:	YRC North Reading							Laboratory Control Spike	Spike
1,4-Dichlorobenzene	50.9	2.0	µg/L	20	0 104	02	130	0	
Dichlorodifluoromethane	18.65	5.0	µg∕L	29	0 93.3	4	160	0	
1,1-Dichloroethane	18.79	2.0	µg∕L	20	0	20	130	0	
1,2-Dichloroethane	19.53	2.0	µg/L	29	0 97.6	20	130	0	
1,1-Dichloroethene	18.3	0.	µg/L	20	0 91.5	70	130	0	
cis-1,2-Dichloroethene	ne 18.62	2.0	μg/L	20	0 93.1	02	130	0	
trans-1,2-Dichloroethene	hene 18.94	2.0	идл	20	0 94.7	70	130	0	
1,2-Dichloropropane	77.71	2.0	hg/L	20	0 88.8	92	130	0	
1,3-Dichloropropane	20.82	2.0	hg∕L	20	0 104	20	130	0	
2,2-Dichloropropane	22.75	2.0	hg/L	20	0 114	70	130	0	
1,1-Dichloropropene	18.3	2.0	µg/L	8	0 91.5	20	130	0	
cis-1,3-Dichloropropene	17.43	0.1	µg/L	20	0 87.2	02	130	0	
trans-1,3-Dichloropropene	opene 17.29	0.1	µ9∕L	20	0 86.5	22	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	2	130	0	
1,4-Dioxane	101.6	<u>2</u> 2	μg/L	100	0 102	9	160	0	
Ethyl Tertiary Butyl Ether	Ether 19.99	2.0	μg/L	20	0 100	70	130	0	
Ethylbenzene	20.43	2.0	µ9/L	20	0 102	92	130	0	
Hexachlorobutadiene	le 16.71	2.0	h9/L	20	0 83.6	70	130	0	
2-Hexanone	49.61	9	ъдуг	40	0 124	40	160	0	
isopropylbenzene	20.78	2.0	h9∕L	20	0 104	20	130	0	
4-isopropyltofuene	20.77	2.0	µ9∕L	20	0	92	130	0	
2-Butanone	48.23	9	₽9⁄L	40	0 121	4	160	0	
4-Methyl-2-pentanone	ne 43.43	<b>6</b>	µ9/L	40	0 109	4	160	0	
Methyl tert-butyl ether	er 19.6	2.0	µ9/L	8	0 98	92	130	0	
Methylene chloride	20.93	5.0	µg/f.	20	0 105	92	130	0	
Naphthalene	21.2	5.0	µ9/L	20	0 106	92	130	0	
n-Propylbenzene	21.19	2.0	µ9/L	20	0 106	02	130	0	
Styrene	18.97	2.0	hg/L	20	0 94.8	02	130	0	
1,1,1,2-Tetrachloroethane	sthane 19.96	2.0	hg∕L	20	0 99.8		130	0	
1,1,2,2-Tetrachloroethane	athane 21.1	2.0	µg/L	50	0 106	20	130	0	
Qualifiers: ND-	ND - Not Detected at the Reporting Limit		S - Spike Recover	S - Spike Recovery outside accepted recovery limits	ecovery limits	B - Analyte	detected in the as	B - Analyte detected in the associated Method Blank	
J-A	J - Analyte detected below quantitation limits	its	R - RPD outside	R - RPD outside accepted recovery limits	nite	ALA MAA	1		
:				···· (································	2	NA - NO.	pplicable wnere J v	NA - Not applicable where J values or ND results occur	

AMRO Environmental Laboratories Corp.

, <b>.</b> ,	CLIENT:	Charles Castelluccio Consulting, LLC	cio Consulting,	,LLC							QC SUMMARY REPORT
_	Work Order: Droiset:	1/01022 VRC North Reading	.5								Laboratory Control Spike
- a	nofer.	I INC INDIAN INCA	9111								,
	Tetrachloroethene		20.93	2.0	₽9⁄L	8	0	105	29	130	0
,-	Tetrahydrofuran		17.58	5	µg/L	20	0	67.9	2	130	0
•-	Toluene		19.48	2.0	μg/L	20	0	97.4	20	130	0
•	1,2,4-Trichlorobenzene	епе	18.4	2.0	µ9/L	8	0	35	20	130	0
•	1,2,3-Trichlorobenzene	ene	21.27	2.0	μg/L	20	0	106	2	130	0
•	1,1,1-Trichloroethane	36	20.66	2.0	µg/L	70	0	103	2	130	0
-	1,1,2-Trichloroethane	je je	18.58	2.0	µ9/L	20	0	92.9	20	130	٥
•	Trichloroethene		19.38	2.0	µg/L	20	0	6.96	2	130	0
•	Trichlorofluoromethane	ane	21.67	2.0	µg/L	20	0	108	2	130	0
-	1,2,3-Trichloropropane	ane	24.04	2.0	µg/L	20	0	120	20	130	0
	1,2,4-Trimethylbenzene	zene	21.73	2.0	µg/L	20	0	109	2	130	0
	1,3,5-Trimethylbenzene	zene	20.69	2.0	µg/L	20	0	103	2	130	0
-	Vinyl chloride		18.05	2.0	µg∕L	20	0	90.2	2	130	0
1	o-Xylene		19.33	2.0	µg/L	20	0	296.7	2	130	0
_	m,p-Xylene		39.64	2.0	µg∕L	40	0	99.1	2	130	0
	Surr: Dibromofluoromethane	oromethane	23.73	2.0	µg/L	25	0	94.9	2	130	0
	Surr: 1,2-Dichloroethane-d4	oethane-d4	24.84	2.0	µg/L	25	0	99.4	29	130	0
	Surr. Toluene-d8		24.3	2.0	μg/L	25	0	97.2	2	130	0
	Surr: 4-Bromofluorobenzene	orobenzene	23.03	2.0	μg/L	25	0	92.1	20	130	0

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

NA - Not applicable where J values or ND results occur

QC SUMMARY REPORT

AMRO Environmental Laboratories Corp.

Charles Castelluccio Consulting, LLC 1701022 Work Order: CLIENT:

Work Order: 1701022 Project: YRC No	1701022 YRC North Reading							Т	Laboratory Control Spike Duplicate	ontrol Spi	ike Duplic	ate
												ı
Sample ID: Icsd-01/24/17	Batch ID: R59212	Test Code:	Test Code: SW8260C	Units: µg/L			Analysis Da	ite: 1/24/201	Analysis Date: 1/24/2017 2:59:00 PM	Prep Date	Prep Date: 1/24/2017	
Client ID:		Run ID:	V-3_170124A	\$			SeqNo:	993639				
	QC Sample		J	QC Spike Original Sample	I Sample			0	Original Sample			
Analyte	Result	궏	Units	Amount	Result %	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	ő
Acetone	43.36	5	µg/L	9	0	108	6	160	43.79	0.987	20	
Tertiary Amyl Methyl Ether	18.51	2.0	J/Grl	20	0	92.6	92	130	19.84	6.94	8	
Benzene	18.12	1.0	µg/L	20	0	90.6	2	130	19.23	5.94	50	
Bromobenzene	20.88	2.0	µg∕L	20	0	\$	70	130	21.59	3.34	2	
Bromochloromethane	16.93	2.0	µg/L	20	0	84.6	2	130	17.95	5.85	70	
Bromodichloromethane	18.82	2.0	µg/L	20	0	94.1	20	130	19.23	2.16	20	
Bromoform	18.12	2.0	µg/L	20	0	90.6	2	130	18.92	4.32	20	
S Bromomethane	15.6	5.0	µg∕L	20	0	78	4	160	16.97	8.41	8	
sec-Butylbenzene	16.72	2.0	μg/L	20	0	83.6	20	130	18.53	10.3	20	
n-Butylbenzene	18.66	2.0	μg/L	20	0	93.3	20	130	20.88	11.2	8	
tert-Butylbenzene	19.09	2.0	hg/L	20	0	95.4	2	130	20.24	5.85	20	
Carbon disulfide	14.1	2.0	µg/L	20	0	70.5	20	130	14.29	1.34	8	
Carbon tetrachloride	18.26	2.0	рg/L	20	0	91.3	2	130	18.43	0.927	20	
Chlorobenzene	19.26	2.0	μg/L	20	0	96.3	20	130	20.68	7.11	20	
Dibromochloromethane	18.21	2.0	µg/L	20	0	91	20	130	19.06	4.56	2	
Chloroethane	12.29	5.0	µg/L	20	0	61.4	2	130	14.02	13.2	20	တ
Chloroform	17.86	2.0	rg/L	20	0	89.3	2	130	18.87	5.5	20	
Chloromethane	18.75	2.0	hg/L	20	0	93.8	4	160	19.44	3.61	20	
2-Chlorotoluene	19.85	2.0	µg/L	20	0	99.2	2	130	21.4	7.52	8	
4-Chlorotoluene	20.25	2.0	ug/L	20	0	101	20	130	21.64	6.64	20	
1,2-Dibromo-3-chloropropane	e 20.44	5.0	ng/L	20	0	102	2	130	23	11.8	20	
1,2-Dibromoethane	4	2.0	µg/L	29	0	8	2	130	19.08	5.83	20	
Dibromomethane	17.58	2.0	rg/L	20	0	87.9	2	130	18.5	5.1	8	
1,3-Dichlorobenzene	18.87	2.0	rg/L	20	0	94.4	2	130	20.44	7.99	20	
1,2-Dichlorobenzene	20.24	2.0	µg/L	20	0	둳	2	130	22.39	10.1	20	
Qualifiers: ND - Not Detec	ND - Not Detected at the Reporting Limit	S	Spike Recov	S - Spike Recovery outside accepted recovery limits	d recovery li	mits	B - Analyte	e detected in 1	B - Analyte detected in the associated Method Blank	od Blank		
J - Analyte dets	J - Analyte detected below quantitation limits	ď	RPD outside	- RPD outside accepted recovery limits	limits		NA - Not a	nnticable whe	NA - Not annijcable where J values or ND results occur	results occur		
		•										

AMRO Environmental Laboratories Corp.

	Charles Castelluccio Consulting, LLC	g, LLC						0	OC SUMMARY REPORT	TARY F	EPORT
Work Order:	1701022							, <u>;</u>			D 1.
Project:	YRC North Reading							Labo	Laboratory Control Spike Duplicate	тоі эріке	: Duplicate
1,4-Dichlorobenzene	19.29	2.0	µ9∕L	20	0 96.5	5.	70	130	20.9	8.01	20
Dichlorodifluoromethane	17.04	2.0	µ9/L	20	0 85.2	Ŋ	40	160	18.65	9.02	20
1,1-Dichloroethane	17.72	2.0	µ9/L	8	0 88.6	φ.	20	130	18.79	5.86	20
1,2-Dichloroethane	18.82	2.0	h9∕L	23	0 94.1	-	70	130	19.53	3.7	20
1,1-Dichloroethene	18.34	1.0	µ9/L	20	0 91.7	۲.	2	130	18.3	0.218	20
cis-1,2-Dichloroethene	e 17.69	2.0	µg/L	70	0 88.4	4	2	130	18.62	5.12	20
trans-1,2-Dichloroethene	ene 17.28	2.0	µg/L	20	0 86.4	4	20	130	18.94	9.17	20
1,2-Dichloropropane	17.21	5.0	µ9/L	70	0	98	20	130	17.71	3.2	20
1,3-Dichloropropane	19.93	2.0	µg/L	8	0 99.7	7:	2	130	20.82	4.37	70
2,2-Dichloropropane	20.51	2.0	µ9∕L	8	0	103	20	130	22.75	10.4	20
1,1-Dichloropropene	16.46	2.0	μg/L	8	0 82.3	6	2	130	18.3	10.6	70
cis-1,3-Dichloropropene	ine 16.32	1.0	µ9/L	8	0 81.6	9.	70	130	17.43	6.58	20
trans-1,3-Dichlompropene	pene 16.13	0.1	µg/L	8	0 80.6	9:	20	130	17.29	6.94	70
Diethyl ether	15.98	9.0	µg/L	20	0 79.9	6.	2	130	16.44	2.84	20
Diisopropyi ether	17.23	2.0	µg/L	70	0 86.2	7	2	130	18.51	7.16	20
1,4-Dioxane	113.6	20	µg/L	100	0	114	9	<del>16</del> 0	101.6	1.1	20
Ethyl Tertiary Butyl Ether	ther 18.97	2.0	µg/L	20	9	94.8	20	130	19.99	5.24	20
Ethylbenzene	19.17	2.0	hg/L	20	0 95	95.8	2	130	20.43	6.36	20
Hexachlorobutadiene	14.13	2.0	hg∕L	20	0 70	9.07	2	130	16.71	16.7	20
2-Hexanone	45.44	6	pg/L	\$	0	114	9	160	49.61	8.77	20
Isopropylbenzene	19.06	2.0	µg/L	20	96	95.3	2	130	20.78	8.63	20
4-Isopropyltoluene	18.62	2.0	µg/L	20	0	93.1	20	130	20.77	10.9	20
2-Butanone	40.94	9	hg∕L	40	0	102	9	<del>5</del>	48.23	16.4	20
4-Methyl-2-pentanone	39.33	2	₽g/L	40	0	98.3	6	160	43.43	9.91	20
Methyl tert-butyl ether	r 18.95	2.0	Lig/L	20	0	94.8	92	130	19.6	3.37	20
Methylene chloride	19.25	5.0	µg/L	20	96 0	96.2	20	130	20.93	8.36	20
Naphthalene	19.96	5.0	µg∕L	20	0	99.8	20	130	21.2	6.03	20
n-Propylbenzene	19.37	2.0	µg/L	20	96	96.8	2	130	21.19	8.97	20
Styrene	17.81	2.0	hg∕L	20	0	89	20	130	18.97	6.31	20
1,1,1,2-Tetrachloroethane	hane 19.04	2.0	µg∕L	20	96 O	95.2	2	130	19.96	4.72	20
1,1,2,2-Tetrachioroethane	hane 20.55	2.0	µg/L	20	0	103	2	130	21.1	2.64	29
Qualifiers: ND-P	ND - Not Detected at the Reporting Limit		S - Spike Recove	S - Spike Recovery outside accepted recovery limits	recovery limits		Analyte de	tected in the as	B - Analyte detected in the associated Method Blank	i Biank	
J-An	J - Analyte detected below quantitation limits	s	R - RPD outside	R - RPD outside accepted recovery limits	imits	Ž	. Not and	. I anadim alduni	NA - Not annicable where I value or ND recults now	allow other	
1		•					17 TATE   17 TATE	Cable with a	AMILES OF IND.	ulls occus	

AMRO Environmental Laboratories Corp.

CLIENT: Work Order:	Charles Castelluccio Consulting, LLC 1701022	io Consulting, I	OTI							QC SUMMARY REPORT	ARY R	EPORT
Project:	YRC North Reading	g.							Labo	Laboratory Control Spike Duplicate	тог эртке	Dupincate
Tetrachloroethene		19.58	2.0	µ9∕L	20	0	97.9	70	130	20.93	6.67	70
Tetrahydrofuran		17.05	9	µg/L	20	0	85.2	2	130	17.58	3.06	20
Toluene		17.6	2.0	µg∕L	20	0	88	2	130	19.48	10.1	20
1,2,4-Trichlorobenzene	ine	16.81	2.0	µg∕L	20	0	\$	2	130	18.4	9.03	20
1,2,3-Trichlorobenzene	ine	18.49	2.0	µg∕L	20	0	92.5	29	130	21.27	14	20
1,1,1-Trichforoethane	Ð	19.18	2.0	bg∕L	20	0	95.9	2	130	20.66	7.43	20
1,1,2-Trichloroethane	Ð	17.12	2.0	µg∕L	20	0	85.6	70	130	18.58	8.18	20
Trichloroethene		18.1	2.0	hg∕L	20	0	90.5	29	130	19.38	6.83	20
Trichlorofluoromethane	me	20.55	2.0	hg/L	20	0	103	20	130	21.67	5.31	20
1,2,3-Trichloropropane	Je	22.82	2.0	hg∕L	20	0	114	92	130	24.04	5.21	20
1,2,4-Trimethylbenzene	ene	20.03	2.0	hg/L	20	0	100	70	130	21.73	8.14	20
1,3,5-Trimethylbenzene	ene	18.85	2.0	µg/L	20	0	94.2	92	130	20.69	9.31	20
Vinyl chloride		15.26	2.0	µg∕L	20	0	76.3	20	130	18.05	16.8	20
o-Xylene		17.94	2.0	µg∕L	20	0	89.7	20	130	19.33	7.46	20
m,p-Xylene		36.92	2.0	µg∕L	40	0	92.3	9	130	39.64	7.11	20
Surr. Dibromofluoromethane	romethane	24.05	2.0	pg/L	25	0	96.2	92	130	0	0	0
Surr. 1,2-Dichloroethane-d4	ethane-d4	27.25	2.0	₽9/L	22	0	109	2	130	0	0	0
Surr. Toluene-d8		23.48	2.0	1,6t	52	0	93.9	2	130	0	0	0
Surr. 4-Bromofluorobenzene	robenzene	23.07	2:0	рg/L	25	0	92.3	20	130	0	0	0

NA - Not applicable where J values or ND results occur

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

Date: 08-Feb-17

CLIENT: Charles Castelluccio Consulting, LLC Lab Order: 1701022

Project: YRC North Reading

Lab ID: 1701022-01 Collection Date: 1/24/2017 10:15:00 AM

Collection Time:

Client Sample ID: Effluent Matrix: AQUEOUS

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

Lab ID: 1701022-02 Collection Date: 1/24/2017 10:40:00 AM

**Collection Time:** 

Client Sample ID: Influent Matrix: AQUEOUS

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

Method Blank QC SUMMARY REPORT Charles Castelluccio Consulting, LLC YRC North Reading 1701022 Work Order: CLIENT: Project:

Date: 08-Feb-17

												1
Sample ID: MB-R59249	Batch ID: R59249	Test Code: E300	: E300	Units: mg/L	<i>ال</i>		Analysis D	Analysis Date: 2/2/2017		Prep Date:		
Client ID:		Run ID:	DIONEX	DIONEX_170202A			SeqNo:	994129				
	QC Sample			QC Spike Original Sample	nal Sample			0	Original Sample			
Analyte	Result	귙	Units	Amount	Result	%REC	LowLimit	HighLimit	Result %REC LowLimit HighLimit or MS Result	%RPD	%RPD RPDLimit	Quí
Chloride	QN	0.50	mg/L									

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

Laboratory Control Spike QC SUMMARY REPORT Charles Castelluccio Consulting, LLC YRC North Reading 1701022 Work Order: CLIENT: **Project:** 

Date: 08-Feb-17

Sample ID: LCS-R59249	Batch ID: R59249	Test Cod	le: E300	Units: mg/L	1g/L		Analysis D	Analysis Date: 2/2/2017		Prep Date:		ı
Client ID:		Run iD:	DIONEX_170202A	70202A			SeqNo:	994130				
Analyte	QC Sample Result	곱	Units	QC Spike Original Sample Amount Result	ginal Sample Result %REC	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ð
Chloride	12.45	0.50	mg/L	12.5	0	99.6	68	110	0			
Sample ID: Icsd-r59249	Batch ID: R59249	Test Cod	le: E300	Units: mg/L	1g/L		Analysis D	Analysis Date: 2/2/2017		Prep Date:		
Client ID:		Run ID:	DIONEX_170202A	70202A			SeqNo:	994144				
Analyte	QC Sample Result	굲	Units	QC Spike Original Sample Amount Result	jinal Sample Result	%REC	LowLimit	C HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ð
Chloride	12.44	0.50	mg/L	12.5	0	99.5	89	110	12.45	0.0715	50	
Sample ID: LCS-R59207	Batch ID: R59207	Test Cod	e: SM4500-H, B Units: pH Units	B Units: p	H Units		Analysis D	ate: 1/24/20	Analysis Date: 1/24/2017 1:10:00 PM	Prep Date:		
Client ID:		Run ID:	ING-WET_170124A	170124A			SeqNo:	993597				
Analyte	QC Sample Result	귬	Units	QC Spike Original Sample Amount Result	ginal Sample Result %REC	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Ö
Н	6.04	0	pH Units	9	0	둳	66	5	0			1
Sample ID: LCSD-R59207 Client ID:	Batch (D: R59207	Test Cod Run ID:	le: SM4500-H, B Units: pH Units ING-WET_170124A	B Units: p 170124A	H Units		Analysis D SeqNo:	ate: 1/24/20 993598	Analysis Date: 1/24/2017 1:10:00 PM SeqNo: 993598	Prep Date:		
Analyte	QC Sample Result	귙	Units	QC Spike Original Sample Amount Result	ginal Sample Result %REC	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ð
Hd	6.05	0	pH Units	ø	0	101	66	101	6.04	0.165	us.	

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

CLIENT: Charles Castelluccio Consulting, LLC

Work Order: 1701022

Project: YRC North Reading

QC SUMMARY REPORT

Date: 08-Feb-17

Sample Duplicate

Sample ID: 1701022-01BD	Batch ID: R59207	Test Co	de: SM4500-	Test Code: SM4500-H, B Units: pH Units	Units		Anatysis D	ate: 1/24/201	Analysis Date: 1/24/2017 1:10:00 PM	Prep Date:		
Client ID: Effluent		Run ID:		ING-WET_170124A			SeqNo:	993600				
	QC Sample			QC Spike Original Sample	nal Sample			0	Original Sample			
Analyte	Result	귙	Units	Amount	Result	%REC	LowLimit	HighLimit	Result %REC LowLimit HighLimit or MS Result	%RPD	%RPD RPDLimit Que	ŏ
H	7.89	0	pH Units	0	0	0	0	0	7.83	0.763	တ	I

28

B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

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

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

Qualifiers:



111 Herrick Street, Merrimack, NH 03054 TEL: (903) 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.

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

Lab Order:	1702023						
Client:	Charles Castelluccio Consulting, LLC	, LLC			DATES DEPOP	FO	
Project:	YRC North Reading						
Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name		Analysis Date	
				Preparatory Test Name	Prep Date	Batch ID	TCLP Date
1702023-01A	Effluent	2/22/2017 9:05:00 AIM	Aqueous	MCP VOCs 8260C, EPA 5030C		2/22/2017	
	1			EPA 5030B	7102/22/2	R59306	
1702023-01B				Ion Chromatography, EPA 300		77222017	
				The state of the s		R59305	
				Standard Methods - pH, Water		20202017	
120000						R59318	
1702023-02A	inliucni	222/2017 9:20:00 AM		MCP VOCs 8260C, EPA 5030C EPA 5030B	8 6 6	2722017	
1702023-02B				Ion Chromatography EDA 300	11077777	R59306	
3						2/22/2017 R59305	
				Standard Methods - pH, Water		2/22/2017	
1 50 500005						R59318	
A50-C70701	Inp Biank	20202017		MCP VOCs 8260C, EPA 5030C		2222017	
				EPA 5030B	7102/22/2	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

Project No.:	Project Name:		Project				web: w	web: www.amrolabs.com	
	TAN NOTANGO		office M	<u> </u>	Project Manager:	Sample	Samplers (Manature):	AMBO Project No.	
P.O.#:	Results Needed by:	1	7		ZY KYCIN	(1410	n	7 9 00 2	L
	No. of	<del>-</del>	-		REO	REOUESTED ANALYSES	S	Domostr	
7 41 610			_	_				ACHIBITAS	7
	Seal Intact? Yes No N/A		əz		81				
			!S %						_
			nont.	7					
Sample ID.:	Date/Time		) 10 						
	pardmac								_
		)aM	rtota mo	lant.					
日本により	50/2 11/292	~		_    - 1					
Todicet.	Jeb Abels	~		- - - - - - - - -	+++++++++++++++++++++++++++++++++++++++				<del>_</del>
ということが			<u> </u>	1	+				<del>-</del> -
			1	1					<del>-</del> -
4			<u> </u>						_
					- -				
		-	_						
					+				
Preservative: Cl-HCl, MeOH, N-HN03, S-H2SO4, Na-NaOH, O- Other	-HN03, S-H2SO4, No.	a-NaOH, O- Othe							
Send Kesults To:		PRIORITY TURNAR	SOUND TIN	PRIORITY TURNAROUND TIME AITHORIZATION	- I - I - I - I - I - I - I - I - I - I				
IN TO CASTINCIO COMUNI	, com	Before submitting san	mples for ex	Before submitting samples for expedited TAT, von miss	Method.	] §	23 TAL 14 MCP	icr	
		have a coded AUTHORIZATION NUMBER	TORIZATA	ON NUMBER		6010	Other Metals:	)	
PHONE #: 773 X 5 1125		AUTHORIZATION No.:	7 No.:	BY:	Dissolved Metals Field Filtered?	Field Filtered?	VFS		
. ]					MCP Presymptiv	e Certainty Required?	Per le		
Kringwished By					I YESK NO	YES X NO	YES NO X	S. 1 Cay   X	
1111111111		3/27 //2 //e	Ţ		Received By		O report page	Τ	
		≥[		W. M. Jamson	Z		level needed:	7-M5	
with I aware		201 1100	1	1	0		EDD required:	] ;	
Please print clearly, legibly and completely. Samples can no	etely. Samples can not		S arriving	<b>*</b>				Ounel:	
or reget in and the turnaround time clock will not start until any ambiguities are resolved.	clock will not start until		received on the follow	lowing day.	e tracked and billed as	AMRO policy requir	AMRO policy requires notification in writing to	KNOWNSITE	
	Yellow: Client Copy					collected from highly contaminated sites.	contaminated sites.	CONTAMINATION:	
					SHEET	OF I	4444	リシー	

SAMPLE RECEIPT CHECKLIST **Laboratorles Corporation** 111 Herrick Street Merrimack, NH 03054 Client: (603) 424-2022 AMRO ID: Project Name: Ship via: (circle one) Fed Ex., UPS, AMRO Courier, Date Rec.: Hand Del., Other Courier, Other: Date Due: Items to be Checked Upon Receipt Army Samples received in individual plastic bags? Yes No NA Comments 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. Samples rec. with ice \_ ice packs 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? 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?

Logged in By: NS

Checked By: MAN

Date: 2/22

Date: 2

Received By: NS

abeled By: NS

Date: 6/22/

# AMRO Environmental Laboratories Corporation

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

Please Circle if: Sample= Soil Sample= Waste

AMRO ID: 1702023

							1,00		
Amalani				,	Added by	y   Solution ID #		Final adjusted	Final adjusted (after 16
			pH*	Y or N	AMRO	of Preserv.	Added	pН	24 hour
Chloril	0H / X50	3 -	1 2	10	╬	<del> </del>		<del> </del>	-
		Ĭ.	1	1	1			<del> </del>	<u> </u>
								<del> </del>	<del> </del>
					12.				
			┼						<del>                                     </del>
	<del></del>		<del> </del>		ļ				
			<del> </del>	<u> </u>	<b> </b>				
			+		<del> </del>	<del> </del>			
			<del>                                     </del>		<b> </b>	<del> </del> -			
	-				#	<del>                                     </del>	<del> </del>		
								<del> </del> -	21.5
			ļ						
			<del> </del>	121					
			├			<u> </u>			
			_			<del> </del> -		*	
		•				<del>                                     </del>			
		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
	-01								
								<del></del>	
	L VOC Chlorily	Analysis Sample  VOC 2x 10,  Chlorel p. H 1 x 50	Volume Preserv.  Analysis Sample Listed  VOC 2x Vo. HCC  Chlority H1x50 —  Volume Preserv.	Volume Preserv. Initial Initial Preserv. Initial	Analysis Sample Listed pH* Y or N  VOC 2x/v HCC - 7  Chlusly pH / x500 - 7  Volume Preserv. Initial Acceptable?	Volume Preserv. Initial Acceptable? Preserv. Added by AMRO  List Preserv. Added by AMRO  Analysis Sample Listed pH* Y or N  Chloril pH   x 00 - 7  N  List Preserv. Added by AMRO   Volume Preserv. Initial Acceptable? Preserv. Added by Solution ID # Analysis Sample Listed pH* Y or N AMRO  VOC 2xb, HCl - 7  Chloril pH   x 60 - 7  Volume Preserv. Initial Acceptable? List Preserv. Added by Solution ID # Solu	Volume Preserv. Initial Acceptable? Preserv. Added by Solution ID # Of Preserv. Added by AMRO of Preserv. Added by AMRO of Preserv. Added by AMRO of Preserv. Added by Solution ID # Of Preservative Preservative Preservative Preservative Preservative Preserv. Added by Solution ID # Of Preservative Preser	Analysis Sample Listed pH* Acceptable? Preserv. Added by	

			┪━━━				
	<u> </u>			1			
	1 1					<del>                                     </del>	
			<del></del>		<del></del>		
t = lCab = t = t	<u></u>				<u></u>		
* = if the laboratory presert 16 hours prior to analysis of 16 Checked By:	ves the drinking wa or 24 hours for wate	ster sample (s) for EPA N er sample (s).	Method 200 se	ries, sample (s)	should be he	ld at least	<u>الجسيدنات</u>
oH Checked By:	14 113	_ Date: 2/12//7	pH adj	usted By:		Date: _	
oH Checked By:		Date:	_pH adj.(16	or 24hrs)By:		Date: _	·
		6		memos/forms	/samplerec R	ev 21 04/1.	1111

CLIENT:

Charles Castelluccio Consulting, LLC

Project:

YRC North Reading

Lab Order:

1702023

CASE NARRATIVE

Date: 06-Mar-17

## 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.

		Me	assDEP Analytic	cal Protocol Certifi	ication Form	
Lab	oratory N	lame: AMRO Enviro	onmental Lab. Con	ρ.	Project #:	
		tion: YRCN			RTN:	
		1102023	-01-03		boratory Sample ID Nu	imber(s):
Matr				diment Drinking	Water  Alr  Other:	
CAN	/ Protoc	ol (check all that a	pply below):	Ш		
	VOC I 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
	SVOC	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
	Metais	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanlde/PAC CAM VI A	6860 Perchiorate CAM VIII B	
					for "Presumptive Certa	ainty" status
A	Were all Custody,	l samples received i	in a condition cons	sistent with those des	scribed on the Chain-of- eld or laboratory, and	Yes D No
В	Were the CAM pro	e analytical method(stocol(s) followed?	s) and all associate	ad QC requirements s	specified in the selected	Yes II No
С	Were all CAM pro	required corrective tocol(s) implemented	actions and analytic d for all identified per	cal response actions s rformance standard no	specified in the selected n-conformances?	Yes 🗆 No
D	Does the "Quality Analytical	Assurance and Qu	omply with all the re allty Control Guide	porting requirements slines for the Acquis	specified in CAM Vil A, sition and Reporting of	Yes I No
E	a. VPH, modificati	ion(s)? (Heter to the i	lethods only: Was Individual method(s)	e each method condu ) for a list of significant ete analyte list reported	ucted without significant modifications).	☐ Yes ☐ No
F	Were all a	applicable CAM prot	tocol QC and perfor	rmance standard non-	-conformances identified	<u> </u>
27	and evalu	lated in a laboratory i	narrative (including a	all "No" responses to C	Questions A through E)?	Yes II No
					mptive Certainty" state	us
G	protocol(s	3)?		orting limits specified in		Yes 11 No <sup>1</sup>
Tep	<u>ta User Not</u> Presentativ	<u>le</u> : Data that achieve eness requirements (	"Presumptive Certain described in 310 CMF	inty" status may not ned R 40. 1056 (2)(k) and WS	cessarily meet the data usa SC-07-350,	ibility and
Н	Were all C	C performance star	ndards specified in th	he CAM protocol(s) acl	hleved?	13 Yes No
1	Were resu	lits reported for the c	complete analyte list	specified in the selecte	ed CAM protocol(s)?	Yes II No¹
<sup>1</sup> All ne	egative res	sponses must be ac	ddressed in an attac	ched laboratory narra	ntive.	1 9
i, the u	undersigne sible for ob	ed. attest under the	pains and penalties	s of periury that have	ned upon my personal inc al report is, to the best of i	quiry of those my knowledge
Signa	ture:	4,8	L	Positlo	n: Vice President	
Printe	d Name:	Nancy Stewart		8 <b>Date:_</b> _	3-13-17	

## DATA COMMENT PAGE

# Organic Data Qualifiers

- ND Indicates compound was analyzed for, but not detected at or above the reporting limit.
- 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.

Date: 06-Mar-17

CLIENT:

Charles Castelluccio Consulting, LLC

Lab Order:

1702023

Client Sample ID: Effluent

Collection Date: 2/22/2017 9:05:00 AM

Project:

YRC North Reading

Lab ID:

1702023-01A

Matrix: AQUEOUS

Analyses	Result	RL (	ual Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUND	S BY MCP MET SV	V8260C	<del></del>	· · · · · · · · · · · · · · · · · · ·	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
Bromodichioromethane	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
I-Chlorotoluene	ND	2.0	μg/L	1	2/22/2017 7:07:00 PM
,2-Dibromo-3-chloropropane	ND	5.0	µg/L	1	2/22/2017 7:07:00 PM
,2-Dibromoethane	ND	2.0	μg/L	1	2/22/2017 7:07:00 PM
Pibromomethane	ND	2.0	μg/L	1	2/22/2017 7:07:00 PM
,3-Dichlorobenzene	ND	2.0	µg/L	1	2/22/2017 7:07:00 PM
,2-Dichlorobenzene	ND	2.0	µg/L	1	2/22/2017 7:07:00 PM
,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-Dichloroethane	ND	2.0	µg/L	1	2/22/2017 7:07:00 PM
,2-Dichloroethane	ND	2.0	µg/L	1	2/22/2017 7:07:00 PM
,1-Dichloroethene	ND	1.0	µg/L	1	2/22/2017 7:07:00 PM
ds-1,2-Dichloroethene	ND	2.0	µg/L	1	2/22/2017 7:07:00 PM
ans-1,2-Dichloroethene	ND	2.0	μg/L.	1	2/22/2017 7:07:00 PM
,2-Dichloropropane	ND	2.0	µg/L	1	2/22/2017 7:07:00 PM
,3-Dichloropropane	ND	2.0	µg/L	1	2/22/2017 7:07:00 PM
,2-Dichloropropane	ND	2.0	μg/L	1	2/22/2017 7:07:00 PM
,1-Dichloropropene	ND	2.0	µg/L	1	2/22/2017 7:07:00 PM
s-1,3-Dichloropropene	ND	1.0	μg/L	1	2/22/2017 7:07:00 PM
ans-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

Date: 06-Mar-17

**CLIENT:** 

Charles Castelluccio Consulting, LLC

Lab Order:

1702023

Client Sample ID: Effluent 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
Trichlorofluoromethan <del>e</del>	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

Date: 06-Mar-17

CLIENT:

Charles Castelluccio Consulting, LLC

Lab Order:

1702023

Client Sample ID: Influent

Project:

YRC North Reading

Collection Date: 2/22/2017 9:20:00 AM

Lab ID:

1702023-02A

Matrix: AQUEOUS

Analyses	Result	RL	Qual Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUND	S 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 ≡	<b>■ 1</b>	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 tetrachioride	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-Chiorotoluene	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	<sup>6</sup> 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
irans-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

Date: 06-Mar-17

CLIENT:

Charles Castelluccio Consulting, LLC

Lab Order:

1702023

Client Sample ID: Influent
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
Dilsopropyl ether	ND	2.0	μg/L	1	2/22/2017 7:44:00 PM
1,4-Dloxane	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-Tetrachioroethane	ND	2.0	µg/L	1	2/22/2017 7:44:00 PM
Tetrachioroethene	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

Date: 06-Mar-17

CLIENT:

Charles Castelluccio Consulting, LLC

Lab Order:

1702023

YRC North Reading

Project: Lab ID:

1702023-03A

Client Sample ID: Trip Blank

Collection Date: 2/22/2017

Matrix: AQUEOUS

Analyses	Result	RL	Qual Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUND	S BY MCP MET SV	W8260C	<del></del> -	<del></del> -	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	<b>≡</b> 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
1-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
,2-Dichlorobenzene	ND	2.0	μ <b>g/L</b>	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
I,1-Dichloroethane	ND	2.0	μg/L	1	2/22/2017 6:30:00 PM
,2-Dichloroethane	ND	2.0	µg/L	1	2/22/2017 6:30:00 PM
,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
rans-1,2-Dichloroethene	ND	2.0	µg/L	1	2/22/2017 6:30:00 PM
,2-Dichloropropane	ND	2.0	µg/L	1	2/22/2017 6:30:00 PM
,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-Dichloropropene	ND	2.0	µg/L	1	2/22/2017 6:30:00 PM
sis-1,3-Dichloropropene	ND	1.0	µg/L	1	2/22/2017 6:30:00 PM
rans-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

Date: 06-Mar-17

CLIENT:

Charles Castelluccio Consulting, LLC

Lab Order:

1702023

Client Sample ID: Trip Blank Collection Date: 2/22/2017

Project:

YRC North Reading

Lab ID:

1702023-03A

Matrix: AQUEOUS

Analyses	Result	RL	Qual Units	DF	Date Analyzed
Dilsopropyl 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-Trichiorobenzene	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-Trichtoropropane	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-Trimethy/benzene	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 C	Charles Castelluccio Consulting, LLC	g, LLC										
Work Order:	1702023		<b>)</b>							QC SUMMARY REPORT	MARY	REPO	RI
Project:	YRC No	YRC North Reading									Σ	Method Blank	ank
													1
Sample ID: mb-02/22/17	122/17	Batch ID: R59306	Test Cor	Test Code: SW8260C	Units: µg/L			Analysis D	ate: 2/22/20	Analysis Date: 2/22/2017 5:52:00 PM	Prep Date: 2/22/2017	2/22/2017	
Client 1D:			Run ID:	V-3_170222A	×			SeqNo:	994904				
		QC Sample		J	QC Spike Original Sample	al Samole			•	Orininal Sample			
Analyte		Result	뇞	Units	Amount		%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Ö
Acetone		2	9	no/L									
Tertiary Amyl Methyl Ether	yl Ether	Q	2.0	no/L									
Benzene		QN	1.0	1/6rt									
Bromobenzene		9	2.0	pg/L									
Bromochloromethane	2	Q	2.0	hg/L									
Bromodichloromethane	lane	Q	2.0	µg√.									
		Q	2.0	µg/L									
9 Bromomethane		Q	2.0	µ9/L									
sec-Butylbenzene		Q	2.0	µ9∕L									
n-Butylbenzene		2	2.0	rg/L									
tert-Butylbenzene		Q	2.0	µg∕l.									
Carbon disulfide		S	2.0	hg/L									
Carbon tetrachloride	ø	Q	2.0	pg/L									
Chlorobenzene		2	2.0	hg/L									
Dibromochloromethane	ane	9	2.0	Pg/L									
Chloroethane		Q	5.0	pg/L									
Chloroform		S	2.0	pg/L									
Chloromethane		2	2.0	hg/L									
2-Chlorotoluene		Ð	2.0	µg/L									
4-Chlorotofuene		9	2.0	yg/L									
1,2-Dibromo-3-chloropropane	торгорапе	9	5.0	hg/L									
1,2-Dibromoethane		9	2.0	µ9/L									
Dibromomethane		Q	2.0	µg/L									
1,3-Dichlorobenzene	<b>a</b>	2	2.0	tug∕L									
1,2-Dichlorobenzene	0	2	2.0	hg/L									
Qualifiers: ND -	Not Detected	ND - Not Detected at the Reporting Limit	S		- Spike Recovery outside accepted recovery limits	d recovery li	mits	B - Analyte	detected in t	B - Analyte detected in the associated Method Blank	d Blank		Į
J-A	nalyte detecte	J - Analyte detected below quantitation limits		- RPD outside	R - RPD outside accepted recovery limits	limits		NA - Not	nnficable who	NA - Not annitrable where I welless on MD - All	- Transfer		
- TE	Reporting Lin	RL - Reporting Limit: defined as the lowest concentration the Jahorata	ncentration th	e Jahoratoric can	accumulativ annativ			101	ppucant will		Suits occur		

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

Date: 06-Mar-17

Work Order:				
	1702023			QC SUMMARY REPORT
Project:	YRC North Reading			Method Blank
1,4-Dichlorobenzene	QV e	2:0	hg/L	
Dichlorodifluoromethane	nane ND	5.0	µg/L	
1,1-Dichloroethane	QN	2.0	µg/L	
1,2-Dichlomethane	QN	2.0	hg∕L	
1,1-Dichloroethene	2	1.0	µg/L	
cis-1,2-Dichloroethene	GN eu	2.0	рg/L	
trans-1,2-Dichloroethene	hene ND	2.0	pg/L	
1,2-Dichloropropane	QN	2.0	µg/L	
1,3-Dichloropropane	QN	2.0	µ9∕1.	
2,2-Dichloropropane	QN	2.0	µg/L	
1,1-Dichloropropene	QN	2.0	hg/L	
cis-1,3-Dichloropropene	QN ene	1.0	µg/L	
trans-1,3-Dichloropropene	Obene ND	1.0	µg/L	
Diethy! ether	QN	5.0	µg/L	
Diisopropyl ether	Q	2.0	µg/L	
1,4-Dioxane	Q	8	ing/L	
Ethyl Tertiary Butyl Ether	Ether ND	2.0	hg/L	
Ethylbenzene	QN	2.0	Light.	
Hexachlorobutadiene	ON NO	2.0	Lgd,	
2-Hexanone	QV	0	µg∕l.	
Isopropylbenzene	QN	2.0	hg/L	
4-Isopropyltoluene	QN	2.0	µ9∕L	
2-Butanone	Q	6	µg/L	
4-Methyl-2-pentanone	ND	5	hg∕L	
Methyl tert-butyl ether	ON JE	2.0	pg/L	
Methylene chloride	QN	5.0	Lg/L	
Naphthalene	<b>Q</b>	5.0	µg/L	
n-Propylbenzene	Q	2.0	µg∕l.	
Styrene	QN	2.0	µg/L	
1,1,1,2-Tetrachiomethane	thane ND	2.0	µg/L	
1,1,2,2-Tetrachioroethane	thane ND	2.0	hg/L	
Qualifiers: ND-1	ND - Not Detected at the Reporting Limit	l i	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
J-An	J - Analyte detected below quantitation limits		R - RPD outside accented recovery limits	
i				NA - Not applicable where J values or ND results occur

ď.
Corp
Laboratories (
Environmental
AMRO

Work Order:1702023Project:YRC North ReadingTetrachloroetheneND2.0TetrahydrofuranND10TolueneND2.0	,							
RC North Reading							) Y	C SOMMANI NELONI
								Method Blank
		2.0	pg/L					
	۵	9	µg∕L					
		2.0	µg/L					
1,2,4-Trichlorobenzene ND	·"	0:	µg∕t.					
1,2,3-Trichlorobenzene ND	·'	0:	hg∕L					
1,1,1-Trichloroethane ND	· ·	0.	µg/L					
1,1,2-Trichloroethane ND	_	2.0	µg/L					
Trichloroethene		2.0	µg/L					
Trichlorofluoromethane		0:	µg/L					
1,2,3-Trichloropropane ND		0:	µ9∕L					
1,2,4-Trimethylbenzene ND	·~	9:	µg√L					
1,3,5-Trimethylbenzene ND	·	0:	µg/L					
Vinyl chloride ND	0	0:	pg/L					
O-Xylene ND		2.0	µg/L					
m,p-Xylene ND		2.0	µg/L					
Surr: Dibromoffuoromethane 23.31		2.0		9	93.2	02	130	0
Surr. 1,2-Dichlowethane-d4 23.39		2.0		25 0	93.6	2	130	0
Surr: Toluene-d8 24.68		2.0		9	286	2	130	
Surr. 4-Bromofluorobenzene 23.03		2.0	pg/L 2	5 0	92.1	20	130	. 0

J - Analyte detected below quantitation limits

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

ND - Not Detected at the Reporting Limit Qualifiers:

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

Date: 06-Mar-17

thane ethan ride e ethan ride e ethan ride e ethan ride e e e e ethan ride e e e e e e e e e e e e e e e e e e	Work Order:	1702073	Charles Castelluccio Consulting, LLC 1702023	, דרכ הרכ							QC SUMMARY REPORT	IMARY	REPO	RT
Table   Tabl	Project:		th Dooding								`c	homotomy	ی اصلامار	2
Company   Comp	rroject:	YRC No	ntn Keading								7	poratory (	Ontroi S	l ke
Part	Sample ID: Ics-02	22/17	Batch ID: R59306	Test Co	Je: SW8260C	Units: µg/	ا		Analysis D	ate: 2/22/20	17 3:56:00 PM	Prep Date	: 2/22/2017	
Parish   P	Client ID:			Run ID:	V-3_17022	×			SeqNo:	994906		•		
Result   R			QC Sample		Ü	2C Spike Origin	nal Sample				Original Sample			
Hyy Ether 17.78 2.0 μg/L 20 0 68.9 70 130 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Analyte		Result	전		Amount	Result		LowLimit		or MS Result	%RPD	RPDLimit	Ö
thyl Ether 17.78 2.0 µg/L 20 0 88.9 and a second of the se	Acetone		40.99	0	µg/L	4	0	102	5		0			
18.55         1.0         µg/L         20         0         92.8           name         19.26         2.0         µg/L         20         0         96.3           thane         17.76         2.0         µg/L         20         0         77.2           thane         16.81         2.0         µg/L         20         0         77.3           18.86         2.0         µg/L         20         0         95.8           19.17         2.0         µg/L         20         0         95.8           ide         15.5         2.0         µg/L         20         0         95.8           thane         15.5         2.0         µg/L         20         0         95.8           thane         17.22         2.0         µg/L         20         0         95.8           thane         17.22         2.0         µg/L         20         0         94.6           16.85         2.0         µg/L         20         0         94.6           16.87         2.0         µg/L         20         0         94.8           thane         17.75         2.0         µg/L         20         0	Tertiary Amyl Meth	yi Ether	17.78	2.0	µg/L	23	0	88.9	20	130	0			
table         2.0         μg/L         20         0 96.3           sthane         15.45         2.0         μg/L         20         0 77.2           sthane         17.76         2.0         μg/L         20         0 77.2           16.11         2.0         μg/L         20         0 79.3           16.26         2.0         μg/L         20         0 79.3           18.26         2.0         μg/L         20         0 79.3           18.45         2.0         μg/L         20         0 72.8           ide         15.5         2.0         μg/L         20         0 72.8           ide         17.22         2.0         μg/L         20         0 77.5           sthane         17.22         2.0         μg/L         20         0 77.5           ide         18.32         2.0         μg/L         20         0 77.5           sthane         16.81         2.0         μg/L         20         0 94.6           18.32         2.0         μg/L         20         0 94.6           18.33         2.0         μg/L         20         0 94.6           18.34         2.0         μg/L	Benzene		18.55	1.0	µg/L	20	0	92.8	2	130	0			
table         15.45         2.0         µg/L         20         0         77.2           sthane         17.76         2.0         µg/L         20         0         77.3           16.11         2.0         µg/L         20         0         79.3           15.86         2.0         µg/L         20         0         79.3           18.26         2.0         µg/L         20         0         91.3           18.5         2.0         µg/L         20         0         92.5           19.17         2.0         µg/L         20         0         94.6           14.57         2.0         µg/L         20         0         94.6           14.57         2.0         µg/L         20         0         94.6           14.57         2.0         µg/L         20         0         94.6           16.85         2.0         µg/L         20         0         94.6           16.85         2.0         µg/L         20         0         94.6           16.83         2.0         µg/L         20         0         91.8           18.73         2.0         µg/L         20	Bromobenzene		19.26	2.0	µg/L	20	0	96.3	20	130	0			
thane 17.76 2.0 µg/L 20 0 88.8   16.11 2.0 µg/L 20 0 79.3   18.26 2.0 µg/L 20 0 79.3   18.26 2.0 µg/L 20 0 79.3   18.26 2.0 µg/L 20 0 77.9   18.5 2.0 µg/L 20 0 92.5   19.17 2.0 µg/L 20 0 92.5   17.22 2.0 µg/L 20 0 77.5   18.92 5.0 µg/L 20 0 86.1   18.92 5.0 µg/L 20 0 94.6   18.92 5.0 µg/L 20 0 94.6   18.92 5.0 µg/L 20 0 94.6   18.37 2.0 µg/L 20 0 91.2   18.37 2.0 µg/L 20 0 91.2   18.37 2.0 µg/L 20 0 91.8   18.34 2.0 µg/L 20 0 93.7   18.34 2.0 µg/L 20 0 93.7   18.35 2.0 µg/L 20 0 93.7   18.37 2.0 µg/L 20 0 99.8   18.34 2.0 µg/L 20 0 99.7   18.35 2.0 µg/L 20 0 99.8   18.34 2.0 µg/L 20 0 99.7   18.35 2.0 µg/L 20 0 99.7   18.37 2.0 µg/L 20 0 99.7   18.38 2.0 µg/L 20 0 99.7   18.39 2.0 µg/L 20 0 99.7   18.30 µg/L 20 0 99.7   18.30 µg/L 20 0 99.7   18.30 µg/L 20 0 99.8    18.30 µg/L 20 0 99.7   18.30	Bromochlorometha	e	15.45	2.0	µg∕L	20	0	77.2	20	130	0			
16.11 2.0 µg/L 20 0 80.6  15.86 2.0 µg/L 20 0 79.3  18.5 2.0 µg/L 20 0 91.3  18.5 2.0 µg/L 20 0 92.5  19.17 2.0 µg/L 20 0 92.5  11.5 2.0 µg/L 20 0 77.8  11.5 2.0 µg/L 20 0 77.8  11.3 2.0 µg/L 20 0 86.1  18.92 2.0 µg/L 20 0 86.1  18.92 2.0 µg/L 20 0 86.1  18.92 2.0 µg/L 20 0 94.6  16.85 2.0 µg/L 20 0 94.6  16.85 2.0 µg/L 20 0 94.6  16.85 2.0 µg/L 20 0 84.2  16.85 2.0 µg/L 20 0 86.1  18.37 2.0 µg/L 20 0 88.5  18.37 2.0 µg/L 20 0 91.8  loropropane 20.06 5.0 µg/L 20 0 91.8  17.7 2.0 µg/L 20 0 93.7  sne 18.74 2.0 µg/L 20 0 0 93.7  sne 18.74 2.0 µg/L 20 0 0 93.7  sne 18.75 20 µg/L 20 µg/L 20 0 0 93.7  sne 18.75 20 µg/L 20 µg/L 20 0 0 93.7  sne 18.75 20 µg/L 20 µg/L 20 0 0 93.7  sne 18.75 20 µg/L 20 µg/L 20 0 0 93.7  sne 18.75 20 µg/L 20 µg/L 20 0 0 93.7  sne 18.75 20 µg/L 20 µg/L 20 0 0 93.7  sne 18.75 20 µg/L 20 µg/L 20 0 0 93.7  sne 18.75 20 µg/L 20 µg/L 20 0 0 93.7  sne 20 0 0 93.7  sne 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Bromodichloromett	ane	17.76	2.0	µ9∕L	20	0	88.8	2	130	0			
15.86 2.0 µg/L 20 0 79.3 18.5 18.5 2.0 µg/L 20 0 79.3 18.5 2.0 µg/L 20 0 92.5 19.1 19.17 2.0 µg/L 20 0 92.5 19.1 19.17 2.0 µg/L 20 0 72.8 19.1 19.17 2.0 µg/L 20 0 77.8 17.5 2.0 µg/L 20 0 77.5 17.5 17.2 2.0 µg/L 20 0 86.1 18.92 2.0 µg/L 20 0 86.1 18.37 2.0 µg/L 20 0 94.6 16.85 16.41 2.0 µg/L 20 0 94.6 16.85 17.7 2.0 µg/L 20 0 94.6 18.37 2.0 µg/L 20 0 94.8 18.4 18.47 2.0 µg/L 20 0 93.7 and 18.47 2.0 µg/L 20 0 93.7 and 18.47 2.0 µg/L 20 0 93.7 hg/L 20 µg/L 20 0 94.4 18.47 2.0 µg/L 20 0 94.4 18.	Bromoform		16.11	2.0	µg/L	20	0	80.6	20	130	٥			
18.26 2.0 µg/L 20 0 91.3  18.5 2.0 µg/L 20 0 92.5  19.17 2.0 µg/L 20 0 92.8  ide 15.5 2.0 µg/L 20 0 77.8  ithane 17.22 2.0 µg/L 20 0 77.8  16.85 2.0 µg/L 20 0 86.1  18.92 2.0 µg/L 20 0 86.1  18.92 2.0 µg/L 20 0 86.1  l6.85 2.0 µg/L 20 0 94.6  l6.85 2.0 µg/L 20 0 94.6  l6.85 2.0 µg/L 20 0 94.8  le 18.37 2.0 µg/L 20 0 91.2  l8.37 2.0 µg/L 20 0 91.8  le 17.7 2.0 µg/L 20 0 91.8  le 17.56 2.0 µg/L 20 0 91.8  le 17.56 2.0 µg/L 20 0 91.8  le 17.56 2.0 µg/L 20 0 91.8  le 18.74 2.0 µg/L 20 0 93.7  sne 18.74 2.0 µg/L 20 0 93.7  sne 18.74 2.0 µg/L 20 0 93.7  landlyte detected below quantitation limits  Paractical limit Afficial of the Landlyth Landlyte detected below quantitation limits  Paractical limit Afficial of the Landlyth Landlyte detected helow quantitation limits	Bromomethane		15.86	2.0	µg/L	20	0	79.3	4	160	0			
18.5         2.0         μg/L         20         0         92.5           ide         19.17         2.0         μg/L         20         0         72.8           ide         15.5         2.0         μg/L         20         0         77.5           ithane         17.22         2.0         μg/L         20         0         86.1           18.92         5.0         μg/L         20         0         84.2           16.85         2.0         μg/L         20         0         94.6           16.85         2.0         μg/L         20         0         94.6           18.37         2.0         μg/L         20         0         94.6           18.23         2.0         μg/L         20         0         91.8           18.37         2.0         μg/L         20         0         91.8           18.37         2.0         μg/L         20         0         93.7           ane         18.47         2.0         μg/L         20         0         92.4           3. Not Detected at the Reporting Limits         8.5         2.0         μg/L         20         0         92.4      <	sec-Butylbenzene		18.26	2.0	hg/L	50	0	91.3	2	130	0			
thane 19.17 2.0 µg/L 20 0 95.8 ride 15.5 2.0 µg/L 20 0 77.5 rithane 17.22 2.0 µg/L 20 0 77.5 rithane 17.22 2.0 µg/L 20 0 86.1 16.85 2.0 µg/L 20 0 86.1 16.85 2.0 µg/L 20 0 84.2 16.81 2.0 µg/L 20 0 94.6 life.41 2.0 µg/L 20 0 94.6 16.41 2.0 µg/L 20 0 91.2 18.37 2.0 µg/L 20 0 91.8 life.41 2.0 µg/L 20 0 91.4 life.41 life.41 2.0 µg/L 20 0 91.4 life.41 2.0 µg/L 20 0 91.4 life.41 life.41 2.0 µg/L 20 0 91.4 life.41 life	n-Butylbenzene		18.5	2.0	µg/L	20	0	92.5	20	130	0			
ide         14.57         2.0         μg/L         20         0         72.8           ide         15.5         2.0         μg/L         20         0         77.5           ithane         17.22         2.0         μg/L         20         0         86.1           18.92         5.0         μg/L         20         0         94.6           16.85         2.0         μg/L         20         0         94.6           loropropane         20.06         5.0         μg/L         20         0         91.2           loropropane         20.06         5.0         μg/L         20         0         91.8           loropropane         20.06         5.0         μg/L         20         0         91.8           loropropane         17.7         2.0         μg/L         20         0         91.8           loropropane         18.37         2.0         μg/L         20         0         91.8           loropropane         18.74         2.0         μg/L         20         0         92.4           O-Not Detected at the Reporting Limit         S-Spike Recovery outside accepted recovery limits	tert-Butylbenzene		19.17	2.0	µg/L	20	0	95.8	2	130	0			
ide 15.5 2.0 µg/L 20 0 77.5  17.3 2.0 µg/L 20 0 86.5  18.92 2.0 µg/L 20 0 86.1  18.92 5.0 µg/L 20 0 86.1  16.85 2.0 µg/L 20 0 84.2  16.41 2.0 µg/L 20 0 94.6  18.23 2.0 µg/L 20 0 91.2  18.23 2.0 µg/L 20 0 91.2  18.37 2.0 µg/L 20 0 91.8  le 17.7 2.0 µg/L 20 0 91.8  ane 17.7 2.0 µg/L 20 0 91.8  18.74 2.0 µg/L 20 0 93.7  ane 18.74 2.0 µg/L 20 0 93.7  ane 18.74 2.0 µg/L 20 0 93.7  Analyte detected below quantitation limits  R - RPD outside accepted recovery limits  Province limits R - RPD outside accepted recovery limits	Carbon disulfide		14.57	2.0	µg/L	20	0	72.8	20	130	0			
thane 17.3 2.0 μg/L 20 0 86.5 than 17.22 2.0 μg/L 20 0 86.1 18.92 2.0 μg/L 20 0 94.6 16.85 2.0 μg/L 20 0 94.6 16.85 2.0 μg/L 20 0 94.6 18.23 2.0 μg/L 20 0 91.2 18.37 2.0 μg/L 20 0 91.8 le 17.7 2.0 μg/L 20 0 91.8 le 17.7 2.0 μg/L 20 0 91.8 le 17.5 2.0 μg/L 20 0 91.8 le 18.74 2.0 μg/L 20 0 93.7 limits Analyte detected below quantitation limits R - RPD outside accepted recovery limits	Carbon tetrachlorid	ø	15.5	2.0	μg/L	20	0	77.5	2	130	0			
thane 17.22 2.0 µg/L 20 0 86.1  18.92 5.0 µg/L 20 0 94.6  16.85 2.0 µg/L 20 0 94.6  16.41 2.0 µg/L 20 0 91.2  18.23 2.0 µg/L 20 0 91.2  18.37 2.0 µg/L 20 0 91.8  loropropane 20.06 5.0 µg/L 20 0 91.8  and 17.7 2.0 µg/L 20 0 91.8  17.56 2.0 µg/L 20 0 93.7  ane 18.74 2.0 µg/L 20 0 93.7  ane 18.74 2.0 µg/L 20 0 93.7  Analyte detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits  Province Limit Afract Accepted recovery limits	Chlorobenzene		17.3	2.0	µg∕L	20	0	86.5	20	130	0			
18.92       5.0       μg/L       20       0       94.6         16.85       2.0       μg/L       20       0       84.2         16.23       2.0       μg/L       20       0       91.8         loropropane       20.06       5.0       μg/L       20       0       91.8         le       17.7       2.0       μg/L       20       0       88.5         sne       17.56       2.0       μg/L       20       0       87.8         ne       18.74       2.0       μg/L       20       0       92.4         O - Not Detected at the Reporting Limit       S - Spike Recovery outside accepted recovery limits         Paradyte detected below quantitation limits       R - RPD outside accepted recovery limits	Dibromochloromet	ane	17.22	2.0	μg/L	20	0	86.1	2	130	0			
16.85       2.0       μg/L       20       0       84.2         16.41       2.0       μg/L       20       0       82.2         18.23       2.0       μg/L       20       0       91.2         le       17.7       2.0       μg/L       20       0       100         le       17.7       2.0       μg/L       20       0       88.5         she       18.74       2.0       μg/L       20       0       87.8         ane       18.47       2.0       μg/L       20       0       92.4         D-Not Detected at the Reporting Limit       S - Spike Recovery outside accepted recovery limits         Paradyte detected below quantitation limits       R - RPD outside accepted recovery limits	Chloroethane		18.92	5.0	ug/L	20	0	94.6	2	130	•			
16.41     2.0     μg/L     20     0     82       18.23     2.0     μg/L     20     0     91.2       18.23     2.0     μg/L     20     0     91.2       18.37     2.0     μg/L     20     0     100       1e     17.7     2.0     μg/L     20     0     88.5       1e     17.56     2.0     μg/L     20     0     87.8       sne     18.74     2.0     μg/L     20     0     92.4       D-Not Detected at the Reporting Limit     S - Spike Recovery outside accepted recovery limits       Analyte detected below quantitation limits     R - RPD outside accepted recovery limits	Chloroform		16.85	2.0	ng/L	20	0	84.2	2	130	0			
18.23       2.0       μg/L       20       0       91.2         18.37       2.0       μg/L       20       0       91.8         Ioropropane       20.06       5.0       μg/L       20       0       91.8         Ie       17.7       2.0       μg/L       20       0       88.5         ane       18.74       2.0       μg/L       20       0       93.7         ane       18.47       2.0       μg/L       20       0       92.4         O - Not Detected at the Reporting Limit       S - Spike Recovery outside accepted recovery limits         Analyte detected below quantitation limits       R - RPD outside accepted recovery limits	Chloromethane		16.41	2.0	µg/L	50	0	82	9	160	• •			
loropropane         18.37         2.0         μg/L         20         0         91.8           le         17.7         2.0         μg/L         20         0         100           she         17.56         2.0         μg/L         20         0         88.5           she         18.74         2.0         μg/L         20         0         93.7           she         18.47         2.0         μg/L         20         0         92.4           O - Not Detected at the Reporting Limit         S - Spike Recovery outside accepted recovery limits         R - RPD outside accepted recovery limits	2-Chlorotoluene		18.23	2.0	ug/L	20	0	91.2	2	130	0			
loropropane 20.06 5.0 µg/L 20 0 100  17.7 2.0 µg/L 20 0 88.5  17.56 2.0 µg/L 20 0 87.8  ane 18.74 2.0 µg/L 20 0 93.7  ane 18.47 2.0 µg/L 20 0 93.7  Analyte detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits  Province I initiate defeated below quantitation limits  R - RPD outside accepted recovery limits	4-Chlorotoluene		18.37	2.0	µg/L	20	0	91.8	2	130				
te         17.7         2.0         μg/L         20         0         88.5           she         18.74         2.0         μg/L         20         0         97.8           ane         18.47         2.0         μg/L         20         0         93.7           O - Not Detected at the Reporting Limit         S - Spike Recovery outside accepted recovery limits         S - Spike Recovery outside accepted recovery limits	1,2-Dibromo-3-chlo	ropropane	20.06	5.0	µg∕L	20	0	00	2	130	• •			
17.56 2.0 μg/L 20 0 87.8  18.74 2.0 μg/L 20 0 93.7  3.0 μg/L 20 0 93.7  3.1 μg/L 20 0 93.7  3.2 μg/L 20 0 93.7  5. Spike Recovery outside accepted recovery limits  Analyte detected below quantitation limits R - RPD outside accepted recovery limits	1,2-Dibromoethane		17.7	2.0	µ9/L	20	0	88.5	2	130	· c			
18.74 2.0 µg/L 20 0 93.7 18.47 2.0 µg/L 20 0 92.4  Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits  R - RPD outside accepted recovery limits	Dibromomethane		17.56	2.0	µg∕L	20	0	87.8	20	130	· a			
Vot Detected at the Reporting Limit  S - Spike Recovery outside accepted recovery limits  R - RPD outside accepted recovery limits	1,3-Dichlorobenzen	a	18.74	2.0	µg∕L	50	0	93.7	2	130	0			
ND - Not Detected at the Reporting Limit  S - Spike Recovery outside accepted recovery limits  J - Analyte detected below quantitation limits  R - RPD outside accepted recovery limits	1,2-Dichlorobenzen	a	18.47	2.0	ng/L	20	0	92.4	20	130	0			
i si		Not Detected	d at the Reporting Limit	S	- Spike Recover	ry outside accept	ed recovery	limits	B - Analyte	detected in the	he associated Meth	od Blank		
ļ.	A-L	nalyte detecto	ed below quantitation limits	<b>2</b>	R - RPD outside	accepted recover	, limits		, = ,		٠			
	Ē			•	,				NA - NOE 8	pplicable whe	re J values or ND	results occur		

AMRO Environmental Laboratories Corp.

Work Onder	i i i i i									
work Order:	1702023								QC SUMMARY REPORT	REPORT
Project:	YRC North Reading								Laboratory Control Spike	ontrol Spike
1,4-Dichlorobenzene	18.21	2.0	µg/L	20	ľ	91	R	130	5	
Dichlorodifluoromethane	lane 14.12	5.0	µg/L	20	0	70.6	9	9 9	• •	
1,1-Dichlomethane	17.24	2.0	рgЛ	20	0	86.2	2	5 E		
1,2-Dichloroethane	16.81	2.0	µg/L	70	0	8	2 8	130	<b>,</b>	
1,1-Dichloroethene		0.1	µg/L	20	•	9.1	2 2	£ 5	<b>&gt;</b>	
cis-1,2-Dichloroethene	16.97	2.0	µg/L	20	0	84.8	2	5	> c	
trans-1,2-Dichloroethene	•	2.0	ьgЛ	20	0	88.6	2 2	\$ £	<b>.</b>	
1,2-Dichloropropane	17.6	2.0	µg/L	20	0	88	2	130	<b>,</b>	
1,3-Dichloropropane	17.93	2.0	µg/L	20	0	89.7	2	130	· c	
2,2-Dichloropropane	18	2.0	ng∕L	20	0	8	2	£	· c	
1,1-Dichloropropene		2.0	µg/L	20	0	89.7	2	130	<b>,</b> c	
cis-1,3-Dichloropropene		1.0	μg/L	20	0	93	2	130	o c	
Irans-1,3-Dichloropropene		1.0	µg/L	20	0	81.3	2	130	· c	
Diethyl ether	18.69	5.0	µ9/L	20	0	93.4	2	130		
Ulisopropyl ether	17.66	2.0	µg∕t.	50	0	88.3	20	130	· c	
1,4-Dioxane		20	µg/L	100	0	112	\$	160	<b>,</b>	
Ethyi Tertiary Butyl Ether		2.0	₽9/L	20	0	88.2	2	£ 5	<b>,</b>	
Etnylbenzene		2.0	μg/L	70	0	92.2	02	130	· c	
Hexachlorobutadiene		2.0	µg/L	50	0	87.1	2	130	o c	
Z-Hexanone	41.76	10	µg/L	9	0	\$	9	9	) c	
sopropylbenzene	19.29	2.0	µg/L	20	0	96.5	2	130		
4-isopropyltoluene	18.89	2.0	µg/L	70	0	4.4	2 2	£ 5	<b>&gt;</b>	
2-Butanone		5	µ9∕L	4	0	107	<b>4</b>	9 9	<b>&gt;</b>	
4-Methyl-2-pentanone	36.78	5	hg/L	40	0	8	: ₽	£ 5	> <	
Methyl ten-butyl ether	19.22	2.0	rg/L	20	0	96.1	2 2	5 E	> <	
Methylene chloride	14.35	5.0	hg/L	20	0	71.8	2 5	5 5	•	
Naphthalene	19.94	5.0	ng/L	20		0 0	? \$	2 5	<b>&gt;</b> (	
n-Propylbenzene	19.43	2.0	ng/L	; S	• •	020	2 5	2 5	<b>-</b>	
Styrene	17.99	2.0	µg/L	50		! G	2 5	5 5	<b>-</b> (	
1,1,1,2-Tetrachloroethane	lane 16.89	2.0	no/L	20	• •	3 7	2 8	130	<b>o</b> (	
1,1,2,2-Tetrachloroethane	tane 19.03	2.0	pg/L	8	, ,	; c	2 8	<u> </u>	<b>-</b>	
Qualifiers: ND - N	ND - Not Detected at the Reporting Limit		4 4				2	3	0	
		o	- Spike Kecover	<ul> <li>Spike Recovery outside accepted recovery limits</li> </ul>	d recovery	limits	B - Analyte d	etected in the a	B - Analyte detected in the associated Method Blank	
J - Ana	J - Analyte detected below quantitation limits	~	- RPD outside a	R - RPD outside accepted recovery limits	limits		NA ME	•		
Ġ IQ										

AMRO Environmental Laboratories Corp.

CLIENT: Work Order: Project:	Charles Castelluccio Consulting, LLC 1702023 YRC North Reading	cio Consulting,	rrc							OC SUMMARY REPORT Laboratory Control Spike
Tetrachloroethene		18.09	2.0	hg/L	20	0	90.4	20	130	0
Tetrahydrofuran		16.98	우	µg/L	20	0	84.9	20	130	0
Toluene		17.63	2.0	µg/L	20	0	88.2	2	130	0
1,2,4-Trichlorobenzene	ne	18.64	2.0	µg∕L	20	0	93.2	2	130	0
1,2,3-Trichlorobenzene	īe	17.63	2.0	µg/L	20	•	88.2	20	130	0
1,1,1-Trichloroethane	ø	15.91	2.0	µ9∕L	20	0	79.6	20	130	0
1,1,2-Trichloroethane	ø	17.11	2.0	µg/L	20	0	92.6	2	130	0
Trichloroethene		17.68	2.0	µg/L	20	0	88.4	20	130	0
Trichlorofluoromethane	ne	16.8	2.0	µg/L	20	0	\$	92	130	0
1,2,3-Trichloropropane	Je	21.78	2.0	hg/L	20	0	109	2	130	0
1,2,4-Trimethylbenzene	ne.	19.25	2.0	µg/L	20	0	96.2	92	130	0
1,3,5-Trimethylbenzene	3ne	19.24	2.0	µg∕L	20	0	96.2	2	130	0
Vinyl chloride		14.11	2.0	rg/L	20	0	9.02	20	130	0
o-Xylene		17.46	2.0	₽Ø∕L	20	0	87.3	2	130	0
m.p-Xylene		34.45	2.0	µg∕l.	40	0	96.1	2	130	0
Surr: Dibromofluoromethane	romethane	22.87	2.0	µg∕l.	25	0	91.5	92	130	0
Surr: 1,2-Dichlomethane-d4	ethane-d4	24.78	2.0	hg∕L	25	0	99.1	20	130	0
Surr. Toluene-d8		25.29	2.0	µg/L	25	0	5	2	130	0
Surr: 4-Bromofluorobenzene	robenzene	23.62	2.0	µg/L	22	0	94.5	20	130	0

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit Qualifiers:

Date: 06-Mar-17

CLIENT:	Charles (	Charles Castelluccio Consulting, LLC	, LLC							ATTO CO			8
Work Order:	1702023									QU SUMMAKY KEPUKI	MAKY	KEFO	7
Project:	YRC No	YRC North Reading								Laboratory Control Spike Duplicate	ontrol Spi	ike Dupli	cate
													1
Sample ID: Icsd-02/22/17	-02/22/17	Batch ID: R59306	Test Code	Test Code: SW8260C	Units: µg/L			Analysis Da	ate: 2/22/20	Analysis Date: 2/22/2017 4:35:00 PM	Prep Date	Prep Date: 2/22/2017	
Client ID:			Run ID:	V-3_170222A	<b>\$</b>			SeqNo:	994905				
		QC Sample		đ	QC Spike Original Sample	l Sample			J	Original Sample			
Analyte		Result	귙	Units	Amount	Resuft	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Ö
Acetone		40.53	10	µg/L	4	0	5	9	160	40.99	1.13	20	
Tertiary Amyl Methyl Ether	thyl Ether	19.7	2.0	иg/L	20	0	98.5	2	130	17.78	10.2	20	
Benzene		21.07	1.0	µg√.	20	0	105	92	130	18.55	12.7	2	
Bromobenzene		20.97	2.0	µg∕l.	20	0	105	20	130	19.26	8.5	70	
Bromochioromethane	hane	18.78	2.0	µg/L	20	0	93.9	2	130	15.45	19.5	8	
Bromodichloromethane	sthane	20.39	2.0	иg/L	20	0	102	2	130	17.76	13.8	20	
Bromoform		18.77	2.0	µ9∕L	20	0	93.8	20	130	16.11	15.3	20	
Bromomethane		17.63	2.0	µg∕L	20	0	88.2	4	160	15.86	10.6	20	
sec-Butylbenzene	ø	20.58	2.0	µg∕L	29	0	103	2	130	18.26	11.9	20	
n-Butylbenzene		20.48	2.0	ид⁄L	20	0	102	22	130	18.5	10.2	70	
tert-Butylbenzene	•	21.9	2.0	µ9∕L	20	0	110	20	130	19.17	13.3	29	
Carbon disulfide		15.41	2.0	µg∕l.	20	0	11	2	130	14.57	5.6	8	
Carbon tetrachloride	ide	18.91	2.0	µg∕L	20	0	94.6	92	130	15.5	19.8	20	
Chlorobenzene		20.26	2.0	hg/L	20	0	Ď	2	130	17.3	15.8	20	
Dibromochloromethane	sthane	19.54	2.0	hg/L	8	0	7.76	2	130	17.22	12.6	20	
Chloroethane		23.45	2.0	1/6rt	20	0	117	2	130	18.92	21.4	20	œ
Chloroform		19.09	2.0	hg/L	20	0	95.4	2	130	16.85	12.5	20	
Chloromethane		16.49	2.0	hg/L	20	0	82.5	9	160	16.41	0.486	20	
2-Chlorotoluene		20.7	5.0	µg∕L	20	0	\$	2	130	18.23	12.7	70	
4-Chlorotoluene		20.52	2.0	μg/L	20	0	103	2	130	18.37	11.1	20	
1,2-Dibromo-3-chloropropane	loropropane	20.79	5.0	µg/L	20	0	\$	2	130	20.06	3.57	20	
1,2-Dibromoethane	e e	19.97	2.0	pg/L	20	0	8.66	2	130	17.7	12.1	20	
Dibromomethane		19.77	2.0	µg/L	20	0	98.8	2	130	17.56	11.8	20	
1,3-Dichlorobenzene	ene	20.65	2.0	μg/L	20	0	50	2	130	18.74	9.7	70	
1,2-Dichlorobenzene	ane	20.4	2.0	hg/L	20	0	102	20	130	18.47	9.93	20	
Qualifiers: NI	O - Not Detected	ND - Not Detected at the Reporting Limit	Ś	Spike Recover	S - Spike Recovery outside accepted recovery limits	recovery	imits	B - Analyte	detected in the	B - Analyte detected in the associated Method Blank	od Blank		1
-E	Analyte detecte	J - Analyte detected below quantitation limits	R.	RPD outside a	R - RPD outside accepted recovery limits	imits		NA Mot					
3	Reporting Lir	RL - Reporting Limit: defined as the lowest concentration the laboratory can accurately augmentates	rentration the	lahoratory can	stituent vieterist	ţ		10 10 1 TAI	ppircaore wire	iver - 140t applicable where J values of NLJ results occur	esuits occur		
			Collegator ary	iduvianuiy van	acculatery quantita								

AMRO Environmental Laboratories Corp.

CLIENT:	Charles Castelluccio Consulting, LLC	io Consulting	TIC		10 A) II							
Work Order:	1702023	Ď	d						<b>~</b>	QC SUMMARY REPORT	<b>JARY F</b>	EPORT
Project:	YRC North Reading	96	12 20						Lab	Laboratory Control Spike Duplicate	itrol Spike	Duplicate
1,4-Dichlorobenzene	9	20.49	2.0	µg/L	20	٥	102	2	130	18.21	11.8	20
Dichlorodifluoromethane	thane	14.9	5.0	µg/L	20	0	74.5	9	160	14.12	5.38	70
1,1-Dichloroethane		19.73	2.0	µg/L	20	0	98.6	20	130	17.24	13.5	20
1,2-Dichloroethane		19.04	2.0	μg/L	20	0	95.2	2	130	16.81	12.4	20
1,1-Dichloroethene		19.26	1.0	hg/L	20	0	96.3	2	130	18.22	5.55	20
cis-1,2-Dichloroethene	ane	19.34	2.0	Hg/L	20	0	2.96	70	130	16.97	13.1	20
trans-1,2-Dichloroethene	thene	20.75	2.0	hg/L	20	0	<del>1</del> 04	2	130	17.71	15.8	70
1,2-Dichloropropane	<b>O</b>	19.29	2.0	μg/L	20	0	96.5	2	130	17.6	9.16	20
1,3-Dichloropropane	<b>Q</b>	20.1	2.0	µg/L	20	0	100	70	130	17.93	11.4	20
2,2-Dichloropropane	Ð	21.14	2.0	μgγ	20	0	106	20	130	81	91	20
1,1-Dichloropropene	<b>a</b> v	20.63	2.0	ng/L	20	0	103	2	130	17.94	13.9	20
cis-1,3-Dichloropropene	pene	20.66	1.0	μg/L	20	0	103	2	130	18.59	10.5	70
trans-1,3-Dichloropropene	ropene	18.56	1.0	µg/L	20	0	92.8	20	130	16.26	13.2	20
Diethyl ether		20.15	5.0	hg/L	20	0	<del>10</del>	2	130	18.69	7.52	20
Diisopropyl ether		20.03	2.0	hg∕L	8	0	100	20	130	17.66	12.6	8
1,4-Dioxane		105	20	μg/L	001	0	105	9	160	111.9	6.42	20
Ethyl Tertiary Butyl Ether	Ether	19.4	2.0	µg/L	50	0	97	2	130	17.63	9.56	20
Ethylbenzene		21.38	2.0	µg∕L	20	0	107	2	130	18.45	14.7	20
Hexachlorobutadiene	<b>a</b>	18.98	2.0	μg/L	20	0	94.9	6	130	17.42	8.57	20
2-Hexanone		45.49	2	µg/L	40	0	114	<b>4</b>	160	41.76	8.55	20
Isopropylbenzene		22.18	2.0	hg/L	20	0	111	2	130	19.29	13.9	70
4-Isopropyttoluene		21.44	2.0	μg/L	20	0	107	20	130	18.89	12.6	20
2-Butanone		47.18	5	µg/L	40	0	118	40	160	42.79	9.76	20
4-Methyl-2-pentanone	ne	41.28	우	μg/L	40	0	103	40	160	36.78	11.5	20
Methyl tert-butyl ether	ier	20.87	2.0	hg/L	20	0	\$	2	130	19.22	8.23	20
Methylene chloride		14.58	5.0	hg∕L	20	0	72.9	2	130	14.35	1.59	20
Naphthaiene		21.58	5.0	µg/L	20	0	108	2	130	19.94	7.9	20
n-Propylbenzene		22.29	2.0	μg/L	20	0	111	2	130	19.43	13.7	20
Styrene		20.29	2.0	μg/L	20	0	5	20	130	17.99	12	20
1,1,1,2-Tetrachloroethane	ethane	18.99	2.0	µg/L	20	0	95	2	130	16.89	11.7	20
1,1,2,2-Tetrachloroethane	ethane	21.04	2.0	hg/L	20	0	105	20	130	19.03	9	20
Qualifiers: ND-	ND - Not Detected at the Reporting Limit	orting Limit		3 - Spike Recover	S - Spike Recovery outside accepted recovery limits	есочету Ііп	1	- Analyte de	lected in the ass	B - Analyte detected in the associated Method Blank	Blank	
J-A	J - Analyte detected below quantitation limits	intitation limits		RPD outside a	R - RPD outside accepted recovery limits	nits	7	Not some	in the second se		<u>.</u>	
IQ	Denoting I imit defined	10 4 th 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					Ž	4 - Not appu	capie where J v	IVA - NOT applicable where J values of NLJ results occur	alts occur	
1	AL - Actioning Lillin, utilitied as the 10Mest concentration the laboratory can accurately quantitate	AS LITE IOWEST VOI	icentranon u	e laboratory can a	occurately quantitat	aj.						

AMRO Environmental Laboratories Corp.

CLIENT: Work Order: Project:	Charles Castelluccio Consulting, LLC 1702023 YRC North Reading	cio Consulting,	rrc			0:05			Q. Labo	QC SUMMARY REPORT Laboratory Control Spike Duplicate	ARY R	EPOR Duplica	E at
Tetrachloroethene		20.65	2.0	hg/L	20	0	103	02	130	18.09	13.2	50	1
Tetrahydrofuran		22.99	<b>£</b>	hg/L	20	0	115	20	130	16.98	30.1	20	œ
Toluene		20.39	2.0	hg/L	20	0	102	20	130	17.63	14.5	20	
1,2,4-Trichlorobenzene	Пе	20.38	2.0	rg/L	20	0	102	20	130	18.64	8.92	20	
1,2,3-Trichlorobenzene	Je	19.56	2.0	Lg/L	20	0	97.8	2	130	17.63	10.4	20	
1,1,1-Trichloroethane	ø	18.71	2.0	hg/L	20	0	93.6	2	130	15.91	16.2	20	
1,1,2-Trichloroethane	₩.	19.57	2.0	hg∕L	20	0	97.8	2	130	17.11	13.4	20	
Trichloroethene		19.96	2.0	hg/L	20	0	8.66	2	130	17.68	12.1	20	
Trichlorofluoromethane	ine	19.46	2.0	hg/L	20	0	97.3	92	130	16.8	14.7	20	
1,2,3-Trichloropropane	<b>a</b>	23.58	2.0	hg/L	20	0	118	20	130	21.78	7.94	20	
1,2,4-Trimethylbenzene	sne sne	21.76	2.0	hg/L	20	0	109	2	130	19.25	12.2	20	
1,3,5-Trimethylbenzene	эпе	21.85	2.0	µg/L	20	0	109	2	130	19.24	12.7	20	
Vinyl chloride		17.12	2.0	hg/L	20	0	85.6	20	130	14.11	19.3	20	
o-Xylene		20.12	2.0	hg/L	20	0	<del>1</del> 0	2	130	17.46	14.2	20	
m,p-Xylene		40.06	2.0	T/Grl	40	0	100	92	130	34.45	15.1	20	
Surr: Dibromofluoromethane	romethane	23.65	2.0	hg/L	25	0	94.6	20	130	0	0	0	
Surr: 1,2-Dichloroethane-d4	ethane-d4	23.66	2.0	hg/L	25	0	94.6	2	130	0	0	0	
Surr: Toluene-d8		24.51	2.0	1/6rl	25	0	86	20	130	0	0	0	
Surr: 4-Bromofluorobenzene	robenzene	23.24	2.0	hg/L	25	0	93	02	130	0	0	0	

NA - Not applicable where J values or ND results occur

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

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

Date: 06-Mar-17

Lab Order:

1702023

CLIENT: Charles Castelluccio Consulting, LLC

1702023-01

Project: YRC North Reading

Collection Date: 2/22/2017 9:05:00 AM

**Collection Time:** 

Client Sample ID: Effluent Ma

Matrix: AQUEOUS

Result Analyses 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 pН 8.1 0 pH Units 2/22/2017 3:39:00 PM

Lab ID:

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 рΗ 6.8 0 pH Units 2/22/2017 3:47:00 PM

Corp.
Laboratories
Environmental
<b>AMRO</b>

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

Method Blank

QC SUMMARY REPORT

Date: 06-Mar-17

Sample ID: NIB-R59305	Batch ID: R59305	Test Code:	:: E300	Units: mg/L	g/L		Analysis Da	Analysis Date: 2/22/2017	17	Prep Date:		
Client ID:		Run (D:	DIONEX	DIONEX_170222A			SeqNo:	994882				
	QC Sample			QC Spike Original Sample	inal Sample			_	Original Sample			
Analyte	Result	굺	Units	Amount	Result	%REC	LowLimit	HighLimit	Result %REC LowLimit HighLimit or MS Result	%RPD	%RPD RPDLimit Que	õ
Chloride	QV	0.50	mg/L									

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

Qualifiers:

Date: 06-Mar-17

CLIENT: Work Order: Project:	Charles Castelluccio Consulting, LLC 1702023 YRC North Reading	ing, LLC							QC SUMMARY REPORT Laboratory Control Spike	JMMARY REPORT Laboratory Control Spike	REPO	RT oike
Sample ID: LCS-R59305 Client ID:	305 Batch ID: R59305	Test Co Run ID:	Test Code: E300 Run ID: DIONEX	E300 Units: mg/L DIONEX_170222A	J6		Analysis D SeqNo:	Analysis Date: 2/22/2017 SeqNo: 994883	147	Prep Date:		ıĪ
Analyte	QC Sample Result	궚	Units	QC Spike Original Sample Amount Result	inal Sample Result	%REC	LowLimit	Hight.imit	Original Sample or MS Result	%RPD	RPDLimit	Ö
Chloride	12.13	0:20	mg/L	12.5	0	97.1	88	110	0			
Sample ID: Icsd-r59305	305 Batch ID: R59305	Test Co	Test Code: E300	Units: mg/L	91-		Analysis D	Analysis Date: 2/22/2017	17	Prep Date:		I
Client ID:		Run ID:	DIONEX	DIONEX_170222A			SeqNo:	994892				
Analyte	QC Sample Result	꿉	Units	QC Spike Original Sample Amount Result	inal Sample Result	%REC	Sample Result %REC LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ö
Chloride	12.18	0.50	mg/L	12.5	0	97.4	8	110	12.13	0.342	20	
Sample ID: LCS-R59318	318 Batch ID: R59318	Test Co	le: SM4500	Test Code: SM4500-H, B Units: pH Units	1 Units		Anatysis Da	ate: 2/22/20	Analysis Date: 2/22/2017 3:29:00 PM	Prep Date:		1
Client ID:		Run (D:	ING-WE	ING-WET_170222A			SeqNo:	995015				
Analyte	QC Sample Result	귵	Units	QC Spike Original Sample Amount Result	inal Sample Result	Sample Result %REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Ö
Н	6.04	0	pH Units	9	0	5	8	101	0			
Sample ID: LCSD-R59318	9318 Batch ID: R59318	Test Cod	le: SM4500-H, B	H, B Units: pH Units	Units		Analysis Da	ate: 2/22/20	Analysis Date: 2/22/2017 3:35:00 PM	Prep Date:		ı
Client ID:		Run ID:	ING-WE	ING-WET_170222A			SeqNo:	995019				
Analyte	QC Sample Result	물	Units	QC Spike Original Sample Amount Result	nal Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Ö
Ħ	6.05	0	pH Units	ဖ	0	101	66	101	6.04	0.165	es es	

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate. J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit Qualifiers:

NA - Not applicable where J values or ND results occur B - Analyte detected in the associated Method Blank

**QC SUMMARY REPORT** Charles Castelluccio Consulting, LLC VRC North Reading 1702023 Work Order: CLIENT: Project:

Project:	YRC No	YRC North Reading									Sam	Sample Duplicate	ate
Sample ID: 1702023-01BD Client ID: Effluent	23-01BD 1t	Batch ID: R59318	Test Cod Run ID:	Test Code: SM4500-H, B Units: pH Units Run ID: ING-WET_170222A	1, B Units: _170222A	pH Units		Analysis D SeqNo:	ate: 2/22/201	Analysis Date: 2/22/2017 3:43:00 PM SeqNo: 995018	Prep Date:		1
Analyte		QC Sample Result	굲	Units	QC Spike ( Amount	QC Spike Original Sample Amount Result	%REC	LowLimit	HighLimit	Sample Original Sample Result %REC LowLimit HighLimit or MS Result	жкро	%RPD RPDLimit Que	ŏ
Æ		8.08	0	pH Units	0	0	0	0	0	8.06	0.248	9	I

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

## ANRO Environmental Laboratories Corporation



111 Herrick Street, Merrimack, NH 03054 TEL: (ED:) 424-2022 • FAX: (603) 429-8498 www.amrolabs.com

April 15, 2017

### **ANALYTICAL TEST RESULTS**

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 <u>30</u> 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.

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

▶
-
Ap
Z
=
_

DATES REPORT

# AMRO Environmental Laboratories Corp.

1703027 Lab Order:

Charles Castelluccio Consulting, LLC YRC North Reading

Client:

Project:	YRC North Reading						
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	
	j			EPA 5030B	3/22/2017	R59395	
1703027-02B				Ion Chromatography, EPA 300		4/5/2017	
					3	R59448	90
				Standard Methods - pH, Water		3/22/2017	
53						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 Merrimack, NH 03054 111 Herrick Street

CHAIN-OF-CUSTODY RECORD

NO: 66496

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

Office: (603) 424-2022

equired Reporting Limits: AMRO Project No.: CONTAMINATION: Remarks GW-2 GW-3 KNOWN SITE Other: S-3 14 MCP AMROCOC2004, Rev.3 08/18/04 凶 AMRO report package AMRO policy requires notification in writing to the laboratory in cases where the samples were collected from highly contaminated sites. MCP Methods Needed: YES No EDD required: level needed: 23 TAL Other Metals: Saufelers (Signatus YES REOUESTED ANALYSES MCP Presumptive Certainty Required? 13 PP 200.7 Dissolved Metals Field Filtered? 티 8 RCRA 6010 2 samples arriving after 12:00 noon will be tracked and billed as eceived on the following day. ostilicas SHEET METALS **Method:** YES Received By Before submitting samples for expedited TAT, you must PRIORITY TURNAROUND TIME AUTHORIZATION have a coded AUTHORIZATION NUMBER BY: Grab dwon AUTHORIZATION No.: Project State: reservative: CI-HCI, MeOH, N-HN03, S-H2SO4, Na-NaOH, O-Other Total # of Cont. & Size 12 · (3) Matrix be logged in and the turnaround time clock will not start until lease print clearly, legibly and completely. Samples can not Yellow: Client Copy Yes No N/A Date/Time Seal Intact? Sampled Send Results To: / Land LEGIS Coman Con Standord S / CAND any ambiguities are resolved.
White: Lab Copy 38 Sample ID.: Project No.: OUOTE #: HONE #: 4 mail: P.O.#:

### **AMRO Environmental Laboratorles Corporation**

### SAMPLE RECEIPT CHECKLIST

111 Herrick Street Merrimack, NH 03054

				(603) 424-2022
Client: Charles Catellucer	AMRO I	ID:		03027
Project Name: YRC North Reading	Date Red	c.:		22-17
Ship via: (circle one) Fed Ex., UPS AMRO Course,	Date Du	e:	<u> 3-</u>	29-17
Hand Del., Other Courier, Other:				
			,	
Items to be Checked Upon Receipt	Yes	No	NA	Comments
Army Samples received in individual plastic bags?			V	3
2. Custody Seals present?			V	
3. Custody Seals Intact?			V	
4. Air Bill included in folder if received?		<u> </u>		
5. Is COC included with samples?	<b>V</b>			
6. Is COC signed and dated by client?				
7. Laboratory receipt temperature. TEMP = 5°C		1		
Samples rec. with ice vice packs neither				
8. Were samples received the same day they were sampled?				
Is client temperature ≈ or <6°C?	V			
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?	<del>,</del>		<del></del>	
11. Were samples rec. within holding time?	1/			
12. Were all samples properly labeled?	<del>  V</del>			
13. Were all samples properly nacecur	<del>  •</del>			
14. Were proper sample containers used?	V			
15. Were all samples received intact? (none broken or leaking)	Y		-	
16. Were VOA vials rec, with no air bubbles?				
	- <del>-</del>			<del></del>
17. Were the sample volumes sufficient for requested analysis?				
18. Were all samples received?	V			
19. VPH and VOA Soils only:	ب لــــــا		VI	
Sampling Method VPH (circle one): M=Methanol, E=EnCore (air-tight contain	*			
Sampling Method VOA (circle one): M=Methanol, SB=Sodium Bisulfate, E=E	1Core, B=Bulk,	D= DI wa	iter	
If M, SB, DI:				
Does preservative cover the soil?				
Does preservation level come close to the fill line on the vial?				<u> </u>
Date/Time DI Preserved vials Frozen on:				
Frozen by Client?				
Were vials provided by AMRO?				
If NO then weights MUST be obta	ined from clien	ıt		
Was dry weight aliquot provided?				
If NO then notified client and info	rm the VOA la	b ASAP.		
20. Subcontracted Samples:			V	
What samples sent:				
Where sent:				
Date:				
Analysis:	<del></del>		<del>-                                    </del>	<del></del>
TAT:	<del>                                     </del>			
21. Information entered into:				
Internal Tracking Log?	<del>/</del>		<del></del>	
	<del>-</del> -		-/-	
Dry Weight Log?			V	
Client Log?			$\checkmark$	
Composite Log?			<u> </u>	
Filtration Log?			<u> </u>	
Received By:  Date: 3-22-/7  Labeled By:  Date: 3-22-/7  Checked By:	<b>A</b>	I	Date: 3	127/17
Labeled By: Date: 3-22-/7 Checked By:	( <i>Gi</i> /)	L	Date: Mで	12/ 11 /

### AMRO Environmental **Laboratories Corporation**

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

Please Circle if: Sample= Soil

AMRO ID: 1703027

Sample= Waste							7101KO 1D.			_
					1	List	1			Final
				]		Preserv.	]	Volume	Final	adjusted pl
		Volume		Initial		Added by	Solution ID #			
Sample 1D	Analysis		Listed	pH*	Y or N	AMRO	of Preserv.	Added	pН	24 hours
01×03A_	VOC	2×40m	HU	<u></u>				<u>L</u>		
016,028	pH, Ce-	500ml	non	a	ralizet	will cl	eck			
DIC. 02C	To La	Com CO Z	HNOZ	42	Α,				1	
, , , , ,	<del>(12) (12)</del>		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		<del> </del>		38		<del> </del>	
						<del></del>				<del> </del>
	<del>                                     </del>	<del> </del> -		<del> </del>	!					
<del></del>		<del>                                     </del>		<u> </u>						
				<u> </u>						
									<u></u>	
		]_								
				-						
						ļ				1
		<del>                                     </del>								
!										
		11								
						List				
			_			Preserv.		Volume	Final	
		Volume	Preserv.	lnitial	Acceptable?	Added by	Solution 1D #	Preservative	adjusted	Acceptable
Sample ID	Analysis	Sample	Listed	TRC	Y or N	AMRO	of Preserv.	Added	TRC	Y or N
	_									
							<u>_</u>	<u></u>		
= if the laborate						thod 200 sei	ries, sample (s)	should be held	i at least	
6 hours prior to	analysis or	24 hours	for water s	ample (.	s). / /					
H Checked B	y: \	$/\mathcal{W}$		Date:	322/17	pH adii	usted By:		Date:	
	•	<del>-/</del>			4-41	L		<del></del>		

J J probable				*** *** ******
l 6 hours prior to analysis o	or 34 hours for water.	sampie (s).	•	
pH Checked By:	(W	Date: 3/22/17	pH adjusted By:	Date:
		/ /		
pH Checked By:		Date:	_pH adj.(16 or 24hrs)By:	Date:

Date: 11-Apr-17

CLIENT:

Charles Castelluccio Consulting, LLC

Project:

YRC North Reading

Lab Order:

1703027

**CASE NARRATIVE** 

### 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.

		Ma	ssDEP Analytic	al Protocol Certifi	cation Form	
Labo	oratory Na	ame: AMRO Enviro	nmental Lab. Corp	).	Project #:	
		on: YRC J			RTN:	
This	Form pro	ovides certification	ns for the followle $-03$	ng data set: list Lab	oratory Sample ID Nu	mber(s):
Matri				diment Drinking	Water ☐ Air ☐ Other:	
CAM	Protoco	ol (check all that a	pply below):	· · · · · · · · · · · · · · · · · · ·		
	VOC 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 🛛
	SVOC	7010 Metais CAM iii C □	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
	Metais III A 🗆	6020 Metais CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchiorate CAM VIII B	
	A <i>ffirmati</i> v	re Responses to (	Questions A thro	ugh F are required t	or "Presumptive Cert	alnty" status
А	Custody,		ed (including tem		cribed on the Chain-of- id or laboratory, and	X Yes 🗆 No
В	Were the	e analytical method tocoi(s) followed?	(s) and all associate	ed QC requirements s	pecified in the selected	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?  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						
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?  Does the laboratory report comply with all the reporting requirements specified in CAM VII A,						
Ε	a. VPH, modificat	ion(s)? (Refer to the	lethods oniy: Was individual method(s	e eaci: method condu ) for a list of significant ete analyte list reporte	ucted without significant modifications). d for each method?	☐ Yes ☐ No
F	Were ali and evai	applicable CAM pro lated in a laboratory	otocoi QC and performantive (including	rmance standard non- aii "No" responses to (	-conformances identified Questions A through E)?	Yes II No
Res	sponses :	to Questions G, F	i and i below are	required for "Presu	mptive Certainty" sta	tus
G	Were the protocoi(		r below all CAM repo	orting ilmits specified in	the selected CAM	Yes Ii No <sup>1</sup>
				inty" status may not ne R 40. 1056 (2)(k) and W	cessarily meet the data us SC-07-350.	ability and
Н	Were all	QC performance sta	andards specified in	the CAM protocol(s) ac	chieved?	□ Yes No¹
I	Were res	uits reported for the	complete analyte lis	t specified in the selec	ted CAM protocol(s)?	Yes D No
<sup>1</sup> All r	negative re	esponses must be a	nddressed in an atta	ached laboratory narra	ative.	
respor	nsibie for d				sed upon my personal li al report is, to the best o	
Sign	ature:`	My3	6_L	Positio	on: Vice President	
Print	ed Name	: Nancy Stewart		8 <b>Date</b> :_	4-15-17	

### DATA COMMENT PAGE

### **Organic Data Qualifiers**

- ND Indicates compound was analyzed for, but not detected at or above the reporting limit.
- 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.

Date: 11-Apr-17

CLIENT:

Charles Castelluccio Consulting, LLC

Lab Order:

1703027

Client Sample ID: Influent

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
OLATILE ORGANIC COMPOUND	S BY MCP MET	SW8260C			₩ <del>*</del>	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-Butyibenzene	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	97	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

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
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 PN
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 PN
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 PN
n-Propyibenzene	ND	2.0	μg/L	1	3/22/2017 3:25:00 PN
Styrene	ND	2.0	µg/L	1	3/22/2017 3:25:00 PN
1,1,1,2-Tetrachloroethane	ND	2.0	μg/L	1	3/22/2017 3:25:00 PN
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	3/22/2017 3:25:00 PN
Tetrachloroethene	74	2.0	µg/L	1	3/22/2017 3:25:00 PN
Tetrahydrofuran	ND	10	μg/L	1	3/22/2017 3:25:00 PN
Toluene	ND	2.0	μg/L	1	3/22/2017 3:25:00 PN
1,2,4-Trichlorobenzene	3.0	2.0	µg/L	1	3/22/2017 3:25:00 PN
1,2,3-Trichlorobenzene	3.0	2.0	µg/L	1	3/22/2017 3:25:00 PN
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 PN
Trichlorofluoromethane	ND	2.0	µg/L	1	3/22/2017 3:25:00 PN
1,2,3-Trichloropropane	ND	2.0	μg/L	1	3/22/2017 3:25:00 PN
1,2,4-Trimethylbenzene	ND	2.0	μ <b>g/L</b>	1	3/22/2017 3:25:00 PN
1,3,5-Trimethylbenzene	ND	2.0	μg/L	1	3/22/2017 3:25:00 PN
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 PN
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 PN

Date: 11-Apr-17

CLIENT:

Charles Castelluccio Consulting, LLC

Lab Order:

1703027

Client Sample 1D: Effluent

Collection Date: 3/22/2017 9:10:00 AM

Matrix: AQUEOUS

Project:

YRC North Reading

Lab ID:

1703027-02A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUND	S 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		μ <b>g/L</b>	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-Chiorotoluene	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 PN
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

Date: 11-Apr-17

CLIENT: Charles Castelluccio Consulting, LLC

Lab Order: 1703027

YRC North Reading

Lab ID: 1703027-02A

Project:

Client Sample 1D: Effluent

Collection Date: 3/22/2017 9:10:00 AM

Matrix: AQUEOUS

Analyses	Result	RL	Qual Units	DF	Date Analyzed
Diisopropyi 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	DN	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

Date: 11-Apr-17

CLIENT:

Charles Casteliuccio Consulting, LLC

Lab Order:

i703027

Client Sample ID: Trip Blank Collection Date: 3/22/2017

Project:

YRC North Reading

Lab ID:

1703027-03A

Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUND	S 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 PN
1,2-Dibromo-3-chloropropane	ND	5.0		µg/L	1	3/22/2017 2:13:00 PN
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

Date: 11-Apr-17

CLIENT:

Charles Castelluccio Consulting, LLC

Lab Order:

1703027

Client Sample ID: Trip Blank Collection Date: 3/22/2017

Project:

YRC North Reading

Matrix: AQUEOUS

Lab ID:

1703027-03A

nalyses	Result	RL	Qual Uni	ts 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 PN
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 PN
2-Hexanone	ND	10	μg/L	1	3/22/2017 2:13:00 PN
Isopropylbenzene	ND	2.0	μg/L	1	3/22/2017 2:13:00 PN
4-Isopropyltoluene	ND	2.0	μg/L	1	3/22/2017 2:13:00 PN
2-Butanone	ND	10	µg/L	1	3/22/2017 2:13:00 PN
4-Methyl-2-pentanone	ND	10	μg/L	1	3/22/2017 2:13:00 PN
Methyl tert-butyl ether	ND	2.0	µg/L	1	3/22/2017 2:13:00 PN
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 PN
n-Propylbenzene	ND	2.0	μg/L	. 1	3/22/2017 2:13:00 PN
Styrene	ND	2.0	µg/L	. 1	3/22/2017 2:13:00 PN
1,1,1,2-Tetrachloroethane	ND	2.0	μg/L	. 1	3/22/2017 2:13:00 PN
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	. 1	3/22/2017 2:13:00 PN
Tetrachloroethene	ND	2.0	μg/L	. 1	3/22/2017 2:13:00 PN
Tetrahydrofuran	ND	10	µg/L	. 1	3/22/2017 2:13:00 PN
Toluene	ND	2.0	μg/L	. 1	3/22/2017 2:13:00 PN
1,2,4-Trichlorobenzene	ND	2.0	μg/L	. 1	3/22/2017 2:13:00 PN
1,2,3-Trichlorobenzene	ND	2.0	µg/L	. 1	3/22/2017 2:13:00 PN
1,1,1-Trichloroethane	ND	2.0	µg/L	. 1	3/22/2017 2:13:00 PN
1,1,2-Trichloroethane	ND	2.0	μg/L	. 1	3/22/2017 2:13:00 PN
Trichloroethene	ND	2.0	μg/L	. 1	3/22/2017 2:13:00 PN
Trichlorofluoromethane	ND	2.0	µg/L	. <b>1</b>	3/22/2017 2:13:00 PM
1,2,3-Trichloropropane	ND	2.0	µg/L	. 1	3/22/2017 2:13:00 PN
1,2,4-Trimethylbenzene	ND	2.0	µg/L	. <b>1</b>	3/22/2017 2:13:00 PM
1,3,5-Trimethylbenzene	ND	2.0	µg/L	. <b>1</b>	3/22/2017 2:13:00 PM
Vinyl chloride	ND	2,0	μg/L	. <b>1</b>	3/22/2017 2:13:00 PM
o-Xylene	ND	2.0	μg/L	. <b>1</b>	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	%RI	EC 1	3/22/2017 2:13:00 PM
Surr: 1,2-Dichloroethane-d4	115	70-130	%RE	EC 1	3/22/2017 2:13:00 PM
Surr: Toluene-d8	106	70-130	%RI	EC 1	3/22/2017 2:13:00 PM
Surr: 4-Bromofluorobenzene	93.6	70-130	%RI	EC 1	3/22/2017 2:13:00 PM

Method Blank QC SUMMARY REPORT Charles Castelluccio Consulting, LLC YRC North Reading 1703027 Work Order: CLIENT: Project:

Sample ID: mb-03/22/17	b-03/22/17	Batch ID: R59395	Test Cod	Test Code: SW8260C	: Units: µg/L		Analysis D	ate: 3/22/20	Analysis Date: 3/22/2017 1:38:00 PM	Prep Date	Prep Date: 3/22/2017	
Client ID:			Run ID:	V-3_170322A	122 <b>A</b>		SeqNo:	996176				
:		QC Sample	õ	, 1	Original	Č		_	Original Sample	200	# T. T. C. C. C.	č
Analyte		Result	로		Amount	%KEC	LOWLIMI	HIGHLIMIT	or MS Result	35 2	RFUCIFIE	3
Acetone		QV	10	µg∕L								
Tertiary Amyl Methyl Ether	Methyl Ether	Q	2.0	ъgу								
Benzene		Q	0.	µ9/L								
Bromobenzene	<b>Q</b>	9	2.0	µg∕L								
Bromochloromethane	nethane	Q	2.0	µ9∕L								
Bromodichloromethane	omethane	Q	2.0	µ9∕L								
Bromoform		Q	2.0	µg∕L								
Bromomethane	9	9	2.0	μg/L								
sec-Butylbenzene	ene	9	2.0	rg/L								
n-Butylbenzene	ě	Q	2.0	rg/L								
tert-Butylbenzene	ene	Q	2.0	пgЛ								
Carbon disulfide	de	Q	2.0	рg/L								
Carbon tetrachloride	hloride	QN	2.0	µg/L								
Chlorobenzene	•	9	2.0	ъgг								
Dibromochloromethane	omethane	Q	2.0	иg/L								
Chloroethane		9	5.0	µg/L								
Chloroform		2	2.0	rg/L								
Chloromethane	9	9	2.0	µ9/L								
2-Chlorotoluene	je	Q	2.0	рgď								
4-Chlorotoluene	Je	Q	2.0	rg/								
1,2-Dibromo-	1,2-Dibromo-3-chloropropane	9	5.0	rg/L								
1,2-Dibromoethane	thane	Q	2.0	hg/L								
Dibromomethane	ane	9	2.0	ng/L								
1,3-Dichlorobenzene	enzene	9	2.0	ug/L								
1,2-Dichlorobenzene	enzene	Q	2.0	µg/L								
Qualifiers:	ND - Not Detecto	ND - Not Detected at the Reporting Limit	01	- Spike Reco	S - Spike Recovery outside accepted recovery limits	limits	B - Analy	te detected in	B - Analyte detected in the associated Method Blank	od Blank		
	J - Analyte detect	J - Analyte detected below quantitation limits		: - RPD outsic	R - RPD outside accepted recovery limits		NA - Not	applicable w	NA - Not applicable where J values or ND results occur	results occur		
			٠	•								

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

CLIENT: Charles C.	Charles Castelluccio Consulting, LLC	E E		TOO STIMMAD V DEPORT
Work Order: 1703027				THE TANK INTERPRETATION OF THE CASE
Project: YRC Nort	YRC North Reading			Method Blank
1,4-Dichlorobenzene	QN	2.0	hg/L	
Dichlorodifluoromethane	2	5.0	µg/L	
1,1-Dichloroethane	9	2.0	hg/L	
1,2-Dichloroethane	Q	2.0	hg/L	
1,1-Dichloroethene	9	1.0	µg/L	
cis-1,2-Dichloroethene	<del>Q</del>	2.0	µg/L	
trans-1,2-Dichloroethene	Q	2.0	µg/L	
1,2-Dichloropropane	2	2.0	µ9∕L	
1,3-Dichloropropane	2	2.0	hg/L	
2,2-Dichloropropane	Q	2.0	µ9/L	
1,1-Dichloropropene	2	2.0	µg∕L	
cis-1,3-Dichloropropene	9	1.0	µg/L	
trans-1,3-Dichloropropene	2	1.0	µg/L	
Diethyl ether	Q	5.0	µg/L	
Diisopropyl ether	2	2.0	ug/L	
1,4-Dioxane	<u>Q</u>	20	µg∕L	
Ethyl Tertiary Butyl Ether	Q	2.0	hg∕L	
Ethylbenzene	Q	2.0	hg∕L	
Hexachlorobutadiene	2	5.0	µg/L	
2-Hexanone	Q	9	µg/L	
Isopropylbenzene	Q	2.0	hg/L	
4-Isopropyitoluene	9	2.0	hg/L	
2-Butanone	Q	5	µ9/L	
4-Methyl-2-pentanone	2	5	µg/L	
Methyl tert-butyl ether	2	2.0	µg/L	
Methylene chloride	Q	5.0	µg∕L	
Naphthalene	Q	5.0	hg∕L	
n-Propylbenzene	Q	2.0	hg/L	
Styrene	QN	2.0	µg/L	
1,1,1,2-Tetrachloroethane	QN	2.0	µg/L	
1,1,2,2-Tetrachloroethane	Q	2.0	µg/L	
Qualifiers: ND - Not Detected	ND - Not Detected at the Reporting Limit		S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
J - Analyte detecte	J - Analyte detected below quantitation limits		R - RPD outside accepted recovery limits	NA - Not applicable where I values or NI) recults occur

AMRO Environmental Laboratories Corp.

CLIENT:	Charles Castelluccio Consulting, LLC	Consulting,	rrc						oc s	QC SUMMARY REPORT
Project:	YRC North Reading									Method Blank
Tetrachioroethene		9	2.0	µg/L						
Tetrahydrofuran		2	9	µg/L						
Toluene		Q	2.0	µg/L						
1,2,4-Trichlorobenzene	zene	9	2.0	hg/L						
1,2,3-Trichlorobenzene	ene.	2	2.0	µg∕L						
1,1,1-Trichloroethane	<b></b>	9	2.0	µg/L						
1,1,2-Trichloroethane	ne	오	2.0	µg/L						
Trichlomethene		9	2.0	μg/L						
Trichlorofluoromethane	ane	8	2.0	µg/L						
1,2,3-Trichloropropane	ane	읒	2.0	µg/L						
1,2,4-Trimethylbenzene	zene	ջ	2.0	ng/L						
1,3,5-Trimethylbenzene	zene	9	2.0	µg∕l.						
Vinyl chloride		2	2.0	µg∕L						
o-Xylene		용	2.0	µ9/L						
m.p-Xylene		2	2.0	µg/L						
Surr. Dibromofluoromethane		26.22	2.0	μg/L	25	0	105	2	130	0
Surr: 1,2-Dichloroethane-d4		28.03	2.0	µg/L	52	0	112	20	130	0
Surr. Toluene-d8	•	26.5	2.0	µg/L	25	0	<del>1</del> 06	2	130	0
Surr: 4-Bromofluorobenzene		22.83	2.0	hg/L	25	0	91.3	20	130	0

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

Date: 04-Apr-17

Work Order: 1703027												
	1700								1º 1	,		9
Project: YRC	YRC North Reading								ran	oratory	Laboratory Control Spike	) jike
Sample ID: Ics-03/22/17	Batch ID: R59395	Test Cod	Test Code: SW8260C	Units: µg/L			Analysis D.	ate: 3/22/201	Analysis Date: 3/22/2017 11:52:00 AM	Prep Date	Prep Date: 3/22/2017	
Client ID:		Run ID:	V-3_170322A				SeqNo:	996178				
	QC Sample		o	QC Spike Original Sample	Sample			J	Original Sample			
Analyte	Result	젍	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	ð
Acetone	56.28	9	ng/L	40	0	141	40	160	0			
Tertiary Amyl Methyl Ether	r 20.48	2.0	hg√L	20	0	102	2	130	0			
Велzепе	21.91	1.0	µg∕L	70	0	110	2	130	0			
Bromobenzene	18.39	2.0	₽ġ√	8	0	92	70	130	0			
Bromochloromethane	21.97	2.0	иgЛ	20	0	110	2	130	0			
Bromodichloromethane	23.03	2.0	µg/L	8	0	115	20	130	0			
Вготобот	16.96	2.0	µg/L	20	0	84.8	2	130	0			
Bromomethane	20.15	2.0	µg∕L	70	0	101	4	160	0			
sec-Butylbenzene	17.55	2.0	ng/L	20	0	87.8	2	130	0			
n-Butylbenzene	18.29	2.0	ng/L	20	0	91.4	20	130	0			
tert-Butylbenzene	18.49	2.0	μg/L	70	0	92.5	2	130	0			
Carbon disulfide	16.4	2.0	hg∕L	20	0	85	20	130	0			
Carbon tetrachloride	20.52	2.0	hg/L	20	0	103	2	130	0			
Chlorobenzene	18.2	2.0	µg/L	20	0	91	70	130	0			
Dibromochloromethane	18.47	2.0	ug/L	70	0	92.4	2	130	0			
Chloroethane	16.33	5.0	µg/l.	29	0	81.7	2	130	0			
Chloroform	22.08	2.0	pg/L	20	0	110	20	130	0			
Chloromethane	15.92	2.0	µg/L	20	0	79.6	\$	160	0			
2-Chiorotoluene	17.7	2.0	µg/L	70	0	88.5	2	130	0			
4-Chlorotoluene	17.96	2.0	µg/L	20	0	86.8	20	130	0			
1,2-Dibromo-3-chloropropane	ane 18.5	5.0	µ9∕L	20	0	92.5	2	130	0			
1,2-Dibromoethane	21.35	2.0	μg/L	20	0	107	2	130	0			
Dibromomethane	21.62	2.0	µg∕L	20	0	108	2	130	0			
1,3-Dichlorobenzene	17.97	2.0	rg/L	20	0	89.8	20	130	0			
1,2-Dichlorobenzene	18.05	2.0	µ9/L	20	0	90.2	20	130	0			
Qualifiers: ND - Not D	ND - Not Detected at the Reporting Limit		S - Spike Recove	S - Spike Recovery outside accepted recovery limits	d recovery	limits	B - Analyt	e detected in t	B - Analyte detected in the associated Method Blank	od Blank		
J - Analyte	J - Analyte detected below quantitation limits		R - RPD outside	R - RPD outside accepted recovery limits	limits		NA - Not	andicable wh	NA - Not sonticable where I value or ND recults corns	penite ocur		

AMRO Environmental Laboratories Corp.

CLIENT:	Charles Castelluccio Consulting, LLC	onsulting, LLC	ບ						ŏ	QC SUMMARY REPORT	ORT
work Order: Project:	YRC North Reading									Laboratory Control Spike	l Spike
1,4-Dichlorobenzene		17.79 2.0	2.0	ug/t.	20	٥	68	92	130	0	
Dichlorodifluoromethane	ane		5.0	µ9/L	20	0	72	40	160	0	
1,1-Dichloroethane		22.62 2.	2.0	иgу	20	0	113	20	130	0	
1,2-Dichloroethane		22.11 2.	2.0	µg∕l.	20	0	#	2	130	0	
1,1-Dichloroethene		19.73	1.0	µg/L	20	0	98.6	2	130	0	
cis-1,2-Dichloroethene		21.43 2.	2.0	µg/L	20	0	107	2	130	0	
trans-1,2-Dichloroethene		21.74 2.	2.0	µg/L	20	0	109	92	130	0	
1,2-Dichloropropane		21.76 2.	2.0	идуг	20	0	109	2	130	0	
1,3-Dichloropropane		18.78 2.	2.0	µg/L	20	0	93.9	2	130	0	
2,2-Dichloropropane		25.54 2.	2.0	pg/L	20	0	128	2	130	0	
1,1-Dichloropropene		21.36 2.	2.0	µg/L	20	0	107	2	130	0	
cis-1,3-Dichloropropene		22.34	1.0	µg/L	20	0	112	92	130	0	
trans-1,3-Dichloropropene		20.9 1.	1.0	1/6rl	20	0	\$	2	130	0	
Diethył ether	22	22.43 5.	5.0	hg/L	20	0	112	70	130	0	
Diisopropyt ether	22	22.21 2.	2.0	hg/L	20	0	111	2	130	0	
1.4-Dioxane	<del>-</del>	110.7 5	20	hg/L	100	0	111	4	160	0	
Ethyl Tertiary Butyl Ether		20.95 2.	2.0	μg/L	20	0	105	2	130	0	
Ethylbenzene	₩	18.63 2.	2.0	µg/L	23	0	93.2	2	130	0	
Hexachlorobutadiene		17.12 2.	2.0	µg∕L	8	0	85.6	2	130	0	
2-Hexanone	ਨੌਂ	35.41	<del>0</del>	µg/L	40	0	88.5	6	160	0	
Isopropylbenzene	=	18.45 2.	2.0	µg/L	29	0	92.2	2	130	0	
4-Isopropyltoluene		18.02	2.0	μg/L	20	0	90.1	2	130	0	
2-Butanone	₹	45.48 1	9	µg/L	40	0	114	9	160	0	
4-Methyl-2-pentanone		39.77	5	L/Grl	40	0	99.4	<del>6</del>	160	0	
Methyl tert-butyl ether		22.05 2.	2.0	µg/L	20	0	<del>1</del> 0	20	130	0	
Methylene chloride		16.31 5.	5.0	µ9/L	20	0	81.6	20	130	0	
Naphthalene	<b>\_</b>	17.44 5.	5.0	µg/L	20	0	87.2	20	130	0	
n-Propylbenzene	=	18.44	2.0	μg/L	20	0	92.2	2	130	0	
Styrene		18.1	2.0	µ9∕L	80	0	90.5	20	130	0	
1,1,1,2-Tetrachloroethane		17.94	2.0	µ9/L	20	0	89.7	2	130	0	
1,1,2,2-Tetrachiomethane		17.85 2.	2.0	µg/L	20	0	89.2	2	130	0	
Qualifiers: ND	ND - Not Detected at the Reporting Limit	g Limit		- Spike Recovery	S - Spike Recovery outside accepted recovery limits	covery lin		B - Analyte d	etected in the ass	B - Analyte detected in the associated Method Blank	
j-[	<ul> <li>J - Analyte detected below quantitation limits</li> </ul>	ation limits	1	2 - RPD outside a	R - RPD outside accepted recovery limits	its		NIA - NIA goog	inchie school	char or MD seculic secure	
	•				•	!		1/40 10 NI - WNI	IICADIC WIICIC J V	IN - INOLAPPICADIC WICLC J VALUES OF IND ICOURS OCCUR	

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

AMRO Environmental Laboratories Corp.

CLIENT: Ch Work Order: 17 Project: Y1	Charles Castelluccio Consulting, LLC 1703027 YRC North Reading	o Consulting,	TIC						<b>OC</b>	QC SUMMARY REPORT Laboratory Control Spike
Tetrachloroethene		17.87	2.0	1/6rt	20	0	89.4	70	130	0
Tetrahydrofuran		22.78	6	µg/L	20	0	114	20	130	0
Toluene		21.49	2.0	μg/L	20	0	107	2	130	0
1,2,4-Trichlorobenzene		18.16	2.0	иg/L	8	0	90.8	29	130	0
1,2,3-Trichlorobenzene		15.58	2.0	∏/dr	20	0	6.77	20	130	0
1,1,1-Trichloroethane		20.45	2.0	µg/L	20	0	102	20	130	0
1,1,2-Trichloroethane		21.38	2.0	µg/L	20	0	107	20	130	0
Trichloroethene		21.98	2.0	hg∕L	20	0	110	2	130	0
Trichlorofluoromethane		21.21	2.0	µg/L	20	0	106	29	130	0
1,2,3-Trichloropropane		19.84	2.0	µg/L	20	0	99.2	29	130	0
1,2,4-Trimethylbenzene		18.72	2.0	µg∕L	20	0	93.6	20	130	0
1,3,5-Trimethylbenzene		18.48	2.0	hg/L	20	0	92.4	2	130	0
Vinyl chloride		16.11	2.0	µg∕L	20	0	90.6	20	130	0
o-Xylene		17.7	2.0	µg/L	20	0	88.5	20	130	0
m.p-Xylene		35.89	2.0	µg√L	40	0	89.7	92	130	0
Surr. Dibromofluoromethane	nethane	26.54	2.0	µg∕L	25	0	106	20	130	0
Surr: 1,2-Dichloroethane-d4	ane-d4	24.51	2.0	µg∕L	25	0	86	20	130	0
Surr. Toluene-d8		27.68	2.0	µg/L	25	0	=======================================	20	130	0
Surr: 4-Bromofluorobenzene	enzene	23.8	2.0	µg∕L	25	0	95.2	92	130	0

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate. J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit Qualifiers:

AMRO Environmental Laboratories Corp.

-	Charles Castelluccio Consulting, LLC	, LLC							OC SUMMARY REPORT	MARY	REPOR	H
Work Order: 1703027 Project: YRC No	1703027 YRC North Reading							I	Laboratory Control Spike Duplicate	ntrol Spi	ke Duplic	울 [
Sample ID: Icsd-03/22/17	Batch (D: R59395	Test Code	Test Code: SW8260C	Units: µg/L			Analysis D	ate: 3/22/201	Analysis Date: 3/22/2017 12:27:00 PM	Prep Date	Prep Date: 3/22/2017	1
Client ID:		Run 1D:	V-3_170322A	4			SeqNo:	996177				
	QC Sample		σ	QC Spike Original Sample	Sample			0	Original Sample			
Analyte	Result	귙	Chits	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	ő
Acetone	50.89	<b>6</b>	μg/L	40	0	127	9	160	56.28	10.1	20	
Tertiary Amyl Methyl Ether	20.5	2:0	µg/L	20	0	103	2	130	20.48	0.0976	8	
Benzene	22.35	1.0	ng/L	20	0	112	2	130	21.91	1.99	8	
Bromobenzene	18.84	2.0	рg/L	20	0	94.2	2	130	18.39	2.42	20	
Bromochloromethane	21.84	2.0	µg/L	20	0	109	2	130	21.97	0.593	20	
Bromodichioromethane	23.37	2.0	μg/L	20	0	117	2	130	23.03	1.47	20	
Вготобот	17.12	2.0	µg∕L	20	0	85.6	20	130	16.96	0.939	20	
Bromomethane	19.95	2.0	рg/L	20	0	8.66	4	160	20.15	0.998	23	
sec-Butylbenzene	17.73	2.0	hдуг	20	0	88.6	2	130	17.55	1.02	20	
n-Butylbenzene	18.62	2.0	µg/L	20	0	93.1	2	130	18.29	1.79	8	
tert-Butylbenzene	19.26	2.0	иgЛ	20	0	96.3	2	130	18.49	4.08	23	
Carbon disulfide	16.86	2.0	µg∕L	20	0	84.3	20	130	16.4	2.77	8	
Carbon tetrachloride	21.72	2.0	rg/	20	0	109	2	130	20.52	5.68	20	
Chlorobenzene	18.5	2.0	иg/L	20	0	92.5	2	130	18.2	1.63	20	
Dibromochloromethane	19.09	2.0	µg/L	20	0	95.4	2	130	18.47	3.3	70	
Chioroethane	16.38	5.0	µg/L	20	0	819	2	130	16.33	0.306	70	
Chloraform	22.89	2.0	hg/L	20	0	114	20	130	22.08	3.6	20	
Chloromethane	14.29	2.0	µg/L	20	0	71.5	9	160	15.92	10.8	2	
2-Chlorotoluene	18.8	2.0	µg∕L	20	0	8	20	130	17.7	6.03	8	
4-Chlorotoluene	18.64	2.0	μg/L	20	0	93.2	20	130	17.96	3.72	20	
1,2-Dibromo-3-chloropropane	ne 18.9	5.0	µ9∕L	20	0	94.5	2	<del>1</del> 30	18.5	2.14	8	
1,2-Dibromoethane	21.38	2.0	µg∕L	20	0	107	20	130	21.35	0.14	70	
Dibromomethane	21.72	2.0	μg/L	20	0	109	2	130	21.62	0.461	8	
1,3-Dichlorobenzene	18.28	2.0	иg/L	20	0	91.4	2	130	17.97	1.71	29	
1,2-Dichlorobenzene	18.51	2.0	ng/L	20	0	97.6	20	130	18.05	2.52	8	

Qualifiers:

NA - Not applicable where J values or ND results occur B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery fimits

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

J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit

<sup>22</sup> 

AMRO Environmental Laboratories Corp.

CLIENT:	Charles Castelluccio Consulting, LLC	ing, LLC							OC STIMMARY REPORT	MARYE	RPORT
Work Order:	1703027							,			
Project:	YRC North Reading					,		Lab	Laboratory Control Spike Duplicate	itrol Spike	: Duplicate
1,4-Dichlorobenzene	e 18.2	2.0	hgvL	20	0	91	70	130	17.79	2.28	20
Dichlorodifluoromethane	hane 16.59	5.0	µg/L	20	0	83	4	160	14.39	14.2	20
1,1-Dichloroethane	72.77	2.0	µg/L	20	0	114	2	130	22.62	0.661	20
1,2-Dichlomethane	22.52	2.0	µg∕L	20	0	113	2	130	22.11	<b>1</b> .	20
1,1-Dichioroethene	21.25	1.0	hg/L	20	0	106 5	2	130	19.73	7.42	20
cis-1,2-Dichloroethene	ane 21.53	2.0	ng/L	20	0	108	92	130	21.43	0.466	20
trans-1,2-Dichloroethene	thene 22.76	2.0	hg∕L	20	0	114	2	130	21.74	4.58	20
1,2-Dichloropropane	e 21.17	2.0	ng/L	70	0	106	2	130	21.76	2.75	20
1,3-Dichloropropane	18.67	2.0	ng/L	8	0	93.4	2	130	18.78	0.587	8
2,2-Dichloropropane	e 25.1	2.0	иgЛ	70	0	126	2	130	25.54	1.74	20
1,1-Dichloropropene	8 22.73	2.0	rg/L	20	0	114	2	130	21.36	6.21	20
cis-1,3-Dichloropropene	pene 22.41	1.0	ng/L	20	0	112	2	130	22.34	0.313	20
trans-1,3-Dichloropropene	ropene 20.43	1.0	µg/L	70	0	102	2	130	20.9	2.27	20
Diethyl ether	22.68	5.0	µ9∕L	20	0	113	2	130	22.43	1.11	70
Diisopropyl ether	21.76	2.0	µg/L	8	0	109	2	130	22.21	2.05	20
1,4-Dioxane	127.4	20	µg∕L	100	0	127	4	160	110.7	4	20
Ethyi Tertiary Butyi Ether	Ether 20.54	2.0	hg/L	20	0	103	20	130	20.95	1.98	20
Ethylbenzene	19.38	2.0	µg/L	20	0	6.96	2	130	18.63	3.95	20
Hexachlorobutadiene	ne 16.61	2.0	µ9/L	20	0	83	2	130	17.12	3.02	20
2-Hexanone	35.35	5	рg/L	40	0	88.4	4	160	35.41	0.17	20
Isopropylbenzene	18.91	2.0	μg/L	20	0	94.6	2	130	18.45	2.46	20
4-Isopropyltoluene	18.73	2.0	µg/L	20	0	93.6	2	130	18.02	3.86	20
2-Butanone	41.5	9	µg/L	40	0	104	4	160	45.48	9.15	20
4-Methyl-2-pentanone	39.47	10	µg/L	40	0	98.7	4	160	39.77	0.757	20
Methyl tert-butyl ether	ner 22.47	2.0	µg/L	20	0	112	20	130	22.05	1.89	20
Methylene chloride	16.66	5.0	µg/L	20	0	83.3	20	130	16.31	2.12	20
Naphthalene	17.48	5.0	µg/L	20	0	87.4	20	130	17.44	0.229	20
n-Propylbenzene	18.91	2.0	µg/L	20	0	94.6	2	130	18.44	2.52	20
Styrene	18.58	2.0	µg/L	20	0	92.9	29	130	18.1	2.62	20
1,1,1,2-Tetrachloroethane	ethane 18.76	2.0	µg/L	20	0	93.8	2	130	17.94	4.47	20
1,1,2,2-Tetrachloroethane	ethane 18.19	2.0	µg/L	20	0	6	2	130	17.85	1.89	20
Qualifiers: ND.	ND - Not Detected at the Reporting Limit		S - Spike Recove	- Spike Recovery outside accepted recovery limits	d recovery lim	its	B - Analyte c	detected in the a	B - Analyte detected in the associated Method Blank	d Blank	
A-1	I - Analyte detected helow assantiation limits	nite	R - RPD outside	R - RPD outside accented recovery fimits	limite		1			2	
•	ulaiju tenene reten quantumien un	2	**************************************	fractions toronto	2		NA - Not ap	plicable where J	NA - Not applicable where I values or NLI results occur	sults occur	

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

AMRO Environmental Laboratories Corp.

CLIENT: Work Order: Project:	Charles Castelluccio Consulting, LLC 1703027 YRC North Reading	io Consulting, l	LLC						Q( Labor	QC SUMMARY REPORT Laboratory Control Spike Duplicate	IARY R trol Spike	EPORT Duplicate
Tetrachloroethene		19.07	2.0	иg/L	20	0	95.4	70	130	17.87	6.5	8
Tetrahydrofuran		25.86	<b>5</b>	µg/L	20	0	129	20	130	22.78	12.7	20
Toluene		21.67	2.0	μg/L	20	0	108	02	130	21.49	0.834	20
1,2,4-Trichlorobenzene	ene	18.04	2.0	μg/L	20	0	90.2	02	130	18.16	0.663	20
1,2,3-Trichlorobenzene	3ne	15.64	2.0	µg∕l.	20	0	78.2	2	130	15.58	0.384	20
1,1,1-Trichloroethane	9	21.33	2.0	μg/L	20	0	107	2	130	20.45	4.21	20
1,1,2-Trichloroethane	•	21.3	2.0	μg/L	20	0	106	20	130	21.38	0.375	20
Trichtoroethene		23.12	2.0	µg/L	20	0	116	2	130	21.98	5.06	20
Trichlorofluoromethane	ane	22.9	2.0	µg∕L	20	0	114	20	130	21.21	99.2	20
1,2,3-Trichloropropane	me	20.41	2.0	µg∕L	20	0	102	2	130	19.84	2.83	20
1,2,4-Trimethylbenzene	ene	19.43	2.0	µg∕l.	20	0	97.2	20	130	18.72	3.72	20
1,3,5-Trimethylbenzene	ene	19.29	5.0	µg∕L	20	0	96.5	2	130	18.48	4.29	20
Vinyi chloride		18.78	2.0	µg∕L	20	0	93.9	20	130	16.11	15.3	50
o-Xylene		18.49	2.0	µg∕l.	20	0	92.5	2	130	17.7	4.37	20
m.p-Xylene		36.1	2.0	µg∕L	40	0	90.2	20	130	35.89	0.583	20
Surr: Dibromofluoromethane	nomethane	26.26	2.0	иg/L	25	0	105	2	130	0	0	0
Surr: 1,2-Dichloroethane-d4	ethane-d4	25.78	2.0	hg/L	25	0	103	20	130	0	0	0
Surr. Toluene-d8		27.13	2.0	µg/L	25	0	109	2	130	0	0	0
Surr: 4-Bromofluorobenzene	nobenzene	23.92	2.0	µg∕L	25	0	95.7	20	130	0	0	0

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate. J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit Qualifiers:

B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

Date: 11-Apr-17

CLIENT: Charles Castelluccio Consulting, LLC Lab Order: 1703027

Project: YRC North Reading

Lab ID: i703027-01 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	E2	00.7			Analyst: AL
Iron	ND	100	µg/L	1	3/27/2017 5:00:43 PM
ION CHROMATOGRAPHY	E3	00			Analyst: AL
Chloride	420	10	mg/L	20	4/5/2017
MERCURY, TOTAL	E2	45.1			Analyst: AL
Mercury	ND	0.20	µg/L	1	3/28/2017 3:51:53 PM
РН	SM	l4500-Н, В			Analyst: AL
рН	6.6	0 Н	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	E	200.7			Analyst: AL
Iron	ND	100	µg/L	1	3/27/2017 5:07:23 PM
ION CHROMATOGRAPHY	E	300			Analyst: AL
Chloride	380	10	mg/L	20	4/5/2017
MERCURY, TOTAL	E	245.1			Analyst: AL
Mercury	ND	0.20	µg/L	1	3/28/2017 4:07:04 PM
PH	s	M4500-H, B			Analyst: AL
pH	7.8	0 H	pH Units	1	3/22/2017 3:05:00 PM

CLIENT: Work Order: Project:	Charles Castelluccio Consulting, LLC 1703027 YRC North Reading	רוכ							QC SUMMARY REPORT Method Blank	MARY	Y REPORT Method Blank	<b>87</b>
Sample ID: mb-27235 Client ID:	Batch ID: 27235	Test Code: E200.7 Run ID: ICP-OF	E200.7 ICP-OPTI	E200.7 Units: µg/L ICP-OPTIMA_170327A			Analysis D SeqNo:	ate: 3/27/201	Analysis Date: 3/27/2017 3:40:38 PM SeqNo: 996240	Prep Date: 3/22/2017	3/22/2017	
Analyte	QC Sample Result	쿈	Units	QC Spike Original Sample Amount Result	Sample Result	%REC	Sample Result %REC LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Ö
Iron	Q	100	µg/L									
Sample ID: MB-R59448 Client ID:	Batch ID: R59448	Test Code: E300 Run ID: DION	E300 Un DIONEX_170405A	Units: mg/L 170405A			Analysis D SeqNo:	Analysis Date: 4/5/2017 SeqNo: 996811		Prep Date:		1
Analyte	QC Sample Result	귙	Units	QC Spike Original Sample Amount Result	Sample Result	%REC	Sample Result %REC LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Ö
Chloride	QN	0.50	mg/L									
Sample ID: mb-27239 Client ID:	Batch ID: 27239	Test Code: E245.1 Run ID: HG-FIM	E245.1 Unii HG-FIMS_170328A	Units: µg/L_170328A			Analysis D SeqNo:	ate: 3/28/201	Analysis Date: 3/28/2017 3:40:36 PM SeqNo: 996349	Prep Date: 3/28/2017	3/28/2017	
Analyte	QC Sample Result	귍	Units	QC Spike Original Sample Amount Result	Sample Result	%REC	Sample Result %REC LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ä

μgγ

0.20

2

Mercury

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate. J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit Qualifiers:

B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

AMRO Environmental Laboratories Corp.

CLIENT: Work Order: Project:	Charles C 1703027 YRC No	Charles Castelluccio Consulting, LLC 1703027 YRC North Reading	, LLC							QC SUMMARY REPORT Laboratory Control Spike	JMMARY REPORT Laboratory Control Spike	REPOI	RT ike
Sample ID: fcs-27235 Client ID: Analyte	236	Batch ID: 27235 QC Sample Result	Test Code: E200.7 Run ID: ICP-OF RL Units	E200.7 ICP-OPTI	E200.7 Units: µg/L ICP-OPTIMA_170327A QC Spike Original Sample Units Amount Result		%REC	Analysis D: SeqNo: LowLimit	ate: 3/27/201 996241 O HighLimit	Analysis Date: 3/27/2017 3:45:14 PM SeqNo: 996241 Original Sample LowLimit HighLimit or MS Result	Prep Date: 3/22/2017	3/22/2017 RPDLimit	on.
Iron Sample ID: LCS-R59448 Client ID:	59448	4155 Batch ID: R59448	100 Test Code: Run ID:	ug/L 4004 ide: E300 Uni DIONEX_170405A	4004 Units: mg/L 170405A	٥	\$	85 Analysis D. SeqNo:	Analysis Date: 4/5/2017 SeqNo: 996812	0	Prep Date:		1
Analyte Chloride		QC Sample Result 13.48	RL 0.50	Units mg/L	QC Spike Original Sample Amount Result 12.5 0		%REC 108	LowLimit 89	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Ö
Sample ID: LCSD-R59448 Client ID: Analyte Chloride	R59448	Batch ID: R59448 QC Sample Result 13.47	Test Code: E300 Run ID: DION RL Units	E300 Uni DIONEX_170405A QC Spik Units Amoun	Units: mg/L 170405A QC Spike Original Sample Amount Result	L al Sample Result 0	%REC 108	Analysis D SeqNo: LowLimit 89	Analysis Date: 4/5/2017 SeqNo: 996817 O LowLimit HighLimit 89 110	7 Original Sample or MS Result	Prep Date:	RPDLimit	Ö
Sample ID: Icsd-27239 Client ID: Analyte	7239	Batch ID: 27239 QC Sample Result	Test Code: E245.1 Run ID: HG-FIN RL Units	E245.1 HG-FIMS Units	E245.1 Units: µg/L HG-FIMS_170328A QC Spike Original Sample Units Amount Result	al Sample Result	%REC	Anatysis D SeqNo: %REC LowLimit	996350 HighLimit	Analysis Date: 3/28/2017 3:48:07 PM SeqNo: 996350 Original Sample LowLimit HighLimit or MS Result	Prep Date	Prep Date: 3/28/2017	Öñ
Mercury		4.556	0.20	μg/L	4	0	4	<b>89</b>	115	0			

B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

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

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

Qualifiers:

CLIENT:	Charles (	Charles Castelluccio Consulting, LLC	, LLC							OC SUMMARY REPORT	MARY	REPOR	£
Work Order:	1703027									1-1		101101	ļ <u>.</u>
Project:	YRCNo	YRC North Reading						i		L'AI	olatory C	Laboratory Collinol Spire	¥
Sample ID: LCS-27239	7239	Batch ID: 27239	Test Code: E245.1	E245.1	Units: mg/L			Analysis D	ate: 3/28/201	Analysis Date: 3/28/2017 5:28:09 PM	Prep Date	Prep Date: 3/28/2017	I
Client ID:			Run ID:	HG-FIMS_170328A	70328A			SeqNo:	996376				
		QC Sample		ð	QC Spike Original Sample	al Sample			J	Original Sample			
Analyte		Result	교	Units /	Amount	Result	%REC	LowLimit	HighLimit	Result %REC LowLimit HighLimit or MS Result	%RPD	%RPD RPDLimit	Ö
Mercury		4.045	0.20	mg/L	4	0	101	82	115	0			
Sample ID: LCS-R59415	159415	Batch ID: R59415	Test Code:	SM4500-H, I	Test Code: SM4500-H, B Units: pH Units	Units		Analysis D	ate: 3/22/201	Analysis Date: 3/22/2017 2:34:00 PM	Prep Date:		
Client ID:			Run ID:	ING-WET_170322A	70322A			SedNo:	998425				

õ

%RPD RPDLimit

or MS Result

Result %REC LowLimit HighLimit

QC Spike Original Sample

Amount

Units

굾

QC Sample

Original Sample

Prep Date:

Analysis Date: 3/22/2017 2:56:00 PM 996431

SeqNo:

5

8

<del>6</del>

0

9

pH Units

0

6.03 Result

Test Code: SM4500-H, B Units: pH Units

Batch ID: R59415

Sample ID: LCSD-R59415

Client ID:

Analyte

돐

ING-WET\_170322A

Run ID:

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 concentra	est concentration the laboratory can accurately quantitate.	

Qualifiers:

Analyte

Ö

%RPD RPDLimit

Original Sample

Result %REC LowLimit HighLimit or MS Result

QC Spike Original Sample

Amount

Units

Result 6.05

QC Sample

pH Units

0 뭅

0.331

6.03

5

66

<del>5</del>

CLIENT: Charles ( Work Order: 1703027 Project: YRC No	Charles Castelluccio Consulting, LLC 1703027 YRC North Reading	g, LLC							QC SUMMARY REPORT Sample Duplicate	MARY	ARY REPORT Sample Duplicate	ZT ate
Sample ID: 1703027-01BD Client ID: Influent	Batch ID: R59448	Test Code: E300 Run ID: DION	E300 Uni	Units: mg/L 70405A			Analysis D. SeqNo:	Analysis Date: 4/5/2017 SeqNo: 996815		Prep Date:		
Analyte	QC Sample Resuft	귤	Q	QC Spike Original Sample Amount Result	f Sample Resuft	%REC	Sample Result %REC LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Oni
Chloride	415	0	mg/L	0	0	0	0	0	415.6	0.142	20	
Sample ID: 1703027-01CD Client ID: Influent	Batch ID: 27239	Test Code: E245.1 Run ID: HG-FIN	9: E245.1 Unit HG-FIMS_170328A	Units: µg/L 170328A			Analysis D SeqNo:	ate: 3/28/201 996352	Analysis Date: 3/28/2017 3:55:41 PM SeqNo: 996352	Prep Date	Prep Date: 3/28/2017	
Analyte	QC Sample Result	점	C Units	QC Spike Original Sample Amount Result	l Sample Result	%REC	Sample Result %REC LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ĕ
Mercury	QN	0.20	µg/L	0	0	0	0	0	0.03809	0	20	
Sample ID: 1703027-01BD Client ID: Influent	Batch ID: R59415	Test Cod Run ID:	3: SM4500-H, B Unit ING-WET_170322A	Test Code: SM4500-H, B Units: pH Units Run ID: ING-WET_170322A	Inits		Analysis D SeqNo:	ate: 3/22/201 996429	Analysis Date: 3/22/2017 3:00:00 PM SeqNo: 996429	Prep Date:		
Analyte	QC Sample Result	펎	Units	QC Spike Original Sample Amount Result	I Sample Result	%REC	Sample Result %REC LowLimit HighLimit		Original Sample or MS Result	%RPD	%RPD RPDLimit	Ö
Hd	6.64	0	pH Units	0	0	0	0	0	6.59	0.756	ĸ	I

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

Sample Matrix Spike

QC SUMMARY REPORT

# AMRO Environmental Laboratories Corp.

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

												١	1
Sample ID: 1703027-01BMS Client ID: Influent	027-01BMS ent	Batch ID: R59448	Test Code: E300 Run ID: DION	E300 Un DIONEX_170405A	Units: mg/L 70405A	- No		Analysis Da SeqNo:	Analysis Date: 4/5/2017 SeqNo: 996816		Prep Date:		1
Analyte		QC Sample Result	교	Units	QC Spike Original Sample Amount Result	inal Sample Result	%REC	Sample Result %REC LowLimit HighLimit		Original Sample or MS Result	%RPD	RPDLimit	ŏ
Chloride		671.2	10	mg/L	250	415.6	102	65	134	0			
Sample ID: 1703027-01CMS Client ID: Influent	1027-01CMS ent	Baich ID: 27239	Test Code: Run 1D:	le: E245.1 Unit HG-FIMS_170328A	Units: µg/L 170328A	<u> </u>		Analysis Dz SeqNo:	ate: 3/28/201	Analysis Date: 3/28/2017 3:59:27 PM SeqNo: 996353	Prep Date:	Prep Date: 3/28/2017	
Analyte		QC Sample Result	젊	Units	QC Spike Original Sample Amount Result	inal Sample Result	%REC	Sample Result %REC LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPOLimit	ő
Mercury		4.163	0.20	hg/L	4	0.03809	103	20	130	0			
Sample ID: 1703027-01CMSD	027-01CMSD	Batch ID: 27239	Test Code:	le: E245.1	Units: µg/L	<u>ج</u>		Analysis Da	ate: 3/28/201	Analysis Date: 3/28/2017 4:03:15 PM	Prep Date:	Prep Date: 3/28/2017	
Client ID: Influent	ent		Run ID:	HG-FIMS_170328A	170328A			SeqNo:	996354				
Analyte		QC Sample Result	귙	Units	QC Spike Original Sample Amount Result	inal Sample Result	Sample Result %REC	LowLimit HighLimit		Original Sample or MS Result	%RPD	%RPD RPDLimit	Que
Mercury		4.204	0.20	µg/L	4	0.03809	40	20	130	4.163	0.996	20	

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

NA - Not applicable where J values or ND results occur



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  $\frac{39}{2}$  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.

Date: 15-May-17

**CLIENT:** 

Charles Castelluccio Consulting, LLC

Project:

YRC N. Reading

Lab Order:

Date Received:

1704037 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

DATES REPORT

# AMRO Environmental Laboratories Corp.

Charles Castelluccio Consulting, LLC 1704037 Lab Order: Client:

Project:	YRC N. Reading						
Sample 1D	Client Sample ID	Collection Date	Matrix	Analytical Test Name	Pren 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	W. A. C.			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	
3				EPA 200.9 SELENIUM, Total		5/2/2017	
3 of 3					4/28/2017	27283	
9				EPA 245.1 MERCURY, Total		5/2/2017	
				MERCURY PREP: EPA 245.1/7040	5/2/2017	27294	
				HARDNESS		5/1/2017	ļ
				200 Series Prep: ICP/GFAA	4/28/2017	27283	
1704037-01C			 	Standard Methods - Ammonia as Nitrogen		4/23/2017	
						R59526	
1704037-01D	The same area of the sa	19 19 19 19 19 19 19 19 19 19 19 19 19 1		Standard Methods - Cyanide, Total		4/26/2017	
						R59527	
1704037-01E	And the second s			lon 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	

DATES REPORT

# AMRO Environmental Laboratories Corp.

Charles Castelluccio Consulting, LLC 1704037 Lab Order: Client:

YRC N. Reading

Project:	YRC N. Reading						
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 R 59528	
1704037-02A	Effluent	4/20/2017 9:10:00 AM	, (m. dr.)	MCP VOCs 8260C, EPA 5030C EPA 5030B	4/20/2017	4/26/2017 R59500	
1704037-02B				Standard Methods - Ammonia as Nitrogen		4/23/2017 R59526	
1704037-02C			}	SM 3500D Hexavalent Chromium		4/20/2017 R59487	
4 of 3				SM 4500G Chlorine, Total Residual (modified)		4/20/2017 R59485	
1704037-02D				EPA 200.7 ICP METALS, TOTAL 200 Series Prep: ICP/GFAA	4/28/2017	5/1/2017 27283	
			4 - 1	HARDNESS	4/28/2017	5/1/2017 27283	
1704037-03A	Receiving	4/20/2017 10:30:00 AM	3	Standard Methods - Ammonia as Nitrogen		4/23/2017 R59526	
1704037-03B				SM 3500D Hexavalent Chromium		4/20/2017 R59487	
1704037-03C				HARDNESS 200 Series Prep: ICP/GFAA	4/28/2017	5/1/2017 27283	

AMRO Environmental Laboratories Corporation 111 Herrick Street Merrimack, NH 03054

CHAIN-OF-CUSTODY RECORD

NO: 66973

web: www.amrolabs.com

Fax: (603) 429-8496 Office: (603) 424-2022

MEHINDACK, INI USO.										L							ŀ		
•	-		Project		9	PE	Project Manager:	a ser:		1	1	Sall	Samplers (Signature):	ignatu	<u>.</u>		<u>₹</u>	AMRO Project No.:	it No.:
1KC	1380	S	tate: MR	لړ	ال	7	Y Y	3	اد	4	7						4	1070	のした
P.O.#:	Results Needed by:	?		L					E E	REOUESTED	- 11	ANALYSES	SES				╣	Remarks	rks
	12 Tark	_							٠	_		_						7	
				_	85				<u>S</u>	م		_					_	يرا يرا دن	
OUOTE#:	al Inta		÷		<b>53</b> \	_				2^\						_	_	かかい	
	Yes No N/A		oziS		NP		7		<u>J.</u>	301							<u>`</u>	qr qr	~N
			2 <b>%</b> .!		ν <b>γ</b>	4	011	0	1/2	0							1	المرام	
			uo		4	5	70	7	10).	Žive								子 か か	
To the second	Date/Time		) }		λh	て	W		5	2 6								7	
Sample ID:	Sampled	xiri	o # [B		aks	<b>)</b> Λ	m ₩	大	/ \ / [-	1.1-							· ·	sts	$T_{\alpha}$
		вM		Cor Gra	w			5		$\dashv$		$\dashv$			$\dashv$		╣		7
1011101	1 2017 925	4		丫	Ľ	X	X	X	X										
100	1/2/1/7 910	4		ヌ	*	X	X	<b>作大学</b>	为	_									
00001V1V8	1420 TI 103N	4		×	_	1	X		X										
Ή				-															
5 of				$\vdash$	Ļ				_	_									
39				+	L	_		T							_		<u> </u>		
				+	L	-		-	┼-	-		$\vdash$	F		$\vdash$		<u> </u>		
				+	Ļ			$\dagger$	+	$\perp$		╁			-		H		
				╁		_			+	$\downarrow$		$\vdash$			+				
				+	<u> </u>	-			-	$\perp$	T	+			+				
Preservative: CI-HCI MeOH. N-HN03. S-H2SO4. Na-NaOH. O- Other	N-HN03 S-H2SO4 N	-NaOH. O-	Other	+	Ļ	-			╀	-	t	╀							
Soud Results To:		PRIORITY TURNAROUND TIME AITHORIZATION	RNAROUN	TIME			] S		METALS	<b>∦</b> ≅	8 RCRA		13 PP	╠	23 TAL		14 MCP	E	
Chindre Corte Vices Pana	νij	Before submitting samples for expedited TAT, you must	ing samples for	or expe	dited T	AT, you	must	Met	Method:	6010		200.7	, <b>-</b>	Other	Other Metals:	]		]	
1		have a coded AUTHORIZATION NUMBER	AUTHORIZ	ATTO	V NUM	BER									. [	l	١,	•.	
		AUTHORIZATION No.:	TION No.:			BY:		Diss	olved M	etals Fi	Dissolved Metals Field Filtered?	red?		YES	╗	اـ و	_		
PHONE #: 5/1/5 SOS 11/2	EAX!							MC	P Presu	aptive (	MCP Presumptive Certainty Required?	y Requir	ed?	S L	MCP Methods Needed:	Needed:			ting Liquits:
E-mail: Charles Castelly	KELLS O AMERING	Gw.			1			4	XIIS	위	$\exists$			SE	4	XI SI	7	Т	Z)[
Rohmuished-Ev		Date/Time	Time	╣	1			Received By	g By					<b>A</b>	oder O	AMRO report package	S-2	Т	
	1111	-1/ <b>00</b> /12	152	হ্র	1	7	1	$\left\  \cdot \right\ $	$\ $	, ],				level	level needed:		2	٦	CW-3
0.7				┪			,		7					<u> </u>	EDD required:	÷i	ō	Other:	
11/Hilawan		41101117	1410				K		X										
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.	mpletely. Samples can not ime clock will not start unt		Samples arriving after 12:00 . received on the following day.	iving a he foll	fter 12. owing	Joon	will be	tracked	r will be tracked and billed as	ed as	the coll	KO poli laborato ected fro	y requir ry in cas m highly	es notifi es wher v contan	AMRO policy requires notification in wri the laboratory in cases where the sample, collected from highly contaminated sites.	AMRO policy requires notification in writing to the laboratory in cases where the samples were collected from highly contaminated sites.		KNOWN SITE CONTAMINATION:	rtion:
White: Lab Copy	Yellow: Client Copy		-						SHEET		OF		H	AMROC	OC2004. R	AMROCOC2004, Rev.3 08/18/04	ğ		
Show or whole	してナイナー ~	4	3	1		8	2	20	9	넌	28								
100 00 00 00 00 00 00 00 00 00 00 00 00	tanto	Palate He	ted in	<		3	}	, ×	CENTON TO THE	3	7-1	7	4	الم	1	1	- Z - Z	AND CALL CACALLY TO THE CALL OF THE CACALLY OF AN AND AND AND AND AND AND AND AND AND	- <del> </del>
いいん いい ろいろ かく	3		) }		)	,		7	>		<u> </u>	<u>}</u>	) ;	5	1	) }	•	· >	7

# AMRO Environmental Laboratorles Corporation

## SAMPLE RECEIPT CHECKLIST

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

	·			(603) 424-2022
Client: Charles Castelluccis	_AMRO			7-04037
Project Name: YRC N. Reading	_Date Red			4-20-17
Ship via: (circle one) Fed Ex., UPS AMRO Courier.	Date Du	e:		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?			V	
2. Custody Seals present?			V	
3. Custody Seals Intact?			V	
4. Air Bill included in folder if received?				
5. Is COC included with samples?				
6. Is COC signed and dated by client?	7			
7. Laboratory receipt temperature. TEMP = 4				
Samples rec. with ice vice packs neither				
8. Were samples received the same day they were sampled?	V			
Is client temperature = or <6°C?				
If no obtain authorization from the client for the analyses.				
Client authorization from: Date: Obtained by:		<del> </del>		·
9. Is the COC filled out correctly and completely?			<del></del>	<u> </u>
10. Does the info on the COC match the samples?				
11. Were samples rec. within holding time?	17		<del></del>	
	\ <u>\</u>		<del> </del>	
12. Were all samples properly labeled?	\ <u>\</u>		<del></del>	
13. Were all samples properly preserved?	V			
14. Were proper sample containers used?	-V_			
15. Were all samples received intact? (none broken or leaking)	V			
16. Were VOA vials rec. with no air bubbles?	V_			
17. Were the sample volumes sufficient for requested analysis?	V			
18. Were all samples received?	V			
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=EnCor	e <u>, B=Bulk,</u>	D= D! w	ater	
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 clie	nt		
Was dry weight aliquot provided?			i	
If NO then notified client and inform t	he VOA la	b ASAP.		
20. Subcontracted Samples:		1	<b>V</b>	
What samples sent:				
Where sent:				
Date:				
Analysis:				
TAT:				
21. Information entered into:	<del>/-</del> -			
Internal Tracking Log?	<del>-</del>		V	
Dry Weight Log?	<del>                                     </del>			
Client Log?	<del></del>		<u> </u>	
Composite Log?			<u> </u>	
Filtration Log?	<u>,                                    </u>		<u> </u>	
Received By: W Date: 4-20-17 Logged in By:	7) 7)		Date: 4	1-20-17
Labeled By: W Date: 4-20-17 Checked By:	NX		Date: 2	4/8417

### AMRO Environmental Laboratories Corporation

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

Please Ci	rcle if:
Sample=	Soil
-alama	

AMRO ID: 1704037

Sample - waste										
						List			Pro at	Final
						Preserv.		Volume	Final	adjusted pH
		Volume	Preserv.	Initial	Acceptable?	Added by	Solution ID #	Preservative	adjusted	(after 16 or
Sample ID	Analysis	Sample	Listed	pH*	Y or N	AMRO	of Preserv.	Added	pН	24 hours)
01A,02A	VOC	2×40ml								
018,020,030	Metals		HNU=	72	7					
O1C, 02B, 03A	Amm.	500 ml	H2504	42	У					
010.02	CN	250m	NAOH,	712	7		200			
01E, 02C	CN- CI- CLG TRE, TSS	500M	noul	an	elist					
038	C16_	500ml	none		1					
						7				
l <sub>e</sub>										
				<del>                                     </del>						
					-					
		-							<u>.</u>	
			<u> </u>				<del></del> -			
				1						
						<del></del>				
									!	
				_						
<u></u>										
		l		<u> </u>			<u> </u>			
i				ŀ						
				İ		List				
			_			Preserv.		Volume	Final	A ====================================
	ŀ	Volume	Preserv.	Initial	Acceptable?	Added by	Solution ID#	Preservative	adjusted TRC	Acceptable? Y or N
Sample ID	Analysis	Sample	Listed	TRC	Y or N	AMRO	of Preserv.	Added	IKC	I OI IN
							ļ			
				<u></u>						
	<del>                                     </del>									
* = if the labora	tory proces	ves the dri	nking wate	r samnl	e (s) for EPA M	ethod 200 se	ries, sample (s)	should be hel	d at least	
16 hours prior to	o analuele a	r 24 house	for water	sanınle	(s).					
_		- 27	X	Date	4-20-17	nH adi	usted By:		Date:	
pH Checked I	oy:			Date:	! 55 1	, pri auj	asiou Dj.	·		
	_			ъ.		TT 11/1/	· 0.41\D		Doto	
pH Checked 1	Ву:			Date:		pH adj.(16	or 24hrs)By:		Date:	

CLIENT: Char

Charles Castelluccio Consulting, LLC

Project:

YRC N. Reading

Lab Order:

1704037

CASE NARRATIVE

Date: 15-May-17

### 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.

		Ma	ssDEP Analytic	al Protocol Certifi	cation Form	
Lab	oratory Na	ame: AMRO Enviro	onmental Lab. Corp	).	Project #:	
Pro	ject Locati	ion: YRC /	N. Readin	19.	RTN:	
This	Form pro	vides certification 704087	ns for the following $-\omega/-\omega 3$	ng data set: list Lat	ooratory Sample ID Nu	mber(s):
Matr	ices: 🏋 G	roundwater/Surface	e Water □ Soil/Se	diment 🗆 Drinking \	Water ☐ Air ☐ Other:	
CAN	/ Protoc	ol (check all that a	oply below):			
	VOC 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
	SVOC 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
	Metals III A 🗆	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchiorate CAM VIII B	
	Affirmativ	/e Responses to (	Questions A throu	igh F are required i	or "Presumptive Cert	ainty" status
A	Custody,	samples received properly preserve /analyzed within met	ed (inciuding tem)	istent with those des perature) in the fie	cribed on the Chain-of- id or laboratory, and	Yes 🗆 No
В	Were the CAM pro	e analytical method( tocol(s) followed?	s) and all associate	ed QC requirements s	pecified in the selected	Y Yes 🗆 No
С	Were all CAM pro	required corrective tocoi(s) implemented	actions and analytic I for all identified per	cal response actions s formance standard no	specified in the selected n-conformances?	Yes II No
D	Does the "Quality Analytica	Assurance and Qu	omply with ail the revalid	eporting requirements elines for the Acquis	specified in CAM VII A, ition and Reporting of	∦Yes □ No
E	a. VPH, modificat	lon(s)? (Refer to the	ethods only: Was individuai method(s)	each method condu for a list of significant te analyte list reported	cted without significant modifications). I for each method?	I) Yes II No
F	Were all and evalu	appiicabie CAM pro lated in a laboratory	tocol QC and performantive (including	rmance standard non- aii "No" responses to C	conformances identified Questions A through E)?	Yes (I No
Res	sponses (	o Questions G, H	and I below are I	required for "Presu	mptive Certainty" stat	lus
G	protocol(s	3)?	·	rting ilmits specified in		YYes Ii No <sup>1</sup>
<u>Da</u> re <sub>l</sub>	<u>ita User No</u> presentativ	<u>te</u> : Data that achieve eness requirements (	"Presumptive Certa described in 310 CMF	inty" status may not ne 7 40. 1056 (2)(k) and WS	cessarily meet the data us. CC-07-350.	ability and
Н	Were all	QC performance sla	ndards specified in t	he CAM protocol(s) ac	hleved?	☐ Yes X No¹
1				specified in the select		Yes □ No¹
				ched laboratory narra		
respon	isible for o	ed, attest under the btaining the informat te and complete.	pains and penaitie tion, the material col	s of perjury that, bas ntained in this analytica	ed upon my personal in al report is, to the best of	quiry of those my knowledge
Signa	ature:	ly Si	5	Positio	n: Vice President	
Print	ed 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
- O 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.

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
OLATILE ORGANIC COMPOUND	S 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

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

nalyses	Result	RL	Qual Un	its Di	F Date Analyzed
Dilsopropyl 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 PN
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-Isopropyitoluene	ND	2.0	µg/l	_ 1	4/26/2017 6:00:00 PM
2-Butanone	ND	10	μ <b>g/</b> 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 Pi
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 5:00:00 Pi
1,1,2,2-Tetrachloroethane	ND	2.0	μg/l	_ 1	4/26/2017 6:00:00 PI
Tetrachloroethene	96	2.0	µg/l	_ 1	4/26/2017 6:00:00 Pt
Tetrahydrofuran	ND	10	µg/l	_ 1	4/26/2017 6:00:00 Pf
Toluene	ND	2.0	μg/l	_ 1	4/26/2017 6:00:00 PI
1,2,4-Trichlorobenzene	ND	2.0	μg/l	. 1	4/26/2017 6:00:00 PI
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 Pt
1,1,2-Trichloroethane	ND	2.0	μg/l	_ 1	4/26/2017 6:00:00 PI
Trichloroethene	7.0	2.0	µg/l	_ 1	4/26/2017 6:00:00 PI
Trichlorofluoromethane	ND	2.0	µg/l		4/26/2017 6:00:00 PI
1,2,3-Trichloropropane	ND	2.0	μg/l		4/26/2017 6:00:00 PI
1,2,4-Trimethylbenzene	ND	2.0	µg/l		4/26/2017 6:00:00 PI
1,3,5-Trimethylbenzene	ND	2.0	µg/l		4/26/2017 6:00:00 Pf
Vinyl chloride	ND	2.0	µg/l		4/26/2017 6:00:00 PI
o-Xylene	ND	2.0	µg/l		4/26/2017 6:00:00 PI
m,p-Xylene	ND	2.0	µg/l		4/26/2017 6:00:00 PI
Surr: Dibromofluoromethane	99.5	70-130	%R		4/26/2017 6:00:00 Pf
Surr: 1,2-Dichloroethane-d4	116	70-130	%R	EC 1	4/26/2017 6:00:00 Pf
Surr: Toluene-d8	97.6	70-130	%R	EC 1	4/26/2017 6:00:00 PM
Surr: 4-Bromofluorobenzene	90.8	70-130	%R	EC 1	4/26/2017 6:00:00 PM

Date: 15-May-17

**CLIENT:** 

Charles Castelluccio Consulting, LLC

Lab Order:

1704037

Client Sample ID: Effluent

Project:

YRC N. Reading

Collection Date: 4/20/2017 9:10:00 AM

Matrix: AQUEOUS

	•			147	attiki 11QU	
Lab ID: 1704037-02A						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUND	S 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 PN
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 PN
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 PN
Dibromomethane	ND	2.0		µg/L	1	4/26/2017 6:39:00 PN
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 PN
1,2-Dichloroethane	ND	2.0		μg/L	1	4/26/2017 6:39:00 PN
1,1-Dichloroethene	ND	1.0		µg/L	1	4/26/2017 6:39:00 PN
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

Date: 15-May-17

CLIENT:

Charles Castelluccio Consulting, LLC

1704037

Client Sample ID: Effluent

Lab Order:

Collection Date: 4/20/2017 9:10:00 AM

Project:

YRC N. Reading

Matrix: AQUEOUS

Lab ID:

1704037-02A

analyses	Result	RL	Qual U	Inits	DF	Date Analyzed
Diisopropyl ether	ND	2.0	þ	g/L	1	4/26/2017 6:39:00 PM
1,4-Dioxane	ND	50	μ	g/L	1	4/26/2017 6:39:00 PM
Ethyl Tertiary Butyl Ether	ND	2.0	μ	g/L	1	4/26/2017 6:39:00 PM
Ethylbenzene	ND	2.0	μ	g/L	1	4/26/2017 6:39:00 PN
Hexachlorobutadiene	ND	2.0	þ	g/L	1	4/26/2017 6:39:00 PM
2-Hexanone	ND	10	μ	g/L	1	4/26/2017 6:39:00 PM
Isopropylbenzene	ND	2.0	μ	g/L	1	4/26/2017 6:39:00 PM
4-Isopropyltoluene	ND	2.0	þ	g/L	1	4/26/2017 6:39:00 PM
2-Butanone	ND	10	μį	g/L	1	4/26/2017 6:39:00 PM
4-Methyl-2-pentanone	ND	10	hi	g/L	1	4/26/2017 6:39:00 PN
Methyl tert-butyl ether	ND	2.0	hi	g/L	1	4/26/2017 6:39:00 PM
Methylene chloride	ND	5.0	μ	g/L	1	4/26/2017 6:39:00 PM
Naphthalene	ND	5.0	μ	g/L	1	4/26/2017 6:39:00 PM
n-Propylbenzene	ND	2.0	μį	g/L	1	4/26/2017 6:39:00 PM
Styrene	ND	2.0	μ	g/L	1	4/26/2017 6:39:00 PM
1,1,1,2-Tetrachloroethane	ND	2.0	μ	g/L	1	4/26/2017 6:39:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0	μ	g/L	1	4/26/2017 6:39:00 PM
Tetrachloroethene	ND	2.0	þ	g/L	1	4/26/2017 6:39:00 PM
Tetrahydrofuran	ND	10	μ	g/L	1	4/26/2017 6:39:00 PM
Toluene	ND	2.0	μ	g/L	1	4/26/2017 6:39:00 PN
1,2,4-Trichlorobenzene	ND	2.0	μ	g/L	1	4/26/2017 6:39:00 PN
1,2,3-Trichlorobenzene	ND	2.0	μ	g/L	1	4/26/2017 6:39:00 PM
1,1,1-Trichloroethane	ND	2.0	μ	g/L	1	4/26/2017 6:39:00 PM
1,1,2-Trichloroethane	ND	2.0	μ	g/L	1	4/26/2017 6:39:00 PM
Trichloroethene	ND	2.0	þ	g/L	1	4/26/2017 6:39:00 PN
Trichlorofluoromethane	ND	2.0	hi	g/L	1	4/26/2017 6:39:00 PM
1,2,3-Trichloropropane	ND	2.0	hi	g/L	1	4/26/2017 6:39:00 PM
1,2,4-Trimethylbenzene	ND	2.0	hi	g/L	1	4/26/2017 6:39:00 PM
1,3,5-Trimethylbenzene	ND	2.0	hi	g/L	1	4/26/2017 6:39:00 PM
Vinyl chloride	ND	2.0	þ	g/L	1	4/26/2017 6:39:00 PM
o-Xylene	ND	2.0	μ	g/L	1	4/26/2017 6:39:00 PN
m,p-Xylene	ND	2.0	þ	g/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

Date: 15-May-17

CLIENT: Charles	Charles Castelluccio Consulting, LLC	LC C							ATTO CO	74.4.7.4	Quan	[
Work Order: 1704037	7								QC SUMIMARY REPORT	MAK	KEL C	Z
	YRC N. Reading									2	Method Blank	ank
												1
Sample ID: mb-04/26/17	Batch ID: R59500	Test Code:	Test Code: SW8260C	Units: µg/L			Analysis D	ate: 4/26/20	Analysis Date: 4/26/2017 1:32:00 PM	Prep Date	Prep Date: 4/26/2017	
Client ID:		Run 1D:	V-2_170426A	⋖			SeqNo:	997759				
	QC Sample		ĕ	QC Spike Original Sample	Sample				Original Sample			
Analyte	Result	궚	Units /	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Öű
Acetone	QN	9	rg/L									
Tertiary Amyl Methyl Ether	S	2.0	ng/L									
Benzene	QN	0.1	J/6rl									
Bromobenzene	Q	2.0	µg∕L									
Bromochloromethane	QN	2.0	µg∕L									
Bromodichloromethane	QV	2.0	hg∕L									
Вгоглобот	Q	2.0	hg/L									
Bromomethane	QN	2.0	µg/L									
sec-Butylbenzene	Q	2.0	µg∕L									
n-Butylbenzene	Q	2.0	µg∕L									
tert-Butylbenzene	QN	2.0	µg∕L									
Carbon disulfide	9	2.0	µg∕L									
Carbon tetrachloride	Q	2.0	µg/L									
Chlorobenzene	Q	2.0	hg∕L									
Dibromochloromethane	S	2.0	hg∕L									
Chloroethane	Q	5.0	µg∕L									
Chloroform	Q	2.0	h9∕L									
Chloromethane	Q	2.0	rg/L									
2-Chiorotoluene	Q	2.0	µg/L									
4-Chlorotoluene	Q	2.0	µg∕L									
1,2-Dibromo-3-chloropropane	Q	5.0	µg/L									
1,2-Dibromoethane	Q	2.0	µg∕L									
Dibromomethane	Q	2.0	µg/L									
1,3-Dichlorobenzene	QN	2.0	hg/L									
1,2-Dichlorobenzene	S	2.0	hg∕L									
Qualifiers: ND - Not Detect	ND - Not Detected at the Reporting Limit	S-	Spike Recovery	S - Spike Recovery outside accepted recovery limits	recovery l	imits	B - Analy	e detected in	B - Analyte detected in the associated Method Blank	od Blank		
J - Analyte detex	J - Analyte detected below quantitation limits	æ	RPD outside a	R - RPD outside accepted recovery limits	imits		NA - Not	applicable wh	NA - Not applicable where J values or ND results occur	esults occur		

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

CLIENT:	Charles Castelluccio Consulting, LLC	Consulting, LLC			TOCOTO VO A MANUS DO
Work Order:	1704037				QC SUMMIAKI KEFUKI
Project:	YRC N. Reading				Method Blank
1,4-Dichlorobenzene	91	ND 2.0	١	hg/L	
Dichlorodifluoromethane	thane	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	ene	ND 2.0	_	µg/L	
trans-1,2-Dichloroethene	thene	ND 2.0	_	µg/L	
1,2-Dichloropropane	ē	ND 2:0	_	µg/L	
1,3-Dichloropropane	<b>©</b>	ND 2.0	_	µg/L	
2,2-Dichloropropane	•	ND 2.0	_	µg/L	
1,1-Dichloropropene	ō	ND 2.0	_	µg/L	
cis-1,3-Dichloropropene	pene	ND 1.0	_	µg∕L	
trans-1,3-Dichloropropene	ropene	ND 1.0	_	µg/L	
Diethyl ether		ND 5.0	_	µg∕L	
Diisopropyl ether		ND 2.0	_	µg/L	
1,4-Dioxane		ND 20	_	µg/L	
Ethyl Tertiary Butyl Ether	l Ether	ND 2.0	_	µg/L	
Ethylbenzene		ND 2.0	_	µg/L	
Hexachlorobutadiene	пе	ND 2.0	_	µg/L	
2-Hexanone			_	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	one	ND 10	_	µg/L	
Methyl tert-butyl ether	her	ND 2.0	_	µg/L	
Methylene chloride		ND 5.0	_	hg/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	ethane	ND 2.0	_	µg/L	
1,1,2,2-Tetrachloroethane	ethane	ND 2.0	_	µg/L	
Qualifiers: ND	ND - Not Detected at the Reporting Limit	ing Limit	S	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
J-A	J - Analyte detected below quantitation limits	itation limits	R-	R - RPD outside accepted recovery limits	NA - Not amplicable where I values or ND results occur
ā					

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

Tetrachloroethene         ND         2.0         µg/L         Amount of the problem of the proble	CLIENT: Work Order: Project:	Charles Castelluccio Consulting, LLC 1704037 YRC N. Reading	o Consulting,	TLC					:	0C	OC SUMMARY REPORT Method Blank
ND         10         μg/L           AD         2.0         μg/L         ABB         CO         LG         LG <t< td=""><td>Tetrachloroethene</td><td></td><td>Q</td><td>2.0</td><td>µg∕L</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Tetrachloroethene		Q	2.0	µg∕L						
ND         2.0         µg/L         Reserve         ND         2.0         µg/L         Reserve         ND         2.0         µg/L         Reserve         ND         2.0         µg/L         Reserve         ND         2.0         µg/L         Reserve         ND         2.0         µg/L         Reserve         ND         2.0         µg/L         Reserve	Tetrahydrofuran		Q	10	µg/L						
ND         2.0         μg/L         Restance         ND         2.0         μg/L         Restance         ND         2.0         μg/L         Restance         ND         2.0         μg/L         Restance         ND         2.0         μg/L         Restance         ND         2.0         μg/L         Restance         ND         2.0         μg/L         Restance         ND         2.0         μg/L         Restance         ND         2.0         μg/L         Restance         ND         2.0         μg/L         Restance         ND         2.0         μg/L         Restance         ND         Restance <td>Toluene</td> <td></td> <td>2</td> <td>2.0</td> <td>µg/L</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Toluene		2	2.0	µg/L						
Forzene         ND         2.0         μg/L         Response         Person	1,2,4-Trichlorobenza	ene	2	2.0	µg/L						
thane         ND         2.0         μg/L         R           thane         ND         2.0         μg/L         R           ethane         ND         2.0         μg/L         R           ropane         ND         2.0         μg/L         R           enzene         ND         2.0         μg/L         R           enzene         ND         2.0         μg/L         R           normethane         25.99         2.0         μg/L         25         0         104         70           ndrorethane-d4         29.16         2.0         μg/L         25         0         107         70           d8         25.19         20         μg/L         25         0         107         70           d8         25.9         20         107         70         70           d8<	1,2,3-Trichlorobenza	ene	2	2.0	µg/L						
thane         ND         2.0         μg/L         R           rethane         ND         2.0         μg/L         R           renzene         ND         2.0         μg/L         R           enzene         ND         2.0         μg/L         R           senzene         ND         2.0         μg/L         R         R           silluoromethane         25.99         2.0         μg/L         R         R         R           rd8         25.19         2.0         μg/L         R         R         R         R         R           rd8         25.19         2.0         μg/L         R	1,1,1-Trichloroethan	ē	Q	2.0	µg/L						
ND         2.0         µg/L         Restance         ND         2.0         µg/L         Restance         ND         2.0         µg/L         Restance         ND         2.0         µg/L         Restance         ND         2.0         µg/L         Restance         ND         2.0         µg/L         Restance         ND         2.0         µg/L         Restance         ND         2.0         µg/L         Restance         ND         2.0         µg/L         Restance         ND         104         70           Ass         25.99         2.0         µg/L         25         0         104         70           Ass         25.16         2.0         µg/L         25         0         101         70           Ass         25.19         2.0         µg/L         25         0         101         70           Ass         25.19         2.0         µg/L         25         0         101         70           Ass         25.19         2.0         µg/L         25         0         101         70           Ass         25.9         20         µg/L         25         0         101         70           Ass         25.9 <td>1,1,2-Trichloroethar</td> <td><b>p</b></td> <td>9</td> <td>2.0</td> <td>µg/L</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	1,1,2-Trichloroethar	<b>p</b>	9	2.0	µg/L						
omethane         ND         2.0         μg/L         And L         Bethe         B	Trichloroethene		Q	2.0	µg/L						
ppropane         ND         2.0         µg/L         Residunct         Property           ylbenzene         ND         2.0         µg/L         Residunct	Trichloroffuorometh	ane	Q	2.0	µg/L						
ylbenzene         ND         2.0         µg/L         Recompleted         Properation of the prop	1,2,3-Trichloropropa	ane	Q	2.0	µg/L						
yibenzene         ND         2.0         µg/L           ND         2.0         µg/L         2.0         µg/L           ND         2.0         µg/L         25         0         104         70           mofluoromethane         25.99         2.0         µg/L         25         0         117         70           ichloroethane-d4         29.16         2.0         µg/L         25         0         117         70           mofluorobenzene         23.44         2.0         µg/L         25         0         101         70	1,2,4-Trimethylbenz	ene	Q	2.0	µg/L						
ND 2.0 μg/L  ND 2.0 μg/L  mofluoromethane 25.99 2.0 μg/L 25 0 104 70  ichloroethane-d4 29.16 2.0 μg/L 25 0 117 70  me-d8 25.19 2.0 μg/L 25 0 101 70  mofluorobenzene 23.44 2.0 μg/L 25 0 93.8 70	1,3,5-Trimethylbenz	ene	Q	2.0	µg/L						
ND         2.0         μg/L         25         0         104         70           Omofluoromethane         25.99         2.0         μg/L         25         0         104         70           Dichloroethane-d4         29.16         2.0         μg/L         25         0         117         70           nene-d8         25.19         2.0         μg/L         25         0         101         70           romofluorobenzene         23.44         2.0         μg/L         25         0         93.8         70	Vinyl chloride		<u>Q</u>	2.0	µg/L						
ND         2.0         µg/L         25         0         104         70           Dichloroethane-d4         29.16         2.0         µg/L         25         0         117         70           nene-d8         25.19         2.0         µg/L         25         0         101         70           romofluorobenzene         23.44         2.0         µg/L         25         0         93.8         70	o-Xylene		2	2.0	µg/L						
25.99 2.0 µg/L 25 0 104 70 29.16 2.0 µg/L 25 0 117 70 25.19 2.0 µg/L 25 0 101 70 23.44 2.0 µg/L 25 0 93.8 70	m.p-Xylene		S	2.0	µg/L						
25.16 2.0 µg/L 25 0 117 70 25.19 2.0 µg/L 25 0 93.8 70	Surr: Dibromoflue	promethane	25.99	2.0	µg/L	25	0	\$	2	130	0
25.19 2.0 µg/L 25 0 101 70 23.44 2.0 µg/L 25 0 93.8 70	Surr: 1,2-Dichlor	bethane-d4	29.16	2.0	µg/L	25	0	117	20	130	0
23.44 2.0 µg/L 25 0 93.8 70	Surr: Toluene-d8		25.19	2.0	µg/L	25	0	101	20	130	0
	Surr: 4-Bromoflux	probenzene	23.44	5.0	µg/L	25	0	93.8	20	130	0

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

Date: 15-May-17

Run ID:         V-2_170426A         Units:         rgul.         Anialysis Date:         4/26/2017 11:40:00 AM         Prop Date:           Run ID:         V-2_170426A         Original Sample         SeqNo:         997761         Annount         Result %REC         LowLimit         HighLimit         or MS Result         %RPD           10         HighL         20         0         102         40         150         0           20         HighL         20         0         114         70         130         0           20         HighL         20         0         116         70         130         0           20         HighL	Work Order: Project:	1704037 YRC N. Reading	Craries Castelluccio Consulting, LLC 1704037 YRC N. Reading	2							QC SUMMARY REPORI Laboratory Control Spike	JMIMARY REPORT Laboratory Control Spike	REPO Sontrol S	RI Pik
Part   Part	Sample ID: Ics-04	126/17	Batch (D: R59500	Test Code	:: SW8260C	Units: pg/L			Analysis Da	ate: 4/26/2017	7 11:40:00 AM	Prep Date	: 4/26/2017	
QCC Sample         Result         RL         Unils         Amount         Result         MRC         Confinite         HighLinit         Original Sample           Amyl Methyl Ether         24,54         10         Hg/L         40         10         102         10	Client ID:			Run ID:	V-2_170426	PA PA			SeqNo:	997761				
Problem of the part			QC Sample		J	C Spike Original	Sample			ō	riginal Sample			
Amyl Methyl Ether         40.64         10         μg/L         40         10           Amyl Methyl Ether         21.57         2.0         μg/L         20         0         108           sinzene         22.9         2.0         μg/L         20         0         114           dioromethane         22.9         2.0         μg/L         20         0         104           chloromethane         21.48         2.0         μg/L         20         0         114           m         16.83         2.0         μg/L         20         0         107           m         16.83         2.0         μg/L         20         0         114           m         16.83         2.0         μg/L         20         0         116           m         16.83         2.0         μg/L         20         0         116           brozene         2.0         μg/L         20         0         106           stransfilde         2.0         μg/L         20         0         106           chloromethane         11.88         2.0         μg/L         20         0         106           shane         11.78	Analyte		Result	귙	Units	Amount	- 1		LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	ő
ryl Ether         21.57         2.0         μg/L         20         0 108           24.97         1.0         μg/L         20         0 125           20.84         2.0         μg/L         20         0 104           thane         22.9         2.0         μg/L         20         0 107           thane         21.48         2.0         μg/L         20         0 107           16.83         2.0         μg/L         20         0 107           16.83         2.0         μg/L         20         0 107           23.26         2.0         μg/L         20         0 106           24.07         2.0         μg/L         20         0 116           20.29         2.0         μg/L         20         0 106           19.09         2.0         μg/L         20         0 106           19.09         2.0         μg/L         20         0 106           14.78         2.0 <td>Acetone</td> <td></td> <td>40.64</td> <td>6</td> <td>µg/L</td> <td>40</td> <td>0</td> <td>102</td> <td>4</td> <td>160</td> <td>0</td> <td></td> <td></td> <td></td>	Acetone		40.64	6	µg/L	40	0	102	4	160	0			
24.97 1.0 μg/L 20 0 125 20.84 2.0 μg/L 20 0 104 thane 21.48 2.0 μg/L 20 0 107 16.83 2.0 μg/L 20 0 107 14.02 2.0 μg/L 20 0 107 23.26 2.0 μg/L 20 0 116 24.07 2.0 μg/L 20 0 116 20.29 2.0 μg/L 20 0 116 20.29 2.0 μg/L 20 0 106 116 20.29 2.0 μg/L 20 0 106 117.82 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.79 2.0 μg/L 20 0 106 14.79 2.0 μg/L 20 0 106 14.79 2.0 μg/L 20 0 106 14.79 2.0 μg/L 20 0 106 14.79 2.0 μg/L 20 0 106 14.70 106 1	Fertiary Amyl Meth	ıyl Ether	21.57	2.0	hg/L	20	0	108	20	130	0			
20.84 2.0 µg/L 20 0 104  ane 22.9 2.0 µg/L 20 0 114  thane 14.02 2.0 µg/L 20 0 107  14.02 2.0 µg/L 20 0 107  14.02 2.0 µg/L 20 0 107  23.26 2.0 µg/L 20 0 116  20.29 2.0 µg/L 20 0 116  20.29 2.0 µg/L 20 0 116  20.29 2.0 µg/L 20 0 106  20.29 2.0 µg/L 20 0 106  21.18 2.0 µg/L 20 0 106  21.27 2.0 µg/L 20 0 106  21.27 2.0 µg/L 20 0 106  21.27 2.0 µg/L 20 0 109  21.83 2.0 µg/L 20 0 109  20.48 2.0 µg/L 20 0 109  20.59 µg/L 20 0 109  20.99 10g/L 20 0 106  20.90 10g/L	Benzene		24.97	0:	hg/L	20	0	125	2	130	0			
ane 22.9 2.0 μg/L 20 0 114 thane 16.83 2.0 μg/L 20 0 107 16.83 2.0 μg/L 20 0 107 14.02 2.0 μg/L 20 0 70.1 23.26 2.0 μg/L 20 0 70.1 23.26 2.0 μg/L 20 0 106 24.07 2.0 μg/L 20 0 106 20.29 2.0 μg/L 20 0 106 20.29 2.0 μg/L 20 0 106 19.09 2.0 μg/L 20 0 106 11.85 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.79 2.0 μg/L 20 0 106 14.70 106 14.70 20 106 14.70 10	Bromobenzene		20.84	2.0	µg/L	20	0	5	20	130	0			
thane         21.48         2.0         μg/L         20         0         107           16.83         2.0         μg/L         20         0         70.1           14.02         2.0         μg/L         20         0         70.1           23.26         2.0         μg/L         20         0         70.1           24.07         2.0         μg/L         20         0         120           20.29         2.0         μg/L         20         0         130           de         25.97         2.0         μg/L         20         0         105           de         25.97         2.0         μg/L         20         0         101           de         25.97         2.0         μg/L         20         0         105           thane         18.85         2.0         μg/L         20         0         106           17.82         5.0         μg/L         20         0         106           14.78         2.0         μg/L         20         0         109           20.48         2.0         μg/L         20         0         109           e         21.95 <td>Bromochlorometha</td> <td>ane</td> <td>22.9</td> <td>2.0</td> <td>µg/L</td> <td>20</td> <td>0</td> <td>114</td> <td>20</td> <td>130</td> <td>0</td> <td></td> <td></td> <td></td>	Bromochlorometha	ane	22.9	2.0	µg/L	20	0	114	20	130	0			
16.83         2.0         µg/L         20         0         84.2           14.02         2.0         µg/L         20         0         70.1           23.26         2.0         µg/L         20         0         116           24.07         2.0         µg/L         20         0         120           21.18         2.0         µg/L         20         0         130           4e         25.97         2.0         µg/L         20         0         130           thane         18.85         2.0         µg/L         20         0         130           thane         17.82         5.0         µg/L         20         0         130           thane         17.82         5.0         µg/L         20         0         130           coropropane         16.47         2.0         µg/L         20         0         130           coropropane         16.47         5.0         µg/L         20         0         130           coropropane         16.47         5.0         µg/L         20         0         130           e         21.95         2.0         µg/L         20	Bromodichlorometi	hane	21.48	2.0	µg∕L	20	0	107	2	130	0			
14.02 2.0 µg/L 20 0 70.1 20 105 24.07 20.0 µg/L 20 0 116 24.07 20.0 µg/L 20 0 120 21.18 20.0 µg/L 20 0 120 120 20.29 2.0 µg/L 20 0 101 105 20.29 2.0 µg/L 20 0 101 101 101 101 101 101 101 101 10	Bromoform		16.83	2.0	µg/L	20	0	84.2	20	130	0			
23.26 2.0 µg/L 20 0 116 24.07 2.0 µg/L 20 0 120 21.18 2.0 µg/L 20 0 120 20.29 2.0 µg/L 20 0 101 20.29 2.0 µg/L 20 0 101 19.09 2.0 µg/L 20 0 101 17.82 2.0 µg/L 20 0 95.4 17.82 5.0 µg/L 20 0 94.2 17.82 5.0 µg/L 20 0 106 21.27 2.0 µg/L 20 0 106 21.27 2.0 µg/L 20 0 106 21.83 2.0 µg/L 20 0 109 20.48 2.0 µg/L 20 0 109 20.48 2.0 µg/L 20 0 100 20.48 20.99 2.0 µg/L 20 0 110 21.95 2.0 µg/L 20 0 110 21.95 2.0 µg/L 20 0 110 22.05 µg/L 20 0 110 22.05 µg/L 20 0 110 22.05 µg/L 20 0 110 22.05 µg/L 20 0 110 22.05 µg/L 20 0 110 22.05 µg/L 20 0 110	Bromomethane		14.02	2.0	µg/L	20	0	70.1	4	160	0			
24.07 2.0 µg/L 20 0 120 21.18 2.0 µg/L 20 0 101 20.29 2.0 µg/L 20 0 101 25.97 2.0 µg/L 20 0 101 19.09 2.0 µg/L 20 0 130 19.09 2.0 µg/L 20 0 95.4 18.85 2.0 µg/L 20 0 89.1 21.27 2.0 µg/L 20 0 106 14.78 2.0 µg/L 20 0 106 21.83 2.0 µg/L 20 0 109 20.48 2.0 µg/L 20 0 109 20.48 2.0 µg/L 20 0 109 20.48 2.0 µg/L 20 0 109 20.48 2.0 µg/L 20 0 109 20.48 2.0 µg/L 20 0 110 20.09 2.0 µg/L 20 0 110 20.09 2.0 µg/L 20 0 110 20.09 2.0 µg/L 20 0 110	sec-Butylbenzene		23.26	2.0	µg/L	20	0	116	20	130	0			
21.18 2.0 µg/L 20 0 106 20.29 2.0 µg/L 20 0 101 25.97 2.0 µg/L 20 0 101 19.09 2.0 µg/L 20 0 95.4 18.85 2.0 µg/L 20 0 94.2 17.82 5.0 µg/L 20 0 106 14.78 2.0 µg/L 20 0 106 21.83 2.0 µg/L 20 0 109 20.48 2.0 µg/L 20 0 109 21.95 2.0 µg/L 20 0 109 21.95 2.0 µg/L 20 0 109 22.05 2.0 µg/L 20 0 109 22.05 2.0 µg/L 20 0 110 22.05 2.0 µg/L 20 0 110 22.05 2.0 µg/L 20 0 110 22.05 2.0 µg/L 20 0 110 20.99 2.0 µg/L 20 0 110	n-Butylbenzene		24.07	2.0	µg/L	20	0	120	20	130	0			
20.29 2.0 µg/L 20 0 101 25.97 2.0 µg/L 20 0 130 19.09 2.0 µg/L 20 0 95.4 18.85 2.0 µg/L 20 0 94.2 17.82 5.0 µg/L 20 0 89.1 21.27 2.0 µg/L 20 0 106 14.78 2.0 µg/L 20 0 109 21.83 2.0 µg/L 20 0 109 20.48 2.0 µg/L 20 0 109 18.5 2.0 µg/L 20 0 109 21.95 2.0 µg/L 20 0 110 22.05 2.0 µg/L 20 0 110 22.05 2.0 µg/L 20 0 110 20.99 2.0 µg/L 20 0 110 20.99 2.0 µg/L 20 0 110	ert-Butylbenzene		21.18	2.0	µg∕L	20	0	106	2	130	0			
25.97 2.0 µg/L 20 0 130 19.09 2.0 µg/L 20 0 95.4 18.85 2.0 µg/L 20 0 94.2 17.82 5.0 µg/L 20 0 89.1 21.27 2.0 µg/L 20 0 106 14.78 2.0 µg/L 20 0 109 21.83 2.0 µg/L 20 0 109 20.48 2.0 µg/L 20 0 109 20.48 2.0 µg/L 20 0 110 21.95 2.0 µg/L 20 0 110 22.05 2.0 µg/L 20 0 110 22.05 2.0 µg/L 20 0 110 20.99 2.0 µg/L 20 0 110 20.99 2.0 µg/L 20 0 110 20.99 2.0 µg/L 20 0 110	Carbon disulfide		20.29	2.0	hg/L	8	0	101	20	130	0			
19.09 2.0 μg/L 20 0 95.4 18.85 2.0 μg/L 20 0 94.2 17.82 5.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 109 20.48 2.0 μg/L 20 0 109 20.48 2.0 μg/L 20 0 109 16.47 5.0 μg/L 20 0 102 18.5 2.0 μg/L 20 0 110 22.05 2.0 μg/L 20 0 110 20.99 2.0 μg/L 20 0 110 20.99 2.0 μg/L 20 0 110 20.99 2.0 μg/L 20 0 110 20.99 2.0 μg/L 20 0 110 20.99 2.0 μg/L 20 0 110	Carbon tetrachloric	de	25.97	2.0	hg/L	20	0	130	20	130	0			
18.85       2.0       μg/L       20       0       94.2         17.82       5.0       μg/L       20       0       89.1         21.27       2.0       μg/L       20       0       106         14.78       2.0       μg/L       20       0       73.9         21.83       2.0       μg/L       20       0       109         20.48       2.0       μg/L       20       0       102         21.95       2.0       μg/L       20       0       110         18.5       2.0       μg/L       20       0       110         20.99       2.0       μg/L       20       0       105         Detected at the Reporting Limit       S- Spike Recovery outside accepted recovery limits	Chlorobenzene		19.09	2.0	hg∕L	8	0	95.4	20	130	0			
17.82 5.0 μg/L 20 0 89.1 21.27 2.0 μg/L 20 0 106 14.78 2.0 μg/L 20 0 106 21.83 2.0 μg/L 20 0 73.9 20.48 2.0 μg/L 20 0 109 20.48 2.0 μg/L 20 0 102 e 16.47 5.0 μg/L 20 0 110 cene 21.95 2.0 μg/L 20 0 110 zene 22.05 2.0 μg/L 20 0 110 zene 20.99 2.0 μg/L 20 0 110 zene 20.99 2.0 μg/L 20 0 110	Dibromochloromet	thane	18.85	2.0	hg/L	20	0	94.2	20	130	0			
21.27       2.0       μg/L       20       0       106         14.78       2.0       μg/L       20       0       73.9         21.83       2.0       μg/L       20       0       73.9         hloropropane       16.47       5.0       μg/L       20       0       109         nne       21.95       2.0       μg/L       20       0       110         cene       18.5       2.0       μg/L       20       0       110         zene       22.05       2.0       μg/L       20       0       110         zene       20.99       2.0       μg/L       20       0       110         Lo Not Detected at the Reporting Limit       5 - Spike Recovery outside accepted recovery limits	Chloroethane		17.82	5.0	hg∕L	20	0	89.1	20	130	0			
14.78 2.0 µg/L 20 0 73.9  21.83 2.0 µg/L 20 0 109  20.48 2.0 µg/L 20 0 109  20.48 2.0 µg/L 20 0 102  Ine 21.95 2.0 µg/L 20 0 110  sene 22.05 2.0 µg/L 20 0 110  zene 20.99 2.0 µg/L 20 0 110  LO-Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits	Chloroform		21.27	2.0	µg/L	20	0	106	2	130	0			
21.83       2.0       μg/L       20       0       109         20.48       2.0       μg/L       20       0       102         hloropropane       16.47       5.0       μg/L       20       0       102         e       18.5       2.0       μg/L       20       0       110         zene       22.05       2.0       μg/L       20       0       110         zene       20.99       2.0       μg/L       20       0       110         LD - Not Detected at the Reporting Limit       S - Spike Recovery outside accepted recovery limits	Chloromethane		14.78	2.0	µg/L	20	0	73.9	4	160	0			
20.48 2.0 µg/L 20 0 102  thloropropane 16.47 5.0 µg/L 20 0 102  ane 21.95 2.0 µg/L 20 0 110  e 18.5 2.0 µg/L 20 0 110  zene 22.05 2.0 µg/L 20 0 110  zene 20.99 2.0 µg/L 20 0 110  AD-Not Detected at the Reporting Limit S-Spike Recovery outside accepted recovery limits	2-Chlorotoluene		21.83	2.0	µg/L	20	0	109	20	130	0			
propane         16.47         5.0         μg/L         20         0         82.4           21.95         2.0         μg/L         20         0         110           18.5         2.0         μg/L         20         0         92.5           22.05         2.0         μg/L         20         0         110           20.99         2.0         μg/L         20         0         105           Not Detected at the Reporting Limit         S - Spike Recovery outside accepted recovery limits	4-Chiorotoluene		20.48	2.0	µg∕L	20	0	102	2	130	0			
21.95 2.0 µg/L 20 0 110 18.5 2.0 µg/L 20 0 92.5 22.05 2.0 µg/L 20 0 92.5 20.99 2.0 µg/L 20 0 110 3. Spike Recovery outside accepted recovery limits	1,2-Dibromo-3-chk	oropropane	16.47	5.0	µg/L	20	0	82.4	20	130	0			
18.5 2.0 µg/L 20 0 92.5 22.05 2.0 µg/L 20 0 110 20.99 2.0 µg/L 20 0 110 110 20.99 2.0 µg/L 20 0 105 20 105 20 0	1.2-Dibromoethans	<b>O</b>	21.95	2.0	µg/L	20	0	110	2	130	0			
22.05 2.0 µg/L 20 0 110 20.99 2.0 µg/L 20 0 105 Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits	Dibromomethane		18.5	2.0	μg/L	20	0	92.5	20	130	0			
20.99 2.0 µg/L 20 0 105  Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits	1,3-Dichlorobenzer	пе	22.05	2.0	μg/L	20	0	110	20	130	0			
ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits	1,2-Dichlorobenzer	ne	20.99	2.0	μg/L	20	0	105	2	130	0			
•		- Not Detecte	ed at the Reporting Limit		- Spike Recove	ry outside accepted	recovery l	imits	B - Analyte	e detected in the	ne associated Metho	od Blank		P.
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits	J-1	Analyte detects	ed helow quantitation limits		PDD cuttide	il morroner between	<u>.</u>							

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

AMRO Environmental Laboratories Corp.

Work Order:         1704037           Project:         YRC N. Reading           1,4-Dichlorobenzene         20.23         2.0         µg/L           1,1-Dichloroethane         21.65         2.0         µg/L           1,2-Dichloroethane         22.8         2.0         µg/L           1,2-Dichloroethane         20.24         1.0         µg/L           1,2-Dichloroethane         20.24         1.0         µg/L           1,2-Dichloroethane         20.24         1.0         µg/L           cis-1,2-Dichloroethane         20.24         1.0         µg/L           trans-1,2-Dichloroptopane         21.73         2.0         µg/L           1,3-Dichloropropane         28.42         2.0         µg/L           2,2-Dichloropropane         28.42         2.0         µg/L           1,1-Dichloropropane         27.6         2.0         µg/L           1,1-Dichloropropane         27.6         2.0         µg/L           trans-1,3-Dichloropropene         27.6         2.0         µg/L           cis-1,3-Dichloropropene         27.6         2.0         µg/L           Diethyl ether         20.53         5.0         µg/L           1,4-Dioxane         20.5	7/6rd 7/6rd 7/6rd 7/6rd 7/6rd 7/6rd 7/6rd 7/6rd 7/6rd 7/6rd	222222222222222222222222222222222222222	101 72.6 108 114 110 100 101 103 108 103 103	5 4 5 5 5 5 5 5 5 5 5 5 5 5 5	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	QC SUMMARY REPORT  Laboratory Control Spike  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	trol Spike
RC N. Reading  20.23 2.0  14.51 5.0  21.65 2.0  22.8 2.0  20.24 1.0  21.9 2.0  21.73 2.0  19.45 2.0  28.42 2.0  27.6 2.0  27.6 2.0  27.6 2.0  27.6 2.0  27.6 2.0  27.6 2.0  27.7 2.0  27.8 35 5.0  20.53 5.0  20.53 5.0  20.53 5.0  20.53 5.0  20.53 5.0  20.53 5.0  20.22 2.0	76n 76n 76n 76n 76n 76n	222222222222222222222222222222222222222	101 72.6 108 114 101 109 103 108 108 109 109	54555555555	05 05 05 05 05 05 05 05 05 05 05 05 05 0	Laboratory Con  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	trol Spike
20.23 2.0 21.65 2.0 22.8 2.0 22.8 2.0 20.24 1.0 21.73 2.0 20.13 2.0 20.13 2.0 28.42 2.0 27.6 2.0 27.6 2.0 27.6 2.0 27.6 2.0 27.6 2.0 27.6 2.0 27.6 2.0 27.6 2.0 27.6 2.0 27.6 2.0 27.6 2.0 27.7 2 1.0 27.8 35 5.0 27.8 2.0 27.9 2.0 27.9 2.0	7/6ri 7/6ri 7/6ri 7/6ri 7/6ri 7/6ri 7/6ri 7/6ri 7/6ri	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	101 72.6 108 114 101 109 101 103 108 108 109	5 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	65 65 65 65 65 65 65 65 65 65 65 65 65 6	000000000	w w
e 14.51 5.0 21.65 2.0 22.8 2.0 20.24 1.0 21.9 2.0 21.73 2.0 20.13 2.0	7,6n 7,6n 7,6n 7,6n 7,6n 7,6n 7,6n	3 2 2 2 2 2 2 2 2 3 3	72.6 108 114 101 109 97.3 142 142 109 109	4 6 6 6 6 6 6 6 6 6 6 6 6 6	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		vs vs
21.65 2.0 22.8 2.0 20.24 1.0 20.24 1.0 21.9 2.0 21.73 2.0 20.13 2.0 19.45 2.0 28.42 2.0 28.42 2.0 27.6 2.0	7/6r 1/6r 1/6r 1/6r 1/6r 1/6r 1/6r	2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3	108 114 110 110 109 17.3 17.8 109 109	222222222	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	00000000	ഗ ഗ
22.8 2.0 20.24 1.0 21.9 2.0 21.73 2.0 20.13 2.0 19.45 2.0 28.42 2.0 27.6 2.0	76d 76d 76d 76d 76d 76d	222222222222222222222222222222222222222	114 101 109 101 97.3 142 142 109 109	22222222	130 130 130 130 130 130 130 130 130 130	0000000	vs vs
20.24 1.0 21.9 2.0 21.73 2.0 20.13 2.0 19.45 2.0 28.42 2.0 27.6 2.0 27.6 2.0 27.6 2.0 27.6 2.0 27.6 2.0 27.72 1.0 e	7/6ri 7/6ri 7/6ri 7/6ri 7/6ri 7/6ri	2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3	101 110 101 97.3 142 138 109 109	22222222	55 55 55 56 56 57 58 58 58 58 58 58 58 58 58 58 58 58 58	000000	w w
21.9 2.0 20.13 2.0 19.45 2.0 28.42 2.0 27.6 2.0 27.72 1.0 en 21.72 1.0 20.53 5.0 20.53 5.0 10 20.53 5.0 20.22 2.0	7/6ri 7/6ri 7/6ri 7/6ri 7/6ri 7/6ri	2 2 2 2 2 2 2 3 3 3 3 5 3 5 5 5 5 5 5 5	110 109 101 97.3 142 142 109 109	2222222	85 85 85 85 85 85 85 85 85 85 85 85 85 8	000000	ഗ ഗ
21.73 2.0 20.13 2.0 19.45 2.0 28.42 2.0 27.6 2.0 21.72 1.0 17.49 1.0 20.53 5.0 22.64 2.0 78.35 50 20.22 2.0	7/6ri 7/6ri 7/6ri 7/6ri 7/6ri	2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3	109 101 142 142 138 109 87.5	222222	130 130 130 130 130 130	00000	oσ
20.13 2.0 19.45 2.0 28.42 2.0 27.6 2.0 21.72 1.0 17.49 1.0 20.53 5.0 22.64 2.0 78.35 5.0 20.22 2.0	7/6ri 7/6ri 7/6ri 7/6ri 7/6ri	2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	101 97.3 142 138 109 87.5	22222	130 130 130 130	0000	ww
19.45 2.0 28.42 2.0 27.6 2.0 21.72 1.0 17.49 1.0 20.53 5.0 22.64 2.0 78.35 50 23.72 2.0	7/6ri 7/6ri 7/6ri 7/6ri	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	97.3 142 138 109 87.5	22222	130 130 130 130	000	os os
28.42 2.0 27.6 2.0 21.72 1.0 17.49 1.0 20.53 5.0 22.64 2.0 78.35 5.0 23.72 2.0 19.44 2.0	761 761 761 761	20 00 00 00 00 00 00 00 00 00 00 00 00 0	142 138 109 87.5	2222	05 t 05 t 05 t 05 t	000	on on
27.6 2.0 21.72 1.0 17.49 1.0 20.53 5.0 22.64 2.0 78.35 5.0 23.72 2.0 19.44 2.0	1997 1907 1907 1907	2000	138 109 87.5	2225	130 130	0 0	w
21.72 1.0 17.49 1.0 20.53 5.0 22.64 2.0 78.35 50 23.72 2.0 20.22 2.0	1997 1997 1997 1997	20 00 00 00 00 00 00 00 00 00 00 00 00 0	109 87.5 103	221	130 130	•	
17.49 1.0 20.53 5.0 22.64 2.0 78.35 50 23.72 2.0 20.22 2.0	1/6rt 1/6rt 1/6rt	20	87.5	2 8	130	>	
20.53 5.0 22.64 2.0 78.35 50 tyl Ether 23.72 2.0 20.22 2.0	µg/L µg/L	2	103	ç		0	
22.64 2.0 78.35 50 by Ether 23.72 2.0 20.22 2.0	±19/L	0		2	130	0	
78.35 50 23.72 2.0 20.22 2.0		20	113	2	130	0	
23.72 2.0 20.22 2.0	ηδ/L	100	78.4	40	160	0	
20.22 2.0	µ9/L	20 0	119	70	130	0	
10.74	μg/L	20	5	20	130	0	
0.7	hg/L	20 0	97.2	20	130	0	
2-Hexanone 22.21 10 µg/L	hg/L	40	55.5	40	160	0	
Isopropylbenzene 23.12 2.0 µg/L	µg/L	20 0	116	2	130	0	
4-Isopropyttoluene 23.12 2.0 µg/L	hg/L	20 0	116	2	130	0	
2-Butanone 33.21 10 µg/L	hg/L	40	83	40	160	0	
4-Methyl-2-pentanone 30.39 10 µg/L	μg/L	40 0	92 (	40	160	0	
Methyl tert-butyl ether 19.84 2.0 µg/L	hg/L	20 0	99.2	29	130	0	
Methylene chloride 19.55 5.0 µg/L	µg/L	20 0	97.8	20	130	0	
Naphthalene 19.17 5.0 µg/L	hg/L	20 0	92.8	29	130	0	
n-Propylbenzene 22.5 2.0 µg/L	hg/L	20 0	112	20	130	0	
21.96 2.0	µg/L	20 0	110	92	130	0	
1,1,1,2-Tetrachloroethane 19.76 2.0 µg/L	hg∕L	20 0	98.8	02	130	0	
1,1,2,2-Tetrachloroethane 17.88 2.0 µg/L	µg/L	20 0	89.4	2	130	0	
Qualifiers: ND - Not Detected at the Reporting Limit S - Spike R	S - Spike Recovery	S - Spike Recovery outside accepted recovery limits	y limits	B - Analyte de	letected in the asso	B - Analyte detected in the associated Method Blank	
J - Analyte detected below quantitation limits R - RPD or	R - RPD outside ac	R - RPD outside accepted recovery limits		NA - Not and	ev I enstre suffective	NA - Not annicable where I values or ND results occur	
•		•		dde mar en	Allegate Wildle 3 va	mucs of the tesuits occur	

AMRO Environmental Laboratories Corp.

CLIENT: Work Order: Project:	Charles Castelluccio Consulting, LLC 1704037 YRC N. Reading	io Consulting	, LLC						9	OC SUMMARY REPORT Laboratory Control Spike
Tetrachloroethene		23.36	2.0	µg/L	20	0	117	70	130	0
Tetrahydrofuran		15.74	10	µ9/L	20	0	78.7	2	130	0
Toluene		20.71	2.0	µg/L	8	0	5	20	130	0
1,2,4-Trichlorobenzene	•	22.51	2.0	µg/L	20	0	113	02	130	0
1,2,3-Trichlorobenzene	9	19.77	2.0	µg/L	8	0	98.8	20	130	0
1,1,1-Trichloroethane		21.93	2.0	µg/L	20	0	110	2	130	0
1,1,2-Trichloroethane		20.67	2.0	µg/L	8	0	103	70	130	0
Trichloroethene		21.75	2.0	µg/L	20	0	109	20	130	0
Trichlorofluoromethane	•	24.3	2.0	µg/L	20	0	122	92	130	0
1,2,3-Trichloropropane	0	19.74	2.0	µg/L	20	0	98.7	70	130	0
1,2,4-Trimethylbenzene	je P	22.86	2.0	µg/L	20	0	114	20	130	0
1,3,5-Trimethylbenzene	9	22.15	2.0	hg/L	20	0	11	20	130	0
Vinyi chloride		16.48	2.0	µg/L	20	0	82.4	20	130	0
o-Xylene		21	2.0	µg/L	20	0	105	2	130	0
m.p-Xylene		44.43	2.0	µg/L	40	0	111	2	130	0
Surr: Dibromofluoromethane	omethane	25.63	2.0	µ9/L	25	0	103	20	130	0
Surr: 1,2-Dichloroethane-d4	thane-d4	28.99	2.0	µg∕L	25	0	116	20	130	0
Surr: Toluene-d8		24.98	2.0	µg/L	25	0	99.9	20	130	0
Surr. 4-Bromofluorobenzene	obenzene	22.98	2.0	µg∕L	25	0	91.9	20	130	0

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

Qualifiers:

Work Order: 1704037 Project: YRC N. Reading Sample ID: Icsd-04/26/17 Batch Client ID: Q Analyte Acetone Tertiary Amyl Methyl Ether Benzene Bromobenzene	Reading Batch ID: R59500						La	Laboratory Control Spike Duplicate	ontrol Spi	ke Duplic	ate
D: Icsd-04/2 myl Methyl	Leading Batch ID: R59500						La	boratory	ide iomic	ke Duplic	are
Sample ID: Icsd-04/26/17 Client ID: Analyte Acetone Tertiary Amyt Methyl Ether Benzene Bromobenzene	Batch ID: <b>R59500</b>										l
Sample ID: Icsd-14/26/17 Client ID: Analyte Acetone Tertiary Amyt Methyl Ether Benzene Bromobenzene	Batch ID: Rossou	Tare State of the Parket					170000000000000000000000000000000000000	10.00.11.01	ote C	Constitution of the Consti	
Analyte Acetone Tertiary Amyi Methyl Ether Benzene Bromobenzene		ë	oc omis. pg/L			Alidiysis D.	Analysis Date: 4/20/2017 12:17:00 FM Sould: 607766	ML 00: / 1:71	rich Dale	. 4/20/2011	
Analyte Acetone Tertiary Amyt Methyl Ether Benzene Bromobenzene		Kun ID: V-Z_1/0426A	U426A			Sedino.					
Analyte Acetone Tertiary Amyt Methyl Ether Benzene Bromobenzene	QC Sample		QC Spike Original Sample	Sample			Oriç	Original Sample			
Acetone Tertiary Amyl Methyl Ether Benzene Bromobenzene	Result	RL Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	ð
Tertiary Amy! Methyl Ether Benzene Bromobenzene	36.53	10 µg/L	40	0	91.3	40	160	40.64	10.7	20	
Benzene Bromobenzene	20.98	2.0 µg/L	20	0	105	2	130	21.57	2.77	8	
Bromobenzene	22.91	1.0 µg/L	20	0	115	20	130	24.97	8.6	50	
3	20.66	2.0 µg/L	70	0	103	2	130	20.84	0.867	20	
Dromocnioromemane	20.82	2.0 µg/L	20	0	호	20	130	22.9	9.52	20	
Bromodichloromethane	20.04	2.0 µg/L	20	0	100	2	130	21.48	6.94	20	
Вготобот	15.01	2.0 µg/L	20	0	75	2	130	16.83	11.4	20	
Bromomethane	15.09	2.0 µg/L	20	0	75.5	6	160	14.02	7.35	23	
sec-Butylbenzene	23.73	2.0 µg/L	20	0	119	20	130	23.26	7	20	
n-Butylbenzene	23.81	2.0 µg/L	20	0	119	20	130	24.07	1.09	20	
tert-Butylbenzene	21.07	2.0 µg/L	50	0	105	2	130	21.18	0.521	20	•
Carbon disulfide	18.81	2.0 µg/L	20	0	94.1	20	130	20.29	7.57	8	
Carbon tetrachloride	23.08	2.0 µg/L	20	0	115	2	130	25.97	11.8	20	
Chlorobenzene	18.48	2.0 µg/L	50	0	92.4	20	130	19.09	3.25	20	
Dibromochloromethane	17.54	2.0 µg/L	20	0	87.7	20	130	18.85	7.2	20	
Chloroethane	16.02	5.0 µg/L	20	0	80.1	22	130	17.82	10.6	20	
Chloroform	20.39	2.0 µg/L	20	0	102	2	130	21.27	4.22	2	
Chloromethane	14.14	2.0 µg/L	20	0	70.7	4	160	14.78	4.43	2	
2-Chlorotoluene	21.56	2.0 µg/L	20	0	108	20	130	21.83	1.24	20	
4-Chiorotoluene	21.9	2.0 µg/L	- 20	0	110	20	130	20.48	6.7	20	
1,2-Dibromo-3-chloropropane	15.18	5.0 µg/L	20	0	75.9	2	130	16.47	8.15	20	
1,2-Dibromoethane	20.6	2.0 µg/L	20	0	103	2	130	21.95	6.35	20	
Dibromomethane	18.12	2.0 µg/L	20	0	90.6	20	130	18.5	2.08	20	
1,3-Dichlorobenzene	22.44	2.0 µg/L	20	0	112	2	130	22.05	1.75	20	
1,2-Dichlorobenzene	21.3	2.0 µg/L	20	0	106	2	130	20.99	1.47	29	
Qualifiers: ND - Not Detected	ND - Not Detected at the Reporting Limit	S - Spike Re	S - Spike Recovery outside accepted recovery limits	i recovery	limits	B - Analyt	e detected in the	B - Analyte detected in the associated Method Blank	od Blank		
J - Analyre detected	J - Analyte detected below quantitation limits	R - RPD out	R - RPD outside accepted recovery limits	limits		NA - Not	nonlicable where	NA - Not annlicable where I values or ND results occur	results occur		
;											

AMRO Environmental Laboratories Corp.

Pig/L   20   103   70   130   20.23   147   20   199/L   20   103   70   130   20.23   147   20   20   199/L   20   0   103   70   130   20.23   147   20   20   199/L   20   0   104   70   130   21.86   3.67   20   20   199/L   20   0   104   70   130   21.86   3.67   20   20   199/L   20   0   102   70   130   21.73   8.04   20   20   199/L   20   0   102   70   130   20.24   174   20   20   199/L   20   0   102   70   130   20.43   141   20   20   199/L   20   0   102   70   130   20.43   141   20   20   199/L   20   0   105   70   130   20.43   141   20   20   199/L   20   0   125   70   130   20.43   141   20   20   199/L   20   0   175   70   130   20.24   17.86   20   20   199/L   20   0   175   70   130   20.23   5.56   20   20   199/L   20   0   171   70   130   20.23   5.56   20   20   199/L   20   0   171   70   130   20.23   20.43   20   20   20   20   20   20   20   2	CLIENT:	Charles Castelluccio Consulting, LLC	io Consulting,	LLC							ET CITAIN	MADVI	Tacase
C.N. Reading  10057 2.0 1991. 20 0 1403 70 150 20.23 1.67 2.0 2.0 1501. 20.0	Work Orde		•							٠ کو		MAKI	AELOKI 7. "
1,00,000   1	Project:	YRC N. Reading								Lab	oratory Col	ntrol Spik	e Duplicate
12.02 5.0 μg/L 20 0 1641 40 1660 1451 18.8 20 20.81 20.87 2.00 μg/L 20 0 104 70 130 22.8 0.572 20 20.87 2.00 μg/L 20 0 104 70 130 20.22.8 0.572 20 20.4 μg/L 20 0 105 70 130 20.22.8 0.572 20 20.4 μg/L 20 0 105 70 130 20.23 4.11 20 20.04 1.0 μg/L 20 0 0 102 70 130 20.23 4.11 20 20.04 1.0 μg/L 20 0 0 162 70 130 20.13 4.11 20 20.04 1.0 μg/L 20 0 0 162 70 130 20.13 4.11 20 20.04 1.10 μg/L 20 0 0 125 70 130 20.13 4.11 20 20.04 1.10 μg/L 20 0 0 125 70 130 20.13 5.65 20 20 191/L 20 0 101/L 20 0 170 130 20.13 5.65 20 20 191/L 20 0 101/L 20 0 170 130 20.13 5.65 20 20 191/L 20 0 101/L 20 0 170 130 20.13 5.65 20 20 191/L 20 0 101/L 20 0 170 130 20.13 5.65 20 20 191/L 20 0 101/L 20 0 170 130 20.13 5.65 20 20 191/L 20 0 101/L 20 0 170 130 20.13 5.65 20 20 191/L 20 0 191/L 20 0 170 130 20.13 5.65 20 20 191/L 20 0 191/L 20 0 170 130 20.13 5.65 20 20 191/L 20 0 191/L 20 0 170 130 20.13 5.65 20 20 191/L 20 0 191/L 20 0 170 130 20.13 5.65 20 20 191/L 20 0 191/L 20 0 170 130 20.13 5.65 20 20 191/L 20 0 191/L 20 0 170 130 20.13 5.75 20.13 5.65 20 20 191/L 20 0 191/L 20 0 170 130 20.13 5.75 20 20 191/L 20 0 191/L 20 0 170 130 20.13 5.75 20.13 5.75 20 191/L 20 0 191/L 20 0 170 130 20.13 5.75 20.13 5.75 20 191/L 20 0 191/L 20 0 170 130 20.13 5.75	1,4-Dichlorob	enzene	20.57	2.0	hg/L	20	0	103	70	130	20.23	1.67	20
2.0.67 2.0 μg/L 20 0 144 70 130 21.65 3.67 20 20 149 19.0 L 20 0 143 70 130 21.65 3.67 20 20 19.0 L 20 0 143 70 130 20.24 1.74 20 20.0 μg/L 20 0 19.0 1 10.0 19.0 1 10.0 19.0 L 20 0 19.0 1 10.0 19.0 L 20 0 19.0 L 20 0 19.0 1 10.0 19.0 L 20 0 19.0	Dichlorodifluc	тотевнапе	12.02	5.0	µ9∕L	20	0	60.1	6	160	14.51	18.8	20
22 67         20         µg/L         20         113         70         130         22.8         0.572           20.04         20         190         7         130         20.28         0.572         174         130         20.28         0.572         174         130         20.29         174         170         130         20.19         174	1,1-Dichloroe	thane	20.87	2.0	µ9/L	20	0	\$	92	130	21.65	3.67	20
18.86   1.0   hg/L   20   0.94   70   130   21.24   174   20   20.4   174   20   20.4   174   20   20.4   174   20   20.4   175   20.4   174   20   20.6   20.4   174   20   20.6   20.6   20.7   20	1,2-Dichloroe	thane	22.67	2.0	µg/L	20	0	113	20	130	22.8	0.572	20
2004 2.0 μg/L 20 0 102 70 130 21.9 708 20 20 20 19.0 L 20 19.0 L 20 0 19.0 L 2	1,1-Dichloroe	thene	19.89	0.	µg/L	20	0	99.4	2	130	20.24	1.74	20
20.05         2.0         µg/L         20         100         70         130         21.73         8.04         20           19.32         2.0         µg/L         20         0         46.6         70         130         20.13         4.11         20           19.06         2.0         µg/L         20         125         70         130         20.42         12.6         20           25.06         2.0         µg/L         20         0         175         70         130         20.42         12.6         20           25.06         2.0         µg/L         20         0         175         70         130         20.42         12.6         20           19.42         1.0         µg/L         20         0         175         70         130         20.43         12.6         20           19.42         2.0         µg/L         20         0         175         70         130         20.43         12.6         20           19.42         2.0         µg/L         20         0         177         70         130         17.4         20         20           66.65         40         µg/L	cis-1,2-Dichlo	proethene	20.4	2.0	µg/L	20	0	102	2	130	21.9	7.09	20
19.32   2.0   199L   2.0   26.5   70   130   20.13   411   2.0   25.65   2.0   199L   2.0   2.	trans-1,2-Dick	hloroethene	20.05	5.0	µg/t	20	0	100	2	130	21.73	8.04	20
19.06 2.0 µg/L 20 0 95.3 70 130 19.45 2.03 20 25.06 2.0 µg/L 20 0 125 70 130 27.6 9.69 20 25.00 1 µg/L 20 0 125 70 130 27.6 9.69 20 25.00 1 µg/L 20 0 125 70 130 27.75 8.05 20 20.04 1.0 µg/L 20 0 100 70 130 21.72 8.05 20 20.04 1.0 µg/L 20 0 1 100 17.0 130 21.72 8.05 20 20.04 1.0 µg/L 20 0 1 17 70 130 22.64 5.82 20 20.04 µg/L 20 0 1 17 70 130 22.64 5.82 20 20.04 µg/L 20 0 1 17 70 130 22.64 5.82 20 20.04 µg/L 20 0 1 17 70 130 22.64 5.82 20 20.04 µg/L 20 0 1 17 70 130 22.64 5.82 20 20.04 µg/L 20 0 1 17 70 130 22.64 5.82 20 20.04 µg/L 20 0 1 17 70 130 22.64 5.82 20 20.04 µg/L 20 0 1 17 70 130 22.12 22.14 5.88 20 20.04 µg/L 20 0 1 17 70 130 22.12 22.14 5.88 20 20.04 µg/L 20 0 1 12 70 130 22.12 22.14 5.88 20 20.04 µg/L 20 0 1 12 70 130 22.12 22.14 5.88 20 20.04 µg/L 20 0 1 12 70 130 22.12 22.14 5.88 20 20.04 µg/L 20 0 1 12 70 130 22.12 22.14 5.88 20 20.04 µg/L 20 0 1 12 70 130 22.15 20.04 1.04 20 20.04 µg/L 20 0 1 12 70 130 22.15 20.04 1.04 20.04 µg/L 20 0 1 12 70 130 22.15 20.04 1.04 20.04 µg/L 20 0 1 12 70 130 22.15 20.04 1.04 20.04 µg/L 20 0 1 12 70 130 22.55 20.04 1.05 20.04 µg/L 20 0 1 12 70 130 22.55 20.04 1.05 20.04 1.04 20.04 µg/L 20 0 1 12 70 130 22.05 20.04 1.05 20.04 1.04 20.04 µg/L 20 0 1 12 70 130 22.05 20.04 1.05 20.	1,2-Dichlorop	ropane	19.32	2.0	ng∕L	20	0	9.96	2	130	20.13	4.11	20
25.06         2.0         pg/L         20         0 125         70         130         28.42         126         20           25.05         2.0         pg/L         20         0 125         70         130         27.6         96.9         20           20.04         1.0         pg/L         20         0 125         70         130         27.75         96.9         20           17.52         1.0         pg/L         20         0 97.1         70         130         27.75         96.9         20           19.42         5.0         pg/L         20         0 97.1         70         130         20.5         5.6         20           19.42         5.0         pg/L         20         0 97.7         70         130         20.5         5.6         20           56.62         5.0         pg/L         20         0 97.7         70         130         20.7         17.7         20           56.62         5.0         pg/L         20         0 94.7         70         130         20.2         1.6         20         17.1         20         17.1         20         1.6         20         20.7         1.6         20 <th>1,3-Dichlorop</th> <td>ropane</td> <td>19.06</td> <td>2.0</td> <td>µg/L</td> <td>20</td> <td>0</td> <td>95.3</td> <td>2</td> <td>130</td> <td>19.45</td> <td>2.03</td> <td>20</td>	1,3-Dichlorop	ropane	19.06	2.0	µg/L	20	0	95.3	2	130	19.45	2.03	20
25.05         2.0         µg/L         2.0         125         7.0         130         27.6         9.89         20           1.0         µg/L         2.0         100         7.0         130         27.7         8.85         20           1.7.52         1.0         µg/L         2.0         0         17.0         130         20.43         8.65         20           19.42         5.0         µg/L         2.0         0         97.1         70         130         20.53         5.6         20           21.36         2.0         µg/L         2.0         0         97.1         70         130         22.64         5.82         20           66.52         2.0         µg/L         2.0         0         177         70         130         22.64         5.82         20           19.3         2.0         µg/L         2.0         0         97.7         70         130         22.64         5.82         20           18.33         2.0         µg/L         2.0         0         97.7         70         130         17.7         20         20         22.64         5.82         20           2.2.4 <td< td=""><th>2,2-Dichlorop</th><td>ropane</td><td>25.06</td><td>2.0</td><td>µg/L</td><td>20</td><td>0</td><td>125</td><td>2</td><td>130</td><td>28.42</td><td>12.6</td><td>20</td></td<>	2,2-Dichlorop	ropane	25.06	2.0	µg/L	20	0	125	2	130	28.42	12.6	20
20.04 1.0 μg/L 20 0 100 70 130 21.72 8.05 20 17.75 1 17.52 10.0 μg/L 20 0 10.0 47.1 70 130 21.72 8.05 20 19.1 Lg/L 20 0 17.1 70 130 22.64 5.05 20 21.36 20 21.36 20 19g/L 20 0 17.1 70 130 22.64 5.05 20 22.29 2.0 μg/L 20 0 17.1 70 130 22.64 5.05 20 22.29 2.0 μg/L 20 0 17.1 70 130 22.64 5.05 20 22.24 2.0 μg/L 20 0 17.1 70 130 22.64 5.05 20 22.24 2.0 μg/L 20 0 19.1 70 130 22.24 1.6 20 22.24 2.0 μg/L 20 0 19.1 70 130 22.24 5.08 20 22.24 2.0 μg/L 20 0 19.1 70 130 22.21 2.22 2.0 μg/L 20 0 19.1 70 130 22.21 2.22 2.0 μg/L 20 0 19.1 70 130 22.21 2.22 2.0 μg/L 20 0 19.1 70 130 22.21 2.22 2.0 μg/L 20 0 19.1 70 130 22.21 2.22 2.0 μg/L 20 0 19.1 70 130 22.21 2.0 μg/L 20 19.1 20 132.2 2.0 μg/L 20 19.1 20 132	1,1-Dichlorop	ropene	25.05	2.0	µg/L	20	0	125	2	130	27.6	9.69	20
17.52 1.0 μg/L 20 0 87.6 70 130 17.49 0.171 20  19.42 5.0 μg/L 20 0 97.1 70 130 20.53 5.66 20  21.36 5.0 μg/L 20 0 107 70 130 20.53 5.69 20  22.29 2.0 μg/L 20 0 111 70 130 23.72 6.22 20  19.9 2.0 μg/L 20 0 99.5 70 130 23.72 6.22 20  18.33 2.0 μg/L 20 0 91.7 70 130 23.72 6.22 20  22.4 2.0 μg/L 20 0 91.7 70 130 23.72 6.22 20  23.4 2.0 μg/L 20 0 91.7 70 130 23.12 26.1 20  23.5 10 μg/L 20 0 118 70 130 23.12 26.1 20  23.6 10 μg/L 20 0 18 70 130 23.12 26.1 20  23.7 2.0 μg/L 20 0 18 70 130 23.12 26.1 20  23.8 20 μg/L 20 0 18 70 130 23.12 26.1 20  23.8 26 10 μg/L 20 0 18 70 130 23.12 2.48 20  23.8 26 10 μg/L 20 0 18 70 130 23.12 2.48 20  23.8 26 10 μg/L 20 0 99.3 70 130 130 13.14 20  19.86 5.0 μg/L 20 0 99.3 70 130 13.1 3.54 20  22.8 9 20 μg/L 20 0 99.3 70 130 13.7 3.54 20  22.8 9 20 μg/L 20 0 99.3 70 130 23.12 3.54 20  22.8 9 20 μg/L 20 0 99.3 70 130 23.13 3.54 20  22.8 9 20 μg/L 20 0 99.3 70 130 23.13 3.54 20  22.8 9 20 μg/L 20 0 99.3 70 130 23.13 3.54 20  22.8 9 20 μg/L 20 0 99.3 70 130 23.13 3.54 20  22.8 9 20 μg/L 20 0 99.3 70 130 23.13 3.54 20  22.8 9 20 μg/L 20 0 99.3 70 130 23.13 3.54 20  22.8 9 20 μg/L 20 0 99.3 70 130 23.13 3.54 20  22.8 9 20 μg/L 20 0 99.3 70 130 23.13 3.54 20  22.8 9 20 μg/L 20 0 99.3 70 130 23.13 3.54 20  22.8 9 20 μg/L 20 0 99.3 70 130 23.13 3.54 20  22.8 9 20 μg/L 20 0 99.3 70 130 130 23.13 3.54 20  22.8 9 20 μg/L 20 μg/L 20 10 130 23.13 3.54 20  22.8 9 20 μg/L 20 μg/L 20 10 130 23.13 3.54 20  22.8 9 20 μg/L 20 μg/L 20 10 130 23.13 3.54 20  22.8 9 20 μg/L 20 μg/	cis-1,3-Dichlo	nopropene	20.04	1.0	µg/L	20	0	8	2	130	21.72	8.05	20
1942   5.0   19fL   20   0   97.1   70   130   20.53   5.56   20     21.36   2.0   19fL   20   0   107   70   130   22.64   5.82   20     66.62   50   19gL   100   0   65.6   40   160   78.35   17.7   20     19.3   2.0   19gL   20   0   91.7   70   130   20.22   1.6   20     18.33   2.0   19gL   20   0   91.7   70   130   20.22   1.6   20     28.87   10   19gL   20   0   91.7   70   130   20.22   1.6   20     28.87   10   19gL   20   0   112   70   130   23.12   3.16   20     29.37   2.0   19gL   20   0   112   70   130   23.12   3.16   20     29.33   10   19gL   20   0   95.7   40   160   22.21   26.1   20     29.43   10   19gL   20   0   95.7   40   160   33.12   3.16   20     19.81   2.0   19gL   20   0   95.7   40   160   33.12   3.16   20     19.81   2.0   19gL   20   0   96.7   40   150   196.8   0.161   20     20.64   2.0   19gL   20   0   96.8   70   130   19.56   0.815   20     20.64   2.0   19gL   20   0   96.8   70   130   19.56   0.815   20     20.64   2.0   19gL   20   0   96.8   70   130   19.56   0.815   20     20.64   20.6   19gL   20   0   104   70   130   17.88   3.08   20     20.64   20.6   19gL   20   0   104   70   130   17.88   3.08   20     20.64   20.6	trans-1,3-Dick	hloropropene	17.52	0.1	hg/L	20	0	87.6	20	130	17.49	0.171	20
13.6   2.0   149/L   20   147   70   130   2.264   5.82   20   2.228	Diethyl ether		19.42	5.0	µg/L	20	0	97.1	2	130	20.53	5.56	20
Per         E5.62         50         µg/L         100         65.6         40         160         78.35         17.7         20           19.9         2.0         µg/L         20         0         111         70         130         23.72         6.22         20           19.9         2.0         µg/L         20         0         99.5         70         130         20.22         1.6         20         20         20         20         20         20         1.6         99.5         70         130         20.22         1.6         20         20         20         20         20         1.0         1.0         1.0         1.0         1.0         1.0         1.0         1.0         1.0         1.0         1.0         20         20         1.0	Diisopropyl e	ther	21.36	2.0	µg/L	20	0	107	2	130	22.64	5.82	20
ref         22.29         2.0         µg/L         20         111         70         130         23.72         6.22         20           18.33         2.0         µg/L         20         99.5         70         130         20.22         1.6         20           18.33         2.0         µg/L         20         91.7         70         130         20.22         1.6         20           28.87         10         µg/L         20         0         72.2         40         180         22.21         26.1         20           22.4         2.0         µg/L         20         0         112         70         130         23.12         1.6         20           22.4         2.0         µg/L         20         0         112         70         130         23.12         26.1         20           29.03         10         µg/L         40         0         50         40         160	1,4-Dioxane		65.62	20	hg/L	100	0	9.59	4	160	78.35	17.7	20
19.9         2.0         µg/L         20         99.5         70         130         20.22         1.6         20           18.33         2.0         µg/L         20         91.7         70         130         19.44         5.88         20           28.87         10         µg/L         40         0         72.2         40         160         22.21         26.1         20           22.4         2.0         µg/L         20         0         112         70         130         22.21         26.1         20           22.4         2.0         µg/L         20         0         112         70         130         23.12         3.16         20           23.7         2.0         µg/L         20         0         112         70         130         23.12         2.48         20           29.03         10         µg/L         20         0         72.5         40         160         30.39         4.58         20           19.81         2.0         µg/L         20         0         98.6         70         19.0         19.48         0.41         0         19.6         10         19.6         10	Ethyl Tertiary	Butyl Ether	22.29	2.0	hg∕L	20	0	111	2	130	23.72	6.22	70
18.33         2.0         µg/L         20         91.7         70         130         19.44         5.88         20           28.87         10         µg/L         40         0         72.2         40         160         22.21         26.1         20           22.4         2.0         µg/L         20         0         112         70         130         23.12         3.16         20           23.7         2.0         µg/L         20         0         95.7         40         160         33.21         14.1         20           29.03         10         µg/L         40         0         95.7         40         160         30.39         4.58         20           19.81         2.0         µg/L         40         0         70         130         19.84         0.151         20           19.84         2.0         µg/L         20         0         98.6         70         130         19.54         20           19.85         5.0         µg/L         20         0         98.6         70         130         19.54         20           22.69         2.0         µg/L         20         130	Ethylbenzene		19.9	2.0	hg/L	20	0	99.5	2	130	20.22	1.6	20
28.87 10 µg/L 20 0 722 40 160 22.21 26.1 26.1 20 22.4 2.0 µg/L 20 0 118 70 130 23.12 3.16 20 23.7 2.0 µg/L 20 0 118 70 130 23.12 3.16 20 29.03 10 µg/L 20 0 95.7 40 160 33.21 14.1 20 19.81 2.0 µg/L 20 0 96.7 40 160 30.39 4.58 20 19.81 2.0 µg/L 20 0 98.6 70 130 19.84 0.151 20 19.86 5.0 µg/L 20 0 99.3 70 130 19.17 3.54 20 22.69 2.0 µg/L 20 0 99.3 70 130 19.17 3.54 20 22.69 2.0 µg/L 20 0 99.3 70 130 19.17 3.54 20 20.84 2.0 µg/L 20 0 104 70 130 21.96 5.23 20 20.84 2.0 µg/L 20 0 99.3 70 130 19.76 1.36 20 20.84 2.0 µg/L 20 0 99.3 70 130 19.76 1.36 20 20.84 2.0 µg/L 20 0 99.3 70 130 19.76 1.36 20 20.84 2.0 µg/L 20 0 99.3 70 130 19.76 1.36 20 20.84 2.0 µg/L 20 0 99.3 70 130 19.76 1.36 20 20.84 2.0 µg/L 20 0 99.3 70 130 19.76 1.36 20 20.84 2.0 µg/L 20 0 99.3 70 130 19.76 1.36 20 20.84 2.0 µg/L 20 0 99.3 70 130 19.76 1.36 20 20.84 2.0 µg/L 20 0 99.3 70 130 19.76 1.36 20 20.84 2.0 µg/L 20 0 90.40 100 100 100 100 100 100 100 100 100 1	Hexachlorobi	utadiene	18.33	2.0	µg∕L	20	0	91.7	2	130	19.44	5.88	20
22.4         2.0         µg/L         20         0         112         70         130         23.12         3.16           23.7         2.0         µg/L         20         0         118         70         130         23.12         2.48           38.26         10         µg/L         40         0         95.7         40         160         33.21         14.1           29.03         10         µg/L         20         0         95.7         40         160         30.39         4.58           19.81         2.0         µg/L         20         0         98.6         70         130         19.84         0.151           19.71         5.0         µg/L         20         0         98.6         70         130         19.55         0.815           22.69         5.0         µg/L         20         0         99.3         70         130         19.75         1.36           20.84         2.0         µg/L         20         0         104         70         130         19.76         1.36           20.84         2.0         µg/L         20         0         104         70         130         19.76	2-Hexanone		28.87	5	µg∕L	40	0	72.2	4	160	22.21	26.1	
23.7         2.0         µg/L         20         0 118         70         130         23.12         2.48           38.26         10         µg/L         40         0 95.7         40         160         33.21         14.1           29.03         10         µg/L         20         0         98.6         70         130         19.84         0.151           19.71         5.0         µg/L         20         0         98.6         70         130         19.55         0.815           19.86         5.0         µg/L         20         0         98.6         70         130         19.17         3.54           22.69         2.0         µg/L         20         0         99.3         70         130         19.17         3.54           20.84         2.0         µg/L         20         0         130         19.0         130         19.17         3.54           20.03         2.0         µg/L         20         0         104         70         130         19.6         136         2.3         0.841           20.03         2.0         µg/L         20         0         10         70         130	Isopropylben	zene	22.4	2.0	hg/L	8	0	112	2	130	23.12	3.16	20
38.26         10         µg/L         40         0         95.7         40         160         33.21         14.1           29.03         10         µg/L         20         0         99         70         130         19.84         0.151           19.81         2.0         µg/L         20         0         98.6         70         130         19.55         0.815           19.71         5.0         µg/L         20         0         99.3         70         130         19.75         0.815           22.69         2.0         µg/L         20         0         113         70         130         22.5         0.841           20.84         2.0         µg/L         20         0         113         70         130         21.96         5.23           ane         20.03         2.0         µg/L         20         0         100         70         130         13.76         1.36           ane         18.44         2.0         µg/L         20         0         92.2         70         130         17.88         3.08           bot ceted         2.0         µg/L         20         0         92.2 <t< td=""><th>4-Isopropylto</th><td>luene</td><td>23.7</td><td>2.0</td><td>hg/L</td><td>20</td><td>0</td><td>118</td><td>20</td><td>130</td><td>23.12</td><td>2.48</td><td>20</td></t<>	4-Isopropylto	luene	23.7	2.0	hg/L	20	0	118	20	130	23.12	2.48	20
29.03         10         µg/L         20         0         72.6         40         160         30.39         4.58           19.81         2.0         µg/L         20         0         98.6         70         130         19.84         0.151           19.71         5.0         µg/L         20         0         98.6         70         130         19.55         0.815           22.69         2.0         µg/L         20         0         99.3         70         130         19.77         3.54           20.84         2.0         µg/L         20         0         113         70         130         22.5         0.841           20.84         2.0         µg/L         20         0         104         70         130         21.96         5.23           ane         20.03         2.0         µg/L         20         0         92.2         70         130         17.86         3.08           ot Detected at the Reporting Limit         S-Spike Recovery outside accepted recovery limits         B - Analyte detected in the associated Method Blank           yte detected below quantitation limits         R - RPD outside accepted recovery limits         NA - Not applicable where J values or ND results occur <th>2-Butanone</th> <td></td> <td>38.26</td> <td>9</td> <td>µg∕L</td> <td>9</td> <td>0</td> <td>95.7</td> <td>9</td> <td>160</td> <td>33.21</td> <td>14.1</td> <td>20</td>	2-Butanone		38.26	9	µg∕L	9	0	95.7	9	160	33.21	14.1	20
ner         19.81         2.0         μg/L         20         0         99         70         130         19.84         0.151           19.71         5.0         μg/L         20         0         98.6         70         130         19.55         0.815           19.86         5.0         μg/L         20         0         99.3         70         130         19.17         3.54           22.69         2.0         μg/L         20         0         113         70         130         22.5         0.841           20.84         2.0         μg/L         20         0         104         70         130         21.96         5.23           ethane         20.03         2.0         μg/L         20         0         100         70         130         17.68         3.08           - Not Detected at the Reporting Limit         S - Spike Recovery outside accepted recovery limits         B - Analyte detected in the associated Method Blank           Analyte detected below quantitation limits         R - RPD outside accepted recovery limits         NA - Not applicable where J values or ND results occur	4-Methyl-2-pt	entanone	29.03	6	µg/L	9	0	72.6	<b>\$</b>	9	30.39	4.58	20
19.71 5.0 µg/L 20 0 98.6 70 130 19.55 0.815 19.86 5.0 µg/L 20 0 99.3 70 130 19.17 3.54 22.69 2.0 µg/L 20 0 113 70 130 22.5 0.841 20.84 2.0 µg/L 20 0 104 70 130 21.96 5.23 ethane 20.03 2.0 µg/L 20 0 100 70 130 19.76 1.36 ethane 18.44 2.0 µg/L 20 0 92.2 70 130 19.76 1.36  - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits R - Analyte detected in the associated Method Blank  NA - Not applicable where J values or ND results occur	Methyl tert-bu	utyl ether	19.81	2.0	µg/L	20	0	66	20	130	19.84	0.151	20
19.86 5.0 µg/L 20 0 99.3 70 130 19.17 3.54 22.69 2.0 µg/L 20 0 113 70 130 22.5 0.841 20.84 2.0 µg/L 20 0 104 70 130 21.96 5.23 roethane 20.03 2.0 µg/L 20 0 100 70 130 19.76 1.36 D-Not Detected at the Reporting Limit S-Spike Recovery outside accepted recovery limits R-RPD outside accepted recovery limits NA-Not applicable where J values or ND results occur	Methylene ch	sloride	19.71	9.0	μg/L	70	0	98.6	2	130	19.55	0.815	20
22.69         2.0         μg/L         20         0         113         70         130         22.5         0.841           20.84         2.0         μg/L         20         0         104         70         130         21.96         5.23           roethane         20.03         2.0         μg/L         20         0         100         70         130         19.76         1.36           D-Not Detected at the Reporting Limit         S-Spike Recovery outside accepted recovery limits         B - Analyte detected in the associated Method Blank           Analyte detected below quantitation limits         R - RPD outside accepted recovery limits         NA - Not applicable where J values or ND results occur	Naphthalene		19.86	5.0	hg∕L	20	0	99.3	2	130	19.17	3.54	20
20.84         2.0         μg/L         20         0         104         70         130         21.96         5.23           Tetrachloroethane         20.03         2.0         μg/L         20         0         100         70         130         19.76         1.36           ers:         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	n-Propylbenz	ene	22.69	2.0	µg/L	20	0	113	20	130	22.5	0.841	20
20.03 2.0 µg/L 20 0 100 70 130 19.76 1.36 18.44 2.0 µg/L 20 0 92.2 70 130 17.88 3.08 steeted at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur	Styrene		20.84	2.0	hg∕L	20	0	<del>1</del> 0	2	130	21.96	5.23	20
18.44 2.0 µg/L 20 0 92.2 70 130 17.88 3.08 etected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank R - RPD outside accepted recovery limits NA - Not applicable where J values or ND results occur	1,1,1,2-Tetra	chloroethane	20.03	2.0	µg∕L	20	0	00	20	130	19.76	1.36	20
ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits  J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits	1,1,2,2-Tetra	chioroethane	18.44	2.0	ng∕L	20	0	92.2	20	130	17.88	3.08	20
R - RPD outside accepted recovery limits	Qualifiers:	ND - Not Detected at the Rep	sorting Limit		S - Spike Recove	y outside accepted	recovery li	imits	B - Analyte d	etected in the a	ssociated Metho	d Blank	
		J - Analyte detected below qu	nantitation limits		R - RPD outside	accepted recovery li	mits		NA - Not and	licable where I	en CIX no senten	cuite occur	
The second secon			•	•					de sous un			Sults over	

AMRO Environmental Laboratories Corp.

CLIENT:         Charles Castelluccio Consulting, LLC           Work Order:         1704037           Project:         YRC N. Reading           Tetrachloroethene         21.83         2.0           Toluene         19.79         10           1,2,4-Trichlorobenzene         24.32         2.0           1,2,3-Trichlorobenzene         2.0         2.0	cio Consulting, 21.83 18.79 19.84 24.32 21.02	LLC 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	Hg/L Hg/L Hg/L				,	QC SUMMARY REPORT	MARY F	EPORT
ne Snzer		2.0 2.0 2.0 2.0	pg/L pg/L pg/L				-	orston Co.		
Tetrachloroethene Tetrahydrofuran Toluene 1,2,4-Trichlorobenzene 1,2,3-Trichlorobenzene	21.83 18.79 19.84 24.32 21.02	2.0 2.0 2.0 2.0	hg/L hg/L				Fa	viatory cor	aboratory Control Spike Dupli	Duplicate
Tetrahydrofuran Toluene 1,2,4-Trichlorobenzene 1,2,3-Trichlorobenzene	18.79 19.84 24.32 21.02	2.0 2.0 2.0	pg/L pg/L	20	0 109	0,	130	23.36	6.77	20
Toluene 1,2,4-Trichlorobenzene 1,2,3-Trichlorobenzene	19.84 24.32 21.02	2 5 0 0 0	µ9∕L	20	0	2	130	15.74	17.7	20
1,2,4-Trichlorobenzene 1,2,3-Trichlorobenzene	24.32 21.02	2.0		20	0 99.2	02	130	20.71	4.29	20
1,2,3-Trichlorobenzene	21.02	2.0	µg∕L	20	0 122	2	130	22.51	7.73	20
	21.02	•	µ9∕L	20	0 105	20	130	19.77	6.03	20
1,1,1-Trichloroethane		7.0	hg∕L	20	0 105	20	130	21.93	4.24	70
1,1,2-Trichloroethane	19.23	2.0	μg/L	20	0 96.2	2	130	20.67	7.22	20
Trichloroethene	19.27	2.0	µg/L	20	0 96.4	2	130	21.75	12.1	20
Trichlorofluoromethane	21.75	2.0	µg/L	20	0 109	20	130	24.3	1.1	20
1,2,3-Trichloropropane	18.76	2.0	µg∕L	20	0 93.8	22	130	19.74	5.09	20
1,2,4-Trimethylbenzene	22.8	2.0	µg∕L	20		20	130	22.86	0.263	20
1,3,5-Trimethylbenzene	21.8	2.0	µg/L	20	0 109	20	130	22.15	1.59	20
Vinyl chloride	14.67	2.0	µg/L	20	•	70	130	16.48	11.6	20
o-Xylene	19.7	2.0	µg∕L	20	0 98.5	20	130	2	6.39	70
m,p-Xylene	43.06	2.0	hg/L	40		20	130	44.43	3.13	20
Surr. Dibromofluoromethane	25.15	2.0	µg∕L	25		70	130	0	0	0
Surr: 1,2-Dichloroethane-d4	27.63	2.0	hg/L	25		20	130	0	0	0
Surr: Toluene-d8	25.27	2.0	μg/L	25		20	130	0	0	0
Sur: 4-Bromofluorobenzene	23.28	2.0	hg/L	25	0 93.1	92	130	0	0	0

Qualifiers:

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

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

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

Client Sample ID: Effluent

**Collection Time:** 

Matrix: AQUEOUS

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

Lab ID:

1704037-03

Collection Date: 4/20/2017 10:30:00 AM

**Collection Time:** 

Client Sample ID: Receiving

Matrix: AQUEOUS

**RL Qual Units** DF Date Analyzed **Analyses** Result Analyst: AL HARDNESS AS CACO3 E200.7

17

Hardness (As CaCO3)

69

mg/L

5/1/2017 1

Date: 15-May-17

Lab Order:

1704037

CLIENT: Charles Castelluccio Consulting, LLC

1704037-01

Project: YRC N. Reading

Lab ID:

Collection Date: 4/20/2017 9:25:00 AM

**Collection Time:** 

Client Sample ID: Influent Matrix: AQUEOUS

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

Lab ID: 1704037-02

Collection Date: 4/20/2017 9:10:00 AM

**Collection Time:** 

Client Sample ID: Effluent Matrix: AQUEOUS

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

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 i0:30:00 AM

**Collection Time:** 

Client Sample ID: Receiving Matrix: AQUEOUS

Analyses	Result	RL Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM	N	13500-CR			Analyst: AL
Chromium, Hexavalent	ND	0.010	mg/L	1	4/20/2017 4:40:00 PM
AMMONIA AS NITROGEN	S	M4500-NH3, C			Analyst: AL
Nitrogen, Ammonia (As N)	ND	1.0	mg/L	1	4/23/2017

CLIENT:	Charles Castelluccio Consulting, LLC	OC SUMMARY REPORT
Work Order:	1704037	Method Blank
Project:	YRC N. Reading	Modifica Diagram

Sample ID: mb-27283	Batch ID: 27283	Test Code: E200.7	E200.7	Units: µg/L			Analysis Da	ate: 5/1/201	Analysis Date: 5/1/2017 3:17:51 PM	Prep Date	Prep Date: 4/28/2017	
Client ID:		Run ID:	ICP-OPTIM	ICP-OPTIMA_170501A			SeqNo:	998404				
Analyte	QC Sample Result	곱	Units	QC Spike Original Sample Amount Result	I Sample Result %REC	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Ö
Antimony	QN	20	µg/L									
Cadmium	2	4.0	μg/L									
Chromium	Q	10	µg/L									
Copper	Q	55	µg∕L									
Iron	QV	100	hg/L									
Nickel	QN	40	µg/L									
Silver	Q	7.0	hg/L									
Zinc	QN	8	ŋ9∕L							ľ		ĺ
Sample ID: MB-27283	Batch ID: 27283	Test Code:	Test Code: E200.9_As	Units: pg/L			Analysis D	ate: 5/4/201	Analysis Date: 5/4/2017 2:44:29 PM	Prep Date	Prep Date: 4/28/2017	
Client ID:		Run ID:	AANALYSI	AANALYST 600_170504			SeqNo:	999199				
9	QC Sample Recult	ā	C	QC Spike Original Sample Amount Result	al Sample Result %REC		LowLimit	HiahLimit	Original Sample or MS Result	%RPD	RPDLimit	ño
Arsenic	QN	2.0	µ9/L									
Sample ID: MB-27283	Batch ID: 27283	Test Code:	Test Code: E200.9_Pb	E200.9_Pb Units: µg/L			Analysis D SeaNo:	ate: 5/1/201	Analysis Date: 5/1/2017 4:36:26 PM SeaNo: 998865	Prep Date	Prep Date: 4/28/2017	
Analyte	QC Sample Result	봆	Units	QC Spike Original Sample Amount Result		%REC	LowLimit	堇	Original Sample or MS Result	%RPD	RPDLimit	Ö
Lead	QN .	2.0	hg/L									
	2	7.7	1									

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

NA - Not applicable where J values or ND results occur

CLIENT:	Charles C	Charles Castelluccio Consulting, LLC	,LLC						QC SUMMARY REPORT	MARY	REPO	RT
Project:	YRC N. Reading	<b>cading</b>								≥	Method Blank	l gr
Sample ID: MB-27283 Client ID:	7283	Batch ID: 27283	Test Code:	Test Code: E200.9_Se	E200.9_Se Units: µg/L AANALYST 600_170502		Analysis Da	ate: 5/2/2017 999098	Analysis Date: 5/2/2017 1:49:15 PM SeqNo: 999098	Prep Date	Prep Date: 4/28/2017	
Analyte		QC Sample Result	75	Cuits	QC Spike Original Sample Атоипt Result	%REC	LowLimit	O HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Ö
Selenium		QN	5.0	hg∕t.								
Sample ID: MB-R59495	59495	Batch ID: R59495	Test Code: E300	E300	Units: mg/L		Analysis Da	Analysis Date: 4/25/2017	11	Prep Date:		
Client ID: Analyte		QC Sample Result	Z Z	DIONEX_170425A QC Spik Units Amoun	• Original Sample	%REC	segivo: LowLimit		Original Sample or MS Result	%RPD	RPDLimit	ő
Chloride		QN	0.50	mg/L								
Sample ID: MB-27283 Client ID:	7283	Batch ID: 27283	Test Code: E200.7 Run ID: ICP-OF	E200.7 ICP-OPTIM	E200.7 Units: mg/L ICP-OPTIMA_170501B		Analysis D SeqNo:	Analysis Date: <i>5/1/</i> 2017 SeqNo: 998526		Prep Date	Prep Date: 4/28/2017	
Analyte		QC Sample Result	귙	Units	QC Spike Original Sample Amount Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ő
Hardness (As CaCO3)	(603)	N	17	mg/L				T.				
Sample ID: MB-27294 Client ID:	7294	Batch ID: 27294	Test Code: E245.1 Run ID: HG-FIN	E245.1 Unit HG-FIMS_170502A	Units: µg/L 170502A		Analysis D SeqNo:	ate: 5/2/2017	Analysis Date: 5/2/2017 5:30:30 PM SeqNo: 998553	Prep Date	Prep Date: 5/2/2017	
Analyte		QC Sample Result	귵	Units	QC Spike Original Sample Amount Result	%REC	LowLimit	C HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Que
Mercury		Q	0.20	µg/L								

B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

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

ND - Not Detected at the Reporting Limit J - Analyte detected below quantitation limits

Qualifiers:

CLIENT: Ch Work Order: 170 Project: VR	Charles Castelluccio Consulting, LLC 1704037 VRC N. Readino	g, LLC							QC SUMMARY REPORT Method Blank	IMARY N	Y REPORT Method Blank	RT lank
								4706100		d cond		
Sample ID: MB-R59528	Batch ID: K59528	lest code:	lest code: SMZ340 D	Units: mg/L	mg/L		Alidiysis	Alialysis Dale: 4/20/2011	-	רופף טמוס.	.•	
Client 1D:		Run ID:	ING-WET_170426B	70426B			SeqNo:	998821				
	QC Sample	i	_	Spike Or	QC Spike Original Sample	6	1	: :	Original Sample	9	2000	è
Analyte	Result	젚	Onits	Amount	Kesult	% KEC	LOWCITIE	LOWLIMIT FIGURIALITY	or Mo Result	טיוא%		3
Suspended Solids (Residue, Non	due, Non ND	4.0	mg/L									
Sample ID: MB-R59487	Batch ID: R59487	Test Code:	le: M3500-Cr	Units: mg/L	mg/L		Analysis E	)ate: 4/20/20	Analysis Date: 4/20/2017 4:40:00 PM	Prep Date:	.,	
Client ID:		Run ID:	ING-WET_170420C	70420C			SeqNo:	997550				
	QC Sample		ŏ	C Spike Or	QC Spike Original Sample	<i>a</i> .			Original Sample			
Analyte	Result	3	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Ö
Chromium, Hexavalent	Q	0.010	mg/L						ļ			
Sample ID: MB-R59485	Batch ID: R59485	Test Code:	le: M4500-CI G	Units: mg/L	mg/L		Analysis [	)ate: 4/20/20	Analysis Date: 4/20/2017 2:45:00 PM	Prep Date:	2.2	
Client ID:		Run ID:	ING-WET_170420B	70420B			SedNo:	997494				
	QC Sample		ŏ	C Spike Or	QC Spike Original Sample				Original Sample			
Analyte	Result	곱	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Ö
Chlorine, Total Residual	Q	0.10	mg/L									
Sample ID: MB-R59527	Batch ID: R59527	Test Code	Test Code: SM4500-CN C Units: mg/l-	C Units:	mg/L		Analysis (	Analysis Date: 4/26/2017	110	Prep Date:	ia:	
Client ID:		Run 10:	ING-WET_170426A	70426A			SeqNo:	998812				
	QC Sample		ð	C Spike O	QC Spike Original Sample	•			Original Sample			
Analyte	Result	됪	Units	Amount	Result	Result %REC	LowLimit	HighLimit	or MS Result	%RPD	%RPD RPDLimit	Ö
Cvanide	Q	0.010	mg/L									

B - Analyte detected in the associated Method Blank NA - Not applicable where J values or ND results occur

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

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

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

Qualifiers:

30 of 39

Date: 15-May-17

Method Blank

QC SUMMARY REPORT

# AMRO Environmental Laboratories Corp.

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

												ı
Sample ID: MB-R59526	Batch ID: R59526	Test Code	SM4500-	Test Code: SM4500-NH3, Units: mg/L	9/L		Analysis D	Analysis Date: 4/23/2017	17	Prep Date:		
Client ID:		Run ID:	ING-WET	ING-WET_170423A			SeqNo:	008866				
	QC Sample			QC Spike Original Sample	inal Sample			J	Original Sample			
Analyte	Result	곱	Units	Amount	Result	%REC	LowLimit	HighLimit	Result %REC LowLimit HighLimit or MS Result	%RPD	%RPD RPDLimit Que	Ö
Nitrogen, Ammonia (As N)	QN	1.0	mg/L									

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

CLIENT:	Charles Castelluccio Consulting, LLC	OC SUMMARY REPORT
Work Order:	1704037	aboratory Control Snike
Project:	YRC N. Reading	ratory control opine

Sample ID: Ics-27283	Batch ID: 27283	Test Code: E200.7	E200.7	Units: µg/L			Analysis Da	ate: 5/1/2017	Analysis Date: 5/1/2017 3:24:27 PM	Prep Date:	Prep Date: 4/28/2017	
Client ID:		Run ID:	ICP-OPTIN	ICP-OPTIMA_170501A			SeqNo:	998405				
	QC Sample		J	QC Spike Original Sample				_	Original Sample			
Analyte	Result	귙	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	ő
Antimony	2034	20	µg/L	1996	0	102	82	115	0			
Cadmium	794.2	4.0	hg/L	800	0	99.3	85	115	0			
Chromium	4151	9	ng/L	3976	0	5	82	115	0			
Copper	1923	25	hg/L	2004	0	95.9	82	115	0			
lon	4233	100	рд/L	4004	0	106	82	115	0			
Nickel	4076	40	rg/L	3984	0	102	82	115	0			
Silver	402.8	7.0	J/6rl	400	0	101	92	115	0			
Zinc	4111	20	hg/L	3984	0	5	82	115	0			
Sample ID: LCS-27283	Batch ID: 27283	Test Code	Test Code: E200.9_As	Units: µg/L			Analysis D.	ate: 5/4/201	Analysis Date: 5/4/2017 2:47:16 PM	Prep Date	Prep Date: 4/28/2017	
Client ID:		Run ID:	AANALYS	AANALYST 600_170504			SeqNo:	999200				
•	QC Sample	ā	e in i	QC Spike Original Sample	il Sample Result %RFC	%RFC	Low imit	High imit	Original Sample or MS Result	%RPD	RPDLimit	å
Arsenic	21.03	2.0	J/6rl	50	0	105	88	115	0			
Sample ID: LCS-27283	Batch ID: 27283	Test Code	Test Code: E200.9_Pb	Units: µg/L			Analysis D	ate: 5/1/201	Analysis Date: 5/1/2017 4:39:14 PM	Prep Date	Prep Date: 4/28/2017	
Client ID:		Run ID:	AANALYS	AANALYST 600_170501			SeqNo:	998866				
	QC Sample	i	;	QC Spike Original Sample	al Sample				Original Sample	9		è
Analyte	Result	교	Units	Amount	Result	%REC	LowLimit	HIGHLIMIT	or MS Kesuli	SAN CAR		ğ
Lead	20.87	2.0	µg/L	20	0	40	82	115	0			

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate. J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit Qualifiers:

B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

<b>CLIENT:</b>	Charles Castelluccio Consulting, LLC	OC SUMMARY REPORT
Work Order:	1704037	I abometom Control Cnibe
Project:	YRC N. Reading	Laboratory Control Spine

Coc Sample   Result   RL   Units   Annount   Result   WREC   LowLimit   HighLimit   FR   Units   Annount   Result   WREC   LowLimit   HighLimit   Coc Sample   Result   RL   Units   Annount   Result   WREC   LowLimit   HighLimit   Coc Sample   Run ID: DIONEX_170425A   SeqNo: 997664   Sample ID: LCS-27283	Batch ID: 27283	Test Code:	Test Code: E200.9_Se	e Units: pg/L			Analysis Da	ate: 5/2/2017	Analysis Date: 5/2/2017 1:52:12 PM	Prep Date:	Prep Date: 4/28/2017		
CC Sample   Result   RL   Units   Amount   Result   %REC   LowLimit   HighLimit   HighLimit   Result   Result   Result   Result   Result   Result   Result   Run ID: DIONEX_170426A   CO   103   85   115   CC Sample   Result   Result   Result   Result   Result   Result   Run ID: DIONEX_170426A   CO   104   89   110   CC Sample   Run ID: Result   Run ID: DIONEX_170426A   CO   104   89   110   CC Sample   Run ID: Result   Run ID: DIONEX_170426A   Co   104   89   110   CC Sample   Run ID: Result   Run ID: DIONEX_170426A   CO   104   89   110   CC Sample   Run ID: Result   Run ID: DIONEX_170426A   CO   104   89   110   CC Sample   Run ID: ICC Sopies   Co   IO   Result   Run ID: ICC Sopies   Co   IO   IO   Result   Result   Result   Result   Run ID: ICC Sopies   Co   IO   IO   Result   Result   Run ID: ICC Sopies   Co   IO   IO   Result   Result   Run ID: ICC Sopies   Co   IO   IO   Result   Run ID: ICC Sopies   Co   IO   Run ID: ICC Sopies   Co   IO   IO   IO   IO   IO   IO   IO   I	Client ID:		Run ID:	AANALYS	T 600_170502			SeqNo:	660666				
20.57 5.0 µg/L 20 0 0 103 85 115  1. LCS-R59495 Batch ID: R59495 Test Code: E300 Units: mg/L Septemble Result Rt. Units Amount Result %REC LowLinnit HighLimit Rt. Units: mg/L Amount Result %REC LowLinnit HighLimit Rt. Units: mg/L Amount Result %REC LowLinnit HighLimit Rt. Units: mg/L 12.59 0 100 100 100 100 100 100 100 100 100	Analyte	QC Sample Result	굾	Units	QC Spike Original Amount		%REC	- (	-	Original Sample or MS Result	%RPD	RPDLimit	Ö
Batch ID: R59495   Test Code: E300   Units: mg/L   Analysis Date: 4/26/20     Run ID: DIONEX_170425A   SeqNo: 997654     Result Result RL   Units Amount Result WREC   LowLimit HighLimit Result Result RL   Units Amount Result WREC   LowLimit HighLimit Result Result RL   Units Amount Result WREC   LowLimit HighLimit HighLimit Result Result Result Result RL   Units Amount Result WREC   LowLimit HighLimit Result Result RL   Units Mode Original Sample Result Run ID: ICP-OPTIMA_1705018   SeqNo: 998527	Selenium	20.57	5.0	μg/L	20	0	103	82	115	0			
CC Sample	Sample ID: LCS-R59495	Batch ID: R59495	Test Code.	E300	Units: mg/L			Analysis D.	ate: 4/25/20	17	Prep Date:		
DEC Sample   RL   Units   Amount   Result   %REC   LowLimit   HighLimit	Client ID:		Run (D:	DIONEX	170425A			SeqNo:	997654				
12.97   0.50   mg/L   12.5   0   104   89   110     Di LCSD-R59495   Batch ID: R59495   Test Code: E300   Units: mg/L   SeqNo: 997661	Analyte	QC Sample Result	꾮	Units	QC Spike Original Amount		%REC	LowLimit		Original Sample or MS Result	%RPD	RPDLimit	ĕ
D: LCSD-R59495   Batch ID: R59495   Test Code: E300   Units: mg/L   Analysis Date: 4/26/20   C Sample	Chloride	12.97	0.50	mg/L	12.5	0	104	88	110	0			
CC Sample	Sample ID: LCSD-R59495	Batch ID: R59495	Test Code	: E300	Units: mg/L			Analysis D	ate: 4/25/20	17	Prep Date:	.,	
CC Sample   Result   RL   Units   Amount   Result   %REC   LowLimit   HighLimit	Client ID:		Run ID:	DIONEX	170425A			SeqNo:	997661				
12.99         0.50         mg/L         12.5         0         104         89         110           D: LCS-27283         Test Code: E200.7         Units: mg/L         Analysis Date: 5/1/201           Run ID: ICP-OPTIMA_170501B         SeqNo: 998527           QC Sample         QC Spike Original Sample           Result         RL         Units         Amount         RES         LowLimit         HighLimit           (As CaCO3)         137.8         17         mg/L         132.3         0         104         80         120	Analyte	QC Sample Result	R	Units	QC Spike Original Amount		%REC	LowLimit		Original Sample or MS Result	%RPD	RPDLimit	Ö
D: LCS-27283         Test Code: E200.7         Units: mg/L         Analysis Date: 5/1/201           Run ID: ICP-OPTIMA_170501B         SeqNo: 998527           QC Sample         QC Spike Original Sample           Result         RL         Units         Amount         Result         HighLimit           (As CaCO3)         137.8         17         mg/L         132.3         0         104         80         120	Chloride	12.99	0.50	mg/L	12.5	0	\$	83	110	12.97	0.174	20	
Run ID: ICP-OPTIMA_170501B   SeqNo: 998527     QC Sample	Sample ID: LCS-27283	Batch ID: 27283	Test Code	E200.7	Units: mg/L			Analysis D	ate: 5/1/201	7	Prep Date	Prep Date: 4/28/2017	
QC SampleQC Spike Original SampleResultRLUnitsAmountResult%RECLowLimitHighLimitis (As CaCO3)137.817mg/L132.3010480120	Client ID:		Run ID:	ICP-OPTI	IMA_170501B			SedNo:	998527				
is (As CaCO3) 137.8 17 mg/L 132.3 0 104 80 120	, , , , , , , , , , , , , , , , , , ,	QC Sample	ā	- Sicol	QC Spike Original		)     	imi bad	High imit	Original Sample	%RPD	RPDI Imit	Ĉ
137.8 17 mg/L 132.3 U 104 60	Analyte	uneau	2 !	3		ì							
	Hardness (As CaCO3)	137.8	17	mg/L	132.3	0	5	3	NZL	Þ			

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

CLIENT: Charle	Charles Castelluccio Consulting, LLC	, LLC							QC SUMMARY REPORT	MARY	REPOI	ΥŢ
Work Order: 1704037 Project: YRC N.	1704037 YRC N. Reading					į		:	Lab	Laboratory Control Spike	ontrol Sp	ike
Sample ID: LCS-27294	Batch ID: 27294	Test Code: E245.1	E245.1	Units: µg/L			Analysis Da	ate: 5/2/2017	Analysis Date: 5/2/2017 5:34:20 PM	Prep Date: 5/2/2017	5/2/2017	
Client ID:		Run 1D:	HG-FIMS_170502A	70502A			SeqNo:	998554				
	QC Sample	i		QC Spike Original Sample	al Sample		1	1	Original Sample	UDDI7	fimi YOU	Č
Analyte	Result	₽   8	Units	Amount	Result WREC		LOWCHINE	115	D CONTRACTOR	2		Š
Mercury	747.4	0.50	hg.	•	•	3	3					
Sample ID: LCSD-27294	Batch ID: 27294	Test Code: E245.1	E245.1	Units: pg/L			Analysis D	ate: 5/2/201	Analysis Date: 5/2/2017 5:38:11 PM	Prep Date: 5/2/2017	5/2/2017	
Client ID:		Run ID:	HG-FIMS_170502A	170502A			SeqNo:	998555				
	QC Sample		J	QC Spike Original Sample	al Sample				Original Sample			
Analyte	Result	귈	Units	Amount	Result %REC	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	ð
Mercury	4.274	0.20	µg/L	4	0	107	82	115	4.242	0.743	50	
Sample ID: LCS-R59528	Batch ID: R59528	Test Code:	Test Code: SM2540 D	Units: mg/L			Analysis D	Analysis Date: 4/26/2017	17	Prep Date:	l	
Client ID:		Run ID:	ING-WET_170426B	170426B			SeqNo:	998822				
	QC Sample		Ü	QC Spike Original Sample	al Sample				Original Sample			
Analyte	Result	귎	Units	Amount	Result	Result %REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	ŏ
Suspended Solids (Residue, Non	e, Non 935	4.0	mg/L	951	0	98.3	97	103	0			1
Sample ID: LCS-R59487 Client ID:	Batch ID: R59487	Test Code Run ID:	Test Code: M3500-Cr Unit Run ID: ING-WET_170420C	Units: mg/L 170420C	ر ا		Analysis D SeqNo:	ate: 4/20/20 997551	Analysis Date: 4/20/2017 4:40:00 PM SeqNo: 997551	Prep Date:	.,	

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

NA - Not applicable where J values or ND results occur

Ö

%RPD RPDLimit

Original Sample

Result %REC LowLimit HighLimit or MS Result

QC Spike Original Sample

Amount 0.

Units mg/L

Result 0.104

QC Sample

0.010 Ч

Chromium, Hexavalent

Analyte

o

115

8

\$

0

**QC SUMMARY REPORT** Charles Castelluccio Consulting, LLC CLIENT:

Work Order: 1704037	13.7								T ah	I aboratory Control Snike	ontrol Sn	٩
Project: YRC1	YRC N. Reading					ŀ			ran	olatoly C	de ionilo	i I
Sample ID: LCS-R59485 Client ID:	Batch ID: R59485	Test Code:	M4500-CI G Unit:	Test Code: M4500-CI G Units: mg/L Run ID: ING-WET_170420B			Analysis Da	ate: 4/20/20 997495	Analysis Date: 4/20/2017 2:45:00 PM SeqNo: 997495	Prep Date:		1
Analyte	QC Sample Result	굾	Units	OC Spike Original Sample Amount Result	al Sample Result	Sample Result %REC	LowLimit HighLimit		Original Sample or MS Result	%RPD	RPDLimit	Ö
Chlorine, Total Residual	1.098	0.10	mg/L	<del></del>	0	110	6	110	0			
Sample ID: LCS-R59527 Client ID:	Batch ID: R59527	Test Code Run ID:	SM4500-CN C Unit ING-WET_170426A	Test Code: SM4500-CN C Units: mg/L Run ID: ING-WET_170426A	ي		Analysis D. SeqNo:	Analysis Date: 4/26/2017 SeqNo: 998813	17	Prep Date:		
Analyte	QC Sample Result	꿉	Units	QC Spike Original Sample Amount Result	al Sample Result	Sample Result %REC	Low_Limit HighLimit		Original Sample or MS Result	%RPD	RPDLimit	ő
Cyanide	0.208	0.010	твЛ	0.2	0	5	\$	121	0			
Sample ID: LCS-R59526 Client ID:	Batch ID: R59526	Test Code Run ID:	SM4500-NH3, Unit ING-WET_170423A	Test Code: SM4500-NH3, Units: mg/L Run ID: ING-WET_170423A	ر		Analysis D SeqNo:	Analysis Date: 4/23/2017 SeqNo: 998801	41	Prep Date:		
Analyte	QC Sample Result	귙	Units	QC Spike Original Sample Amount Result	al Sample Resutt	Sample Result %REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Ö
Nitrogen, Ammonia (As N)	9.1	1.0	mg/L	10	0	6	88	95	0			

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit Qualifiers:

NA - Not applicable where J values or ND results occur B - Analyte detected in the associated Method Blank

CLIENT: Charles (Work Order: 1704037	Charles Castelluccio Consuiting, LLC 1704037	g, LLC							QC SUMMARY REPORT	MARY	REPO.	RT.
	YRC N. Reading									Sami	Sample Duplicate	cate
Sample ID: 1704037-01BD Client ID: Influent	Batch ID: 27294	Test Code: E245.1 Run ID: HG-FIN	E245.1 Unii HG-FIMS_170502A	Units: µg/L 70502A			Analysis Da	ate: 5/2/2017 998557	Analysis Date: 5/2/2017 5:45:55 PM SeqNo: 998557	Prep Date: 5/2/2017	5/2/2017	
Analyte	QC Sample Result	<b>Z</b>	Units	QC Spike Original Sample Amount Result	al Sample Result %REC		LowLimit HighLimit		Original Sample or MS Result	%RPD	RPDLimit	Ö
Mercury	QN	0.20	hg/L	0	0	0	0	0	0	0	20	
Sample ID: 1704037-01ED	Batch ID: R59528	Test Code:	SM2540 D Unit ING-WET 170426B	Units: mg/L 170426B	 		Analysis Da SeqNo:	Analysis Date: 4/26/2017 SeqNo: 998825	21	Prep Date:		
	QC Sample Result	컱	Units	QC Spike Original Sample Amount Result	al Sample Result %REC	%REC	LowLimit	O HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Ö
Suspended Solids (Residue, Non	ND ND	4.0	mg/L	0	0	0	0	0	4	0	S	
Sample ID: 1704037-01ED Client ID: Influent	Batch ID: R59487	Test Code: Run ID:	le: M3500-Cr Unit: ING-WET_170420C	Units: mg/L 170420C			Analysis D: SeqNo:	ate: 4/20/201 997555	Analysis Date: 4/20/2017 4:40:00 PM SeqNo: 997555	Prep Date:	l	
Analyte	QC Sample Result	R	Onits	QC Spike Original Sample Amount Result	al Sample Result	%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Que
Chromium, Hexavalent	QN	0.010	mg/L	0	0	0	0	0	0	0	20	
Sample ID: 1704037-01ED Client ID: Influent	Batch ID: R59485	Test Code: Run ID:	Test Code: M4500-CI G Unit Run ID: ING-WET_170420B	3 Units: mg/L 170420B	į		Analysis D SeqNo:	ate: 4/20/20 <sup>-</sup>	Analysis Date: 4/20/2017 2:45:00 PM SeqNo: 997499	Prep Date:	<u></u>	
Analyte	QC Sample Result	돲	Units	QC Spike Original Sample Amount Result	al Sample Result	%REC	LowLimit	C HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Š
Chlorine, Total Residual	Q	0.10	mg/L	0	0	0	0	0	0	0	20	

NA - Not applicable where J values or ND results occur B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery fimits

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

J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit

Qualifiers:

	Charles (	Charles Castelluccio Consulting, LLC	g, LLC							QC SUMMARY REPORT	MARY	REPO	Z
Work Order: 1 Project:	1704037 YRC N.	1704037 YRC N. Reading									Samp	Sample Duplicate	ate
Sample ID: 1704037-01DD Client ID: Influent	9100	Batch ID: R59527	Test Cod Run ID:	le: SM4500- ING-WET	Test Code: SM4500-CN C Units: mg/L Run ID: ING-WET_170426A	ng/L		Analysis D SeqNo:	Analysis Date: 4/26/2017 SeqNo: 998818	2	Prep Date:		
Analyte		QC Sample Result	굲	Units	QC Spike Original Sample Amount Result	iginaf Sample Result	%REC	LowLimit	O HighLimit	Sample Original Sample Result %REC LowLimit HighLimit or MS Result	%RPD	RPDLimit	ð
Cyanide		Q Q	0.010	mg/L	0	0	0	0	0	0	0	20	
Sample ID: 1704037-01CD Client ID: Influent	9100	Batch ID: R59526	Test Coc Run ID:	Je: SM4500.	Test Code: SM4500-NH3, Units: mg/L Run ID: ING-WET_170423A	mg/L		Analysis D SeqNo:	Analysis Date: 4/23/2017 SeqNo: 998807	2	Prep Date:	 	
Analyte		QC Sample Result	몺	Units	QC Spike Ori Amount	QC Spike Original Sample Amount Result	%REC	LowLimit	C HighLimit	Sample Original Sample Result %REC LowLimit HighLimit or MS Result	%RPD	%RPD RPDLimit Que	Ö
Nitrogen, Ammonia (As N)	As N)	Q	1.0	mg/L	0	0	0	0	0	0	0	20	

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

Qualifiers:

Date: 15-May-17

Charles Castelluccio Consulting, LLC

ğ õ ő ö Sample Matrix Spike QC SUMMARY REPORT **RPDLimit RPDLimit RPDLimit** %RPD RPDLimit 8 Prep Date: 5/2/2017 Prep Date: 5/2/2017 %RPD Prep Date: %RPD Prep Date: %RPD 1.59 or MS Result 4.591 or MS Result or MS Result or MS Result Original Sample Original Sample Original Sample Original Sample Analysis Date: 4/20/2017 2:45:00 PM Analysis Date: 4/20/2017 4:40:00 PM Analysis Date: 5/2/2017 5:49:43 PM Analysis Date: 5/2/2017 5:53:28 PM Result %REC LowLimit HighLimit LowLimit HighLimit 997500 998558 LowLimit HighLimit 997556 115 998559 118 500 LowLimit HighLimit 130 8 2 8 SeqNo: SeqNo: SeqNo: SeqNo: Result %REC Result %REC Result %REC 115 108 117 8 QC Spike Original Sample QC Spike Original Sample QC Spike Original Sample QC Spike Original Sample 0 0 0 Units: mg/L Units: mg/L Units: µg/L Units: pg/L 0.1 Amount ING-WET\_170420C ING-WET\_170420B HG-FIMS\_170502A Amount Amount Amount HG-FIMS\_170502A Test Code: M4500-CI G Test Code: M3500-Cr Test Code: E245.1 Test Code: E245.1 Units Units hg/L Units hg/L mg/L Units mg/L Run ID: Run 10: Run ID: Run 10: 0.20 0.20 0.010 0.10 귣 뭅 펎 짇 Batch ID: R59485 Batch ID: R59487 1.075 Result Result Batch ID: 27294 Result 4.591 Sample ID: 1704037-01BMSD Batch ID: 27294 4.664 QC Sample 0.1 QC Sample QC Sample QC Sample YRC N. Reading 1704037 Sample ID: 1704037-01BMS Sample ID: 1704037-01EMS Sample ID: 1704037-01EMS Chlorine, Total Residual Chromium, Hexavalent Client ID: Influent Influent Client ID: Influent Influent Work Order: CLIENT: Client ID: Client ID: Project: Analyte Analyte Mercury Mercury Analyte Analyte

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

NA - Not applicable where J values or ND results occur

Date: 15-May-17

Sample Matrix Spike **QC SUMMARY REPORT** Charles Castelluccio Consulting, LLC YRC N. Reading 1704037 Work Order: CLIENT: Project:

Sample ID: 1704037-01EMS	Batch ID: R59485	Test Code:	M4500-CI G	Test Code: M4500-CI G Units: mg/L			Analysis Da	ate: 4/20/201	Analysis Date: 4/20/2017 2:45:00 PM	Prep Date:		
Client ID: Influent		Run ID:	ING-WET_170420B	70420B			SeqNo:	997500				
Analyte	QC Sample Result	굲	Or	QC Spike Original Sample Amount Result	Sample Result	%REC	Sample Or Result %REC LowLimit HighLimit	C HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Öñ
Chlorine, Total Residual	1.075	0.10	mg/L	-	0	108	89	118	0			
Sample ID: 1704037-01DMS Client ID: Influent	Batch ID: R59527	Test Code: Run ID:	SM4500-CN C Unit: ING-WET_170426A	Test Code: SM4500-CN C Units: mg/L Run ID: ING-WET_170426A			Analysis Da SeqNo:	Analysis Date: 4/26/2017 SeqNo: 998819	2	Prep Date:	i	
Analyte	QC Sample Result	교	Units	QC Spike Original Sample Amount Result	i Sample Result	%REC	Sample O Result %REC LowLimit HighLimit	C HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ŏñŏ
Cyanide	0.204	0.010	mg/L	0.2	0	102	89	119	0			
Sample ID: 1704037-01CMS Client ID: Influent	Batch ID: R59526	Test Code: Run ID:	SM4500-NH3, Unit	Test Code: SM4500-NH3, Units: mg/L Run ID: ING-WET_170423A			Analysis Da SeqNo:	Analysis Date: 4/23/2017 SeqNo: 998808	21	Prep Date:		
Analyte	QC Sample Result	굾	Units	QC Spike Original Sample Amount Result		%REC	LowLimit	O HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ð
Nitrogen, Ammonia (As N)	9.38	1:0	mg/L	9	0	93.8	78	107	0			

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



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 <u>29</u> 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

ty Stil

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.

Date: 01-Jun-17

CLIENT: Charles Castelluccio Consulting, LLC

Project: North Reading
Lab Order: 1705043

Work Order Sample Summary

Date Received: 5/17/2017

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

DATES REPORT

# AMRO Environmental Laboratories Corp.

Charles Castelluccio Consulting, LLC 1705043 Lab Order: Client:

North Reading Project: Sample ID 1705043-01 1705043-01

Sample ID	Client Sample ID	Collection Date	Matrix	Analytical Test Name		Analysis Date	
				Preparatory Test Name	Prep Date	Batch ID	TCLP Date
1705043-01A	Effluent	5/17/2017 9:30:00 AM	Aqueous	MCP VOCs 8260C, EPA 5030C	1007117	5/22/2017 D 50507	
1705043-01B				Ion Chromatography, EPA 300	3/1//2017	\$/25/2017	
						R59619	
	The result of the state of the			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	
					2/17/2017	R59624	
3				MCP VOCs 8260C, EPA 5030C		5/22/2017	
of 2				EPA 5030B	2/17/2017	R59597	
17050 <del>43</del> -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 Names		Project N	<b>A</b>	Project	Project Managed:		7	Mimpler	Mmplers (Signature):		AMRO Project No.:
**			7	7		<u> </u>	<u> </u>		1			1 +000 + 1
1.0.#:	results inceded by:	· _				T.	REQUESTED		ANALYSES			Remarks
	CARRIANS					1						
:												
# <b>3</b> 000	Yes No N/A		əziS									
Sample ID.:	Date/Time Sampled	xirisM	Total # of Cont. &	Comp. Grab	M CI_							
ない。	SEP 171718	V.	W	Image: second color in the least	又 又			-				rationer withemore
から下午	11/11/2 GED	A	3	X	メメ							( ) Sec. ( )
												1 7 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
4												
of 2												
29												
				$\exists$								
Prescryative: CI-HCI, MeOH, N-HN03, S-H2SO4, Na-NaOH, O- Other	N-HN03, S-H2SO4, N	va-NaOH, O	Other						L			
sults To:	$\perp$	PRIORITY TURNAROUND TI	JRNAROUND	TIME /	ME AUTHORIZATION		8 RC	8 RCRA	13 PP	23 TAL	141	14 MCP
יייייייייייייייייייייייייייייייייייייי	20, 2	before submitting samples for expedited TAT, y have a coded ATTHORIZATION NITMRER	ing samples id	r exped	before submitting samples for expedited TAT, you must have a coded AITHORIZATION NITURER	Method:	0109		200.7	Other Metals:		
		AUTHORIZATION No.:	TION No.:		BY:	Dissolved	Dissolved Metals Field Filtered?	d Filtered?		YES	□ 9	
PHONE #: 176187.5 - 117.7 E-mail:	C FAX#:					MCP Presu	ਛੋ	ertainty Re	quired?	MCP Methods Needed:	Needed:	Required Reporting Limits:
/ Kelipadishad BG		Date/Time	ine Fine	L		Received By	2			AMRO report package	ort nackage	
Month	)	4/41/5	5011		2					level needed:	9	Τ
				<u> </u>	1					EDD required		] ដូ
Please print clearly, legibly and completely. Samples can not	poletely. Samples can no		Samples arriving	_16	after 17:00 noon will be tracked and billed as	he tracked and h	Mad as	170787				
be logged in and the turnaround time clock will not start until any ambiguities are resolved.	ne clock will not start un	. <del>T</del>	received on the f	ا جويما	ollowing day.	be mucked and bi	iiea as	the labo	nolicy requ ratory in ci I from higl	AM RV poucy requires notylication in writing to the laboratory in cases where the samples were collected from highly contaminated sites.	writing to oles were tes.	KNOWN SITE CONTAMINATION:
White: Lab Copy	Yellow: Client Copy					SHEET		þ		AMROCOC2004, Rev.3 08/18/04	*.3 08/18/04	

				(603) 424-2022
Client: Charles (astelluccio	AMRO	ID:	11000	343
Project Name: North Keading	Date Red		00/17	117
Ship via: (circle one) Fed Ex., UPS, AMRO Courier,	Date Du	ie:	25/2	4)17
Hand Del., Other Courier, Other:			W -	777
Fearments he Chanted I man Densine	1/44	T No.	1 344	
Items to be Checked Upon Receipt	Yes	No	NA NA	Comments
Army Samples received in individual plastic bags?     Custody Seals present?	<u> </u>	<del> </del>	V	
		<del> </del>	1	
3. Custody Seals Intact?	<b> </b>	<del> </del>	+ - +	
4. Air Bill included in folder if received?	<b>—</b>	┼	+	
5. Is COC included with samples?	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	ــــــ	╃——	_ ·
6. Is COC signed and dated by client? 7. Laboratory receipt temperature. TEMP THE TAPETHER.	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	—	+	
	'	<del> </del>	+	
Samples rec. with iceice packs neither	<b> </b>	<del> </del>	——	
8. Were samples received the same day they were sampled?	2	<del> </del>	┼┼-	
Is client temperature = or <6°C?	'	—	+	
If no obtain authorization from the client for the analyses.	'	—	——	
Client authorization from: Date: Obtained by:	<b></b> '	<del></del>	╀	
9. Is the COC filled out correctly and completely?		<u> </u>	<del> </del>	
10. Does the info on the COC match the samples?	Y			
11. Were samples rec. within holding time?	V			
12. Were all samples properly labeled?	<u></u>			
13. Were all samples properly preserved?	V			
14. Were proper sample containers used?	<b>V</b>			
15. Were all samples received intact? (none broken or leaking)	V			10
16. Were VOA vials rec. with no air bubbles?				
t7. Were the sample volumes sufficient for requested analysis?	V			
18. Were all samples received?	V			
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	e, B <u>=Bulk,</u>	D= <u>DΙ ν</u>	vater	
If M , SB, DI:				
Does preservative cover the soil?			0	
Does preservation level come close to the fill line on the vial?				
Date/Time DI Preserved vials Frozen on:			<u> </u>	
Frozen by Client?			<del>                                     </del>	<u> </u>
Were vials provided by AMRO?			<del>                                     </del>	
If NO then weights MUST be obtained	from clier	nt	<del></del>	
Was dry weight aliquot provided?				
If NO then notified client and inform the	he VOA la	b ASAP.		
20. Subcontracted Samples:	1,20			<del></del>
What samples sent:			<del> </del>	
Where sent:			<del>                                     </del>	
Date:	<del></del>		<del>  -</del>	
Analysis:	-		<del>  </del>	<del></del>
TAT:	$\vdash$		<del>                                     </del>	
21. Information entered into:	<del> </del>		<del> </del>	<del></del>
Internal Tracking Log?	<del>-/-</del>			
Dry Weight Log?	- <del></del>		<del></del>	
	<del></del>		1	
Client Log?	<del></del>		<b>Y</b>	
Composite Log?			V	
/Filtration Log?  Received By: //S Date: 06/17/17 Logged in By: // /	<del>k  </del>		V 14	41117
	,		Date: Ob	11011
abeled By: NS Date: OF/17/17 Checked By: SIV			Date 767	/X//_/

### Laboratories Corporation

Merrimack, NH 03054 (603) 424-2022

Please Circle if: Sample= Soil Sample= Waste AMRO ID: 17050 43

Dampie waste										
						List				Final
ļ		37-1	<b></b>		, ,,,,	Preserv.		Volume	Final	adjusted pH
Samula ID	Amalassia	Volume	Preserv.	Initial		Added by	Solution ID #	Preservative	adjusted	(after 16 or
Sample ID	Analysis		Listed HCI	pH*	Y or N	AMRO	of Preserv.	Added	pН	24 hours)
017	Wh o	*40ml	191	<del> </del>			<u> </u>		<u> </u>	
02A	V	<del>  V</del>	W	<del> </del>		<u> </u>			<u> </u>	
- <i>-0/1</i> 3	E-300	1X FOW		-		ļ			<u> </u>	
	<b>V</b>	V-		<del>                                     </del>		ļ	1 1 1			
				ļ			ļ			
				<del> </del> -		<u> </u>				
						<b> </b>				
	=									
								-		
								-		
		-								
						<u> </u>				
			- 13		<u> </u>		 			
					:				_	_
						!	<u>                                     </u>	<u> </u>	<u> </u>	
						List				
ĺ						Preserv.		Volume	Final	
		Volume	Preserv.	Initial	Acceptable?	Added by	Solution ID#	Preservative	adjusted	Acceptable?
Sample ID	Analysis	Sample	Listed	TRC	Y or N	AMRO	of Preserv.	Added	TRC	Y or N
									Ì	
						ļ				
							-			
* = if the laborate	0 <b>PU DP<i>P</i>SPP</b> V	es the drin	king water	samnla	(s) for FPA M	ethod 200 so	ries, samnie (s)	should he held	i at least	
16 hours prior to							······································	N.C. 11.C.11	* *** 16#36	
pH Checked B	•	,	_	Date:	~,•	പ്പ പ്	usted By:		Date:	
pri Checked D	у	<del></del> "		Dale.		pri auji	usicu by:		Date:	
-II.OI 1 1-				ъ.		** ****	0.41		ъ.	
pH Checked B	v:			Date:		pH adi.(16	or 24hrs)By:		Date:	

Date: 01-Jun-17

CLIENT:

Charles Castelluccio Consulting, LLC

Project:

North Reading

Lab Order:

1705043

**CASE NARRATIVE** 

### 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).

		Ma	ssDEP Analytica	al Protocol Certifi	cation Form		
Labo	oratory Na	ame: AMRO Enviro	nmentai Lab. Corp	).	Project #:		
Proj	ect Locati	on: North K	ading .		RTN:		
This	Form pro	ovides certification	ns for the following	ng data set: list Lat	ooratory Sample ID Nu	mber(s):	
Matri	ces: K Gr	oundwater/Surface	Water ☐ Soil/See	diment 🛮 Drinking	Water ☐ Air ☐ Other:		
CAM	Protoc	ol (check all that a	pply below):				
	VOC , II A X	7470/7471 Hg CAM iil B	MassDEP VPH CAM IV A □	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A	
	SVOC II B [II	7010 Metals CAM iil C	MassDEP EPH CAM IV B	8151 Herblcides CAM V C	8330 Expiosives CAM VIII A	TO-15 VOC CAM IX B	
	Metais III A 🗆	6020 Metals CAM iil D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchiorate CAM VIII B	=	
	A <i>ffirmati</i> v	ve Responses to (	Questions A thro	ugh F are required	for "Presumptive Cert	aiņty" status	
A	Custody,		ed (including temp		cribed on the Chain-of- id or laboratory, and	X Yes □ No	
В	Were the	e analytical method( tocol(s) followed?	(s) and all associate	ed QC requirements	specified in the selected	X Yes II No	
С	Were all CAM pro	required corrective tocol(s) implemented	actions and analytic d for all identified per	cal response actions formance standard no	specified in the selected in-conformances?	Xi Yes □ No	
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"?  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).							
E	a. VPH, modificat	EPH, and APH Million(s)? (Refer to the	lethods only: Was individual method(s	each method condi ) for a list of significan ete analyte list reporte		Yes I No	
F					-conformances identified Questions A through E)?	Y Yes II No	
Res	ponses	to Questions G, H	i and i below are	required for "Presu	ımptive Certainty" sta	tus	
G	Were the protocoi(		r below all CAM repo	orting limits specified in	the selected CAM	XYes Ii No¹	
<u>Da</u> re	ata User No presentativ	ote: Data that achieve veness requirements	e "Presumptive Certa described in 310 CM	inty" status may not no R 40. 1056 (2)(k) and W	ecessarily meet the data us SC-07-350.	ability and	
Н	Were all	QC performance sta	ındards specified in t	the CAM protocol(s) a	chleved?	□ Yes No¹	
ı	Were res	ults reported for the	complete analyte lis	t specified in the selec	ted CAM protocol(s)?	X Yes II No¹	
¹All r	egative re	esponses must be a	addressed in an atta	ached laboratory narr	ative.		
respor	nsible for c				sed upon my personal lical report is, to the best of		
Sign	ature:	Un C	Bul	Positi	on: Vice President		
Print	ed Name	: Nancy Stewart		8 of 29 <b>Date:</b> _	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.

Date: 01-Jun-17

CLIENT:

Charles Castelluccio Consulting, LLC

Lab Order:

1705043

Client Sample ID: Effluent

Collection Date: 5/17/2017 9:30:00 AM

Project:

North Reading

Matrix: AQUEOUS

Lab ID:

1705043-01A

nalyses	Result	RL	Qual	Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUND	S BY MCP MET SV	/8260C				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 PN
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 PN
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

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 Un	iits	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 PN
Ethylbenzene	ND	2.0	µg/	'L	1	5/22/2017 5:45:00 PN
Hexachlorobutadiene	ND	2.0	µg/	'L	1	5/22/2017 5:45:00 PN
2-Hexanone	ND	10	µg/	'L	1	5/22/2017 5:45:00 PN
Isopropylbenzene	ND	2.0	µg/	'L	1	5/22/2017 5:45:00 PM
4-Isopropyltoluene	ND	2.0	μg/	rL	1	5/22/2017 5:45:00 PM
2-Butanone	ND	10	μg/	<b>L</b>	1	5/22/2017 5:45:00 PM
4-Methyl-2-pentanone	ND	10	μg/	/L	1	5/22/2017 5:45:00 PN
Methyl tert-butyl ether	ND	2.0	µg/	'L	1	5/22/2017 5:45:00 PN
Methylene chloride	ND	5.0	µg/	<b>/</b> L	1	5/22/2017 5:45:00 PN
Naphthalene	ND	5.0	µg/	'L	1	5/22/2017 5:45:00 PN
n-Propylbenzene	ND	2.0	µg/	/L	1	5/22/2017 5:45:00 PN
Styrene	ND	2.0	µg/	′L	1	5/22/2017 5:45:00 PN
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 PN
Tetrachloroethene	ND	2.0	µg/	'L	1	5/22/2017 5:45:00 PN
Tetrahydrofuran	ND	10	µg/		1	5/22/2017 5:45:00 PN
Toluene	ND	2.0	μg/	′L	1	5/22/2017 5:45:00 PM
1,2,4-Trichlorobenzene	ND	2.0	µg/	<b>/L</b>	1	5/22/2017 5:45:00 PN
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 PN
1,2,3-Trichloropropane	ND	2.0	µg/	/L	1	5/22/2017 5:45:00 PN
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/	<b>/L</b>	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 PN
Surr: Dibromofluoromethane	100	70-130	%F	REC	1	5/22/2017 5:45:00 PM
Surr: 1,2-Dichloroethane-d4	97.0	70-130	%F	REC	1	5/22/2017 5:45:00 PN
Surr: Toluene-d8	101	70-130	%F	REC	1	5/22/2017 5:45:00 PM
Surr: 4-Bromofluorobenzene	91.2	70-130	%F	REC	1	5/22/2017 5:45:00 PN

Date: 01-Jun-17

CLIENT:

Charles Castelluccio Consulting, LLC

1705043

Client Sample ID: Influent

Lab Order:

Collection Date: 5/17/2017 9:50:00 AM

Matrix: AQUEOUS

Project: Lab ID: North Reading 1705043-02A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
OLATILE ORGANIC COMPOUND	S 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 PN
Bromochloromethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PN
Bromodichloromethane	ND	2.0		µg/L	1	5/22/2017 6:19:00 PN
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 PN
sec-Butylbenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PN
n-Butylbenzene	ND	2.0		µg/L	1	5/22/2017 6:19:00 PN
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 PN
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 PN

Date: 01-Jun-17

CLIENT:

Charles Castelluccio Consulting, LLC

Lab Order:

1705043

Client Sample ID: Influent

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	1	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	1	μg/L	1	5/22/2017 6:19:00 PM
1,1,2-Trichloroethane	ND	2.0	1	µg/L	1	5/22/2017 6:19:00 PM
Trichloroethene	7.5	2.0	1	µg/L	1	5/22/2017 6:19:00 PM
Trichlorofluoromethane	ND	2.0	1	µg/L	1	5/22/2017 6:19:00 PM
1,2,3-Trichloropropane	ND	2.0	1	μg/L	1	5/22/2017 6:19:00 PM
1,2,4-Trimethylbenzene	ND	2.0	1	µg/L	1	5/22/2017 6:19:00 PM
1,3,5-Trimethylbenzene	NĎ	2.0	1	µg/L	1	5/22/2017 6:19:00 PM
Vinyl chloride	ND	2.0	1	µg/L	1	5/22/2017 6:19:00 PM
o-Xylene	ND	2.0	1	µg/L	1	5/22/2017 6:19:00 PM
m,p-Xylene	ND	2.0	1	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

QC SUMMARY REPORT

### AMRO Environmental Laboratories Corp.

Charles Castelluccio Consulting, LLC CLIENT:

1705043 Work Order:

ő Method Blank Prep Date: 5/22/2017 %RPD RPDLimit B - Analyte detected in the associated Method Blank or MS Result Original Sample Analysis Date: 5/22/2017 1:25:00 PM 068666 HighLimit LowLimit SeqNo: Result %REC S - Spike Recovery outside accepted recovery limits QC Spike Original Sample R - RPD outside accepted recovery limits Units: µg/L Amount V-3\_170522A Test Code: SW8260C βľ rg/L ng/L rg/L μg/L rg/L rg/L rg/ µg/L rig/L µg/L 퉏 rg/L rg/L J/Gd Jg/ Jg/L μg/ Run ID: 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 5.0 2.0 2.0 1.0 2.0 2.0 2.0 2.0 ح J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit Batch ID: R59597 9999 Result 9 ₽ 읒 9 皇 9 9 9 9 皇 9 9 9 9 2 身 을 물 9 QC Sample North Reading 1,2-Dibromo-3-chloropropane Tertiary Amyl Methyl Ether Sample ID: mb-05/22/17 Dibromochloromethane Bromodichloromethane Bromochioromethane ,3-Dichlorobenzene ,2-Dichlorobenzene Carbon tetrachloride 1.2-Dibromoethane sec-Butylbenzene ert-Butylbenzene Dibromomethane Carbon disulfide 4-Chlorotoluene n-Butylbenzene 2-Chlorotoluene **Bromomethane** Chlorobenzene Chloromethane Bromobenzene Chloroethane Qualifiers: Bromoform Chloroform Project: Client ID: Benzene Acetone Analyte

NA - Not applicable where J values or ND results occur

CLIENT: Cha	Charles Castelluccio Consulting, LLC	LLC	1	OC SIIMMARV REPORT
Work Order: 170	1705043			
Project: No	North Reading			Method Blank
1,4-Dichlorobenzene	QN	2.0	μg/L	
Dichlorodifluoromethane	ON	5.0	µg/L	
1,1-Dichloroethane	ON	2.0	µg/L	
1,2-Dichloroethane	ON	2.0	hg/L	
1,1-Dichloroethene	QN	1.0	µg/L	
cis-1,2-Dichloroethene	QN	2.0	hg/L	
trans-1,2-Dichloroethene	QN	2.0	hg/L	
1,2-Dichloropropane	QN	2.0	hg/L	
1,3-Dichloropropane	QN	2.0	hg/L	
2,2-Dichloropropane	QN	2.0	µg/L	
1,1-Dichloropropene	QN	2.0	hg/L	
cis-1,3-Dichloropropene	QN	1.0	hg/L	
trans-1,3-Dichloropropene	ON e	0.1	hg/L	
Diethyl ether	QN	5.0	hg/L	
Diisopropyl ether	QN	2.0	hg∕L	
1,4-Dioxane	QN	22	hg/L	
Ethyl Tertiary Butyl Ether	QN	2.0	µg/L	
Ethylbenzene	QN	2.0	µg/L	
Hexachlorobutadiene	QN	2.0	hg/L	
2-Hexanone	QN	0	hg/L	
Isopropylbenzene	QN N	2.0	µg/L	
4-Isopropyltoluene	Q	2.0	hg/L	
2-Butanone	QN	10	hg/L	
4-Methyl-2-pentanone	QN	우	hg/L	
Methyl tert-butyl ether	QN	2.0	hg/L	
Methylene chloride	Q	5.0	hg/L	
Naphthalene	QN	9.0	hg/L	
n-Propylbenzene	Q	2.0	hg/L	
Styrene	QV	2.0	hg/L	
1,1,1,2-Tetrachioroethane	NO NO	2.0	µg/L	
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	
Qualifiers: ND - Not I	ND - Not Detected at the Reporting Limit		S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
J - Analyte	J - Analyte detected below quantitation limits		R - RPD outside accepted recovery limits	NA - Not applicable where I values or ND results occur
				The same white and a second and

AMRO Environmental Laboratories Corp.

CLIENT: Cl Work Order: 17 Project: N	Charles Castelluccio Consulting, LLC 1705043 North Reading	io Consulting,	ГГС						OC S	QC SUMMARY REPORT Method Blank
Tetrachioroethene		ND	2.0	1/6rl				i		
Tetrahydrofuran		N	9	µg/L						
Toluene		Q	2.0	µg/L						
1,2,4-Trichlorobenzene		Q	2.0	µg/L						
1,2,3-Trichlorobenzene	_	Q	2.0	µg/L						
1,1,1-Trichloroethane		Q	2.0	µg/L						
1,1,2-Trichloroethane		2	2.0	µg/L						
Trichloroethene		S	2.0	hg/L						
Trichlorofluoromethane		Q	2.0	µg∕L						
1,2,3-Trichloropropane		9	2.0	µ9∕L						
1,2,4-Trimethylbenzene	<b>d</b> ì	Q	2.0	hg/L						
1,3,5-Trimethylbenzene	<b>a</b>	Q	2.0	hg/L						
Vinyl chloride		Q	2.0	µg/L						
o-Xylene		Q	2.0	µg/L						
m,p-Xylene		Q	2.0	µg/L						
Surr: Dibromofluoromethane	nethane	24.79	2.0	µg∕L	25	0	99.2	20	130	0
Surr. 1,2-Dichloroethane-d4	nane-d4	23.68	2.0	µg∕L	25	0	94.7	20	130	0
Surr. Toluene-d8		25.07	2.0	µg/L	25	0	100	20	130	0
Surr. 4-Bromofluorobenzene	benzene	23.18	2.0	µg/L	25	0	92.7	20	130	0

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

NA - Not applicable where J values or ND results occur

Date: 01-Jun-17

CLIENT:	Charles Casi	Charles Castelluccio Consulting, LLC	, LLC							CC STIMMA DV BEDODT	TAADV	Debo	£
Work Order:	1705043										INEMI	NET C	
Project:	North Reading	gui								Lat	Laboratory Control Spike	Control S	pike
													۱
Sample ID: 1cs-05/22/17		Batch ID: R59597	Test Cod	Test Code: SW8260C	Units: µg/L			Analysis Da	ate: 5/22/20	Analysis Date: 5/22/2017 11:43:00 AM	Prep Date	Prep Date: 5/22/2017	
Client ID:			Run ID:	V-3_170522A	2A			SeqNo:	999892				
		QC Sample		Ū	QC Spike Original Sample	al Sample			J	Original Sample			
Analyte		Result	귙	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Ö
Acetone		38.87	5	hg/L	40	0	97.2	40	160	0			
Tertiary Amyl Methyl Ether	yl Ether	21.45	2.0	μg/L	20	0	107	2	130	0			
Benzene		20.66	1.0	hg/L	20	0	103	20	130	0			
Bromobenzene		21.16	2.0	µg/L	20	0	106	20	130	0			
Bromochloromethane	Je	22.17	2.0	hg/L	20	0	111	2	130	0			
Bromodichioromethane	ane	21.5	2.0	ng/L	20	0	108	20	130	0			
Bromoform		18.32	2.0	µg/L	20	0	91.6	20	130	0			
Bromomethane		21.79	2.0	μg/L	20	0	109	4	160	0			
sec-Butylbenzene		20.85	2.0	µg/L	8	0	5	2	130	0			
n-Butylbenzene		21.9	5.0	µg/L	8	0	110	2	130	•			
tert-Butylbenzene		21.18	2.0	hg/L	20	0	106	2	130	0			
Carbon disulfide		15.18	2.0	µg/L	20	0	75.9	20	130	0			
Carbon tetrachloride	0	20.59	2.0	µg∕L	20	0	103	20	130	0			
Chlorobenzene		20.53	2.0	µg/L	20	0	103	70	130	0			
Dibromochloromethane	nane	20.16	2.0	µg/L	20	0	101	2	130	0			
Chloroethane		17.47	5.0	1/6rl	20	0	87.4	20	130	0			
Chioroform		19.91	2.0	hg√L	20	0	9.66	70	130	0			
Chloromethane		25.75	2.0	hg/L	20	0	129	40	160	0			
2-Chlorotoluene		20.22	2.0	µ9/L	20	0	101	20	130	0			
4-Chlorototuene		20.73	2.0	µg∕L	20	0	5	20	130	0			
1,2-Dibromo-3-chloropropane	ropropane	22.39	5.0	hg/L	20	0	112	2	130	0			
1,2-Dibromoethane		21.31	2.0	µg∕L	20	0	107	20	130	0			
Dibromomethane		20.4	2.0	µg/L	20	0	102	2	130	0			
1,3-Dichlorobenzene	ē	20.59	2.0	µg∕L	20	0	103	70	130	0			
1,2-Dichlorobenzene	•	20.77	2.0	µg/L	20	0	<u>₹</u>	29	130	0			
Qualifiers: ND	- Not Detected at	ND - Not Detected at the Reporting Limit	S	- Spike Recov	S - Spike Recovery outside accepted recovery limits	d recovery	limits	B - Analyt	e detected in	B - Analyte detected in the associated Method Blank	od Blank		į
1-1	snalyte detected b	J - Analyte detected below quantitation limits		RPD outside	R - RPD outside accepted recovery limits	' limits		NA - Not	ipplicable wh	NA - Not applicable where J values or ND results occur	results occur		

AMRO Environmental Laboratories Corp.

CLIENT:	Charles Castelluccio Consulting, LLC	onsulting, LL(	ပ						QC SUMMARY REPORT	PORT
Work Order: Project:	1705043 North Reading								Laboratory Control Spike	rol Spike
1.4-Dichlorobenzene		20.6 2.	2.0	ng/L	20	103	02	130	0	
Dichlorodifluoromethane		36.87 5.	5.0	pg/L	20	184	4	160	0	S
1,1-Dichloroethane		18.94 2.	2.0	µg/L	20	0 94.7	20	130	0	
1,2-Dichloroethane	20.	20.54 2.	2.0	µg/L	20	0 103	20	130	0	
1,1-Dichloroethene		20.79 1.	1.0	µg/L	20	0 5	2	130	0	
cis-1,2-Dichloroethene		19.92	2.0	µg/L	20	9.66 0	70	130	0	
trans-1,2-Dichloroethene	9	19.65 2.	2.0	µg/L	20	0 98.2	20	130	0	
1,2-Dichloropropane		20.66 2.	2.0	µg/L	20	0 103	02	130	0	
1,3-Dichloropropane		19.34 2.	2.0	µg/L	20	2.96 0	2	130	0	
2,2-Dichloropropane		22.17 2.	2.0	hg/L	20	111	20	130	0	
1,1-Dichloropropene		21.87 2.	2.0	µg∕L	20	0 109	20	130	0	
cis-1,3-Dichloropropene		21.9 1.	1.0	hg/L	20	0 110	20	130	0	
trans-1,3-Dichloropropene		21.12	1.0	hg/L	20	0 106	2	130	0	
Diethyl ether	20	20.37 5.	5.0	µg/L	20	0 102	20	130	0	
Diisopropyl ether	19	19.78 2.	2.0	hg/L	20	6.86 0	20	130	0	
1,4-Dioxane	-	119.6	50	µg/L	100	0 120	40	160	0	
Ethyl Tertiary Butyl Ether		20 2	2.0	hg/L	20	0 100	70	130	0	
Ethylbenzene	21.	21.18 2	2.0	√g/L	70	0 106	70	130	0	
Hexachlorobutadiene		20.35 2	2.0	hg/L	50	0 102	20	130	0	
2-Hexanone	37.	37.46	10	hg/L	40	0 93.6	40	160	0	
Isopropylbenzene	21	21.48 2	2.0	hg/L	29	0 107	20	130	0	
4-isopropyitoluene	21	21.96 2	2.0	hg/L	70	0 110	92	130	0	
2-Butanone	88	39.05	5	hg/L	40	97.6	6	160	0	
4-Methyt-2-pentanone		41.82	10	1/6rl	40	0 105	<del>4</del>	160	0	
Methyl tert-butyl ether		21.03	2.0	hg/L	50	0 105	70	130	0	
Methylene chloride		20.2 5	5.0	hg/L	70	0 101	70	130	0	
Naphthalene	20	20.93 5	5.0	hg∕L	8	0 105	70	130	0	
n-Propylbenzene	21	21.12	2.0	µg/L	20	0 106	20	130	0	
Styrene	19	19.92	2.0	µg/L	20	9.66	70	130	0	
1,1,1,2-Tetrachloroethane		20.13 2	2.0	hg/L	20	101	70	130	0	
1,1,2,2-Tetrachloroethane		19.8	2.0	hg/L	20	66 0	20	130	0	
Qualifiers: ND	ND - Not Detected at the Reporting Limit	S.Cimit		- Spike Recovery	S - Spike Recovery outside accepted recovery limits	ery limits	B - Analyte	detected in U	B - Analyte detected in the associated Method Blank	:
J-A	J - Analyte detected below quantitation limits	tion limits	_	? - RPD outside acc	R - RPD outside accepted recovery limits		NA - Not ap	plicable whe	NA - Not applicable where J values or ND results occur	
							•			

AMRO Environmental Laboratories Corp.

CLIENT: Charles Ca	Charles Castelluccio Consulting, LLC	Iting, LLC							C SIMMADY DEPOPT
Work Order: 1705043								>	C SUMMANI NELONI
Project: North Reading	ading								Laboratory Control Spike
Tetrachloroethene	20.89	2.0	µ9/L	20	0	104	70	130	0
Tetrahydrofuran	22.62	0	µg/L	8	0	113	92	130	0
Toluene	21.46	2.0	µg/L	20	0	107	20	130	0
1,2,4-Trichtorobenzene	21.77	2.0	µg/L	29	0	109	20	130	0
1,2,3-Trichlorobenzene	19.34	2.0	µg/L	20	0	29.7	20	130	0
1,1,1-Trichloroethane	20.55	2.0	µg/L	8	0	103	20	130	0
1,1,2-Trichloroethane	20.35	2.0	µg/L	20	0	102	20	130	0
Trichloroethene	20.9	2.0	µg/L	20	0	104	20	130	0
Trichlorofluoromethane	20.04	2.0	µg/L	20	0	100	2	130	0
1,2,3-Trichloropropane	19.78	2.0	µg/L	20	0	98.9	20	130	0
1,2,4-Trimethylbenzene	21.49	2.0	µg/L	20	0	107	2	130	0
1,3,5-Trimethylbenzene	21.49	2.0	µg/L	20	0	107	2	130	0
Vinyl chloride	22.59	2.0	µg/L	20	0	113	20	130	0
o-Xylene	19.54	2.0	µ9∕L	20	0	97.7	92	130	0
m.p-Xylene	41.22	2.0	µg/L	40	0	103	20	130	0
Surr: Dibromofluoromethane	25.85	2.0	µg∕L	25	0	103	20	130	0
Surr: 1,2-Dichloroethane-d4	24.65	2.0	µg/L	25	0	98.6	2	130	0
Surr: Toluene-d8	25.83	2.0	µg/L	25	0	103	20	130	0
Surr: 4-Bromofluorobenzene	23.6	2.0	µ9/L	25	0	94.4	20	130	0

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

Qualifiers:

_	Charles Castelluccio Consulting, LLC	sulting, LLC							QC SUMMARY REPORT	MARY	REPOR	
Work Order: Project:	1705043 North Reading							Ι	Laboratory Control Spike Duplicate	ontrol Spi	ke Duplica	ţe
												ı
Sample ID: Icsd-05/22/17	22/17 Batch ID: R59597		Test Code: SW8260C	Units: µg/L			Analysis Da	ate: 5/22/201	Analysis Date: 5/22/2017 12:17:00 PM	Prep Date	Prep Date: 5/22/2017	
Client ID:		Run ID:	V-3_170522A	\$			SeqNo:	999891				
	QC Sample		U	QC Spike Original Sample	l Sample			O	Original Sample			
Analyte	Result	<b>R</b>	Units	Amount		%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	ő
Acetone	42.37	9	hg/L	40	0	90	40	160	38.87	8.62	20	
Tertiary Amyi Methyl Ether	Ether 20.59	2.0	µ9/L	20	0	103	20	130	21.45	4.09	20	
Benzene	19.46	1.0	µg/L	20	0	97.3	20	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	2	130	22.17	3.07	20	
Bromodichloromethane	ne 20.28	1 2.0	µg/L	20	0	둳	20	130	21.5	5.84	20	
Bromoform	18.34	1 2.0	µg/L	20	0	91.7	2	130	18.32	0.109	20	
Bromomethane	19.3	1 2.0	µg/L	20	0	96.5	9	160	21.79	12.1	20	
sec-Butylbenzene	19.34	1 2.0	µg/L	20	0	296.7	20	130	20.85	7.51	20	
n-Butylbenzene	20.46	2.0	µg∕L	20	0	102	20	130	21.9	6.8	20	
tert-Butylbenzene	19.99	2.0	µ9/L	20	0	100	20	130	21.18	5.78	20	
Carbon disuifide	14.69	2.0	µg/L	20	0	73.5	2	130	15.18	3.28	20	
Carbon tetrachloride	20.65	5 2.0	µg/L	20	0	103	20	130	20.59	0.291	20	
Chlorobenzene	19.28	2.0	µg/L	20	0	96.4	2	130	20.53	6.28	20	
Dibromochloromethane	ne 19.96	3 2.0	µg/L	20	0	8.66	20	130	20.16	0.997	20	
Chloroethane	15.29	9 2.0	μ <u>9</u> /L	20	0	76.5	2	130	17.47	13.3	20	
Chioroform	19.41	2.0	µg/L	50	0	97	2	130	19.91	2.54	20	
Chloromethane	22.77	2.0	µ9/L	20	0	114	4	160	25.75	12.3	20	
2-Chlorotoluene	19.17	2.0	hg/L	20	0	95.8	2	130	20.22	5.33	20	
4-Chlorototuene	19.74	1 2.0	hg/L	20	0	98.7	2	130	20.73	4.89	20	
1,2-Dibromo-3-chloropropane	propane 21.1	0.9	µg/L	20	0	106	2	130	22.39	5.93	20	
1,2-Dibromoethane	20.88	3 2.0	µg/L	20	0	104	20	130	21.31	2.04	20	
Dibromomethane	19.86	3 2.0	µg/L	20	0	99.3	2	130	20.4	2.68	20	
1,3-Dichlorobenzene	19.67	2.0	µg/L	20	0	98.4	92	130	20.59	4.57	20	
1,2-Dichlorobenzene	20.16	3 2.0	ng/L	20	0	101	2	130	20.77	2.98	20	
Qualifiers: ND - N	ND - Not Detected at the Reporting Limit	mit	S - Spike Recove	S - Spike Recovery oulside accepted recovery limits	d recovery l	imits	B - Analyt	e detected in t	B - Analyte detected in the associated Method Blank	od Blank		
J - An	J - Analyte detected below quantitation limits	n limits	R - RPD outside	R - RPD outside accepted recovery limits	limits		NA - Not	applicable wh	NA - Not applicable where J values or ND results occur	results occur		
RL - F	RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.	owest concentration	the laboratory car	n accurately quanti	tate.			ı :				

AMRO Environmental Laboratories Corp.

Work Order:	1705043								ا			
Project:	North Reading								Labo	Laboratory Control Spike Duplicate	ıtrol Spike	Duplicat
1,4-Dichlorobenzene	ine	19.69	2.0	µg/L	20	0 98.4	4	70	130	20.6	4.52	20
Dichlorodifluoromethane	ethane	31.87	5.0	µg/L	20	0	159	40	160	36.87	14.5	20
1,1-Dichloroethane	<b>a</b>	17.57	2.0	µg/L	20	0 87.8	æ	29	130	18.94	7.5	20
1,2-Dichloroethane	ø	20.11	2.0	µg/L	20	0 7	101	70	130	20.54	2.12	20
1,1-Dichloroethene	ø	19.09	1.0	µg/L	20	0 95.4	4	70	130	20.79	8.53	20
cis-1,2-Dichloroethene	hene	18.92	2.0	µg/L	20	0 94.6	9.	20	130	19.92	5.15	20
trans-1,2-Dichloroethene	ethene	17.58	2.0	µg∕L	20	0 87.9	6	70	130	19.65	11.1	20
1,2-Dichloropropane	<b>3</b>	19.8	2.0	µg/L	8	0	66	70	130	20.66	4.25	20
1,3-Dichloropropane	<b>E</b>	19.25	2.0	µg/L	20	0 96.2	7	20	130	19.34	0.466	20
2,2-Dichloropropane	Je	20.82	2.0	µg/L	20	0	401	70	130	22.17	6.28	20
1,1-Dichloropropene	ne	20.25	2.0	µg/L	8	0 1	101	70	130	21.87	69.7	20
cis-1,3-Dichloropropene	opene	21.24	1.0	µg/L	20	0 4	106	20	130	21.9	3.06	20
trans-1,3-Dichloropropene	propene	20.64	1.0	hg/L	20	0 7	103	20	130	21.12	2.3	20
Diethyl ether		19.54	5.0	hg∕t	29	0 97.7	7	20	130	20.37	4.16	20
Diisopropyl ether		18.14	2.0	hg/L	20	0 90.7	7:	20	130	19.78	8.65	20
1,4-Dioxane		117.1	20	µg/L	100	0	117	40	160	119.6	2.08	20
Ethyl Tertiary Butyl Ether	yl Ether	19.26	2.0	hg/L	20	0 96.3	6	20	130	20	3.77	20
Ethylbenzene		19.84	2.0	µg/L	20	56 O	Ċ.	20	130	21.18	6.53	20
Hexachlorobutadiene	ene	19.67	2.0	hg/L	20	0 98.4	4	20	130	20.35	3.4	20
2-Hexanone		38.72	5	hg∕L	40	96 0	96.8	5	160	37.46	3.31	20
Isopropylbenzene		19.83	2.0	µg/L	20	0 99.2	7	70	130	21.48	7.99	8
4-Isopropyltoluene	f).	20.66	2.0	µg/L	20	0 1	103	20	130	21.96	6.1	20
2-Butanone		41.92	5	µg/L	40	0 11	105	40	160	39.05	7.09	20
4-Methyl-2-pentanone	one	41.45	9	hg/L	4	0	<del>5</del>	4	160	41.82	0.889	8
Methyl tert-butyl ether	ther	20.13	2.0	µg/L	20	0	5	20	130	21.03	4.37	20
Methylene chloride	•	20.16	5.0	µg/L	8	0	101	20	130	20.2	0.198	20
Naphthalene		20.18	5.0	µg/L	20	0	101	20	130	20.93	3.65	20
n-Propylbenzene		19.84	2.0	µg/L	8	0 99.2	7	20	130	21.12	6.25	20
Styrene		18.9	2.0	µg/L	20	0 94.5	5.	20	130	19.92	5.26	20
1,1,1,2-Tetrachloroethane	vethane	19.02	2.0	µg/L	8	0 95.1	<u>.</u>	20	130	20.13	2.67	20
1,1,2,2-Tetrachloroethane	oethane	19.32	2.0	µg/L	20	96 0	99.9	2	130	19.8	2.45	20
Qualifiers: ND	ND - Not Detected at the Reporting Limit	orting Limit		S - Spike Recovery outside accepted recovery limits	y outside accepted	f recovery limits		malyte dete	cted in the ass	B - Analyte detected in the associated Method Blank	1 Blank	i i
ï	J - Analyte detected below quantitation limits	antitation limits	_	R - RPD outside accepted recovery limits	ccepted recovery	limits	NA.	Not annlie:	y l where I v	NA - Not annijeable where I values or NI) results occur	anite occur	

AMRO Environmental Laboratories Corp.

CLIENT: Work Order:	Charles Castelluccio Consulting, LLC 1705043	cio Consulting,	LLC			!			O Labo	QC SUMMARY REPORT Laboratory Control Spike Duplicate	ARY RI	<b>PORT</b> Duplicate
nethene	Simple World	19.27	20	1/011	90	٥	96.4	۶	130	20.89	8.07	,   ç
Tetrahydrofuran		21.31	2	r J/6rl	8	0	107	2 2	130	22.62	5.96	8 8
Toluene		20.65	2.0	hg/L	20	0	103	02	130	21.46	3.85	20
1,2,4-Trichlorobenzene	ě	21.07	2.0	hg/L	20	0	105	20	130	21.77	3.27	20
1,2,3-Trichlorobenzene	ē	18.49	2.0	µg/L	20	0	92.5	92	130	19.34	4.49	20
1,1,1-Trichloroethane		19.52	2.0	µg/L	20	0	97.6	2	130	20.55	5.14	20
1,1,2-Trichloroethane		19.86	2.0	µg/L	20	0	99.3	20	130	20.35	2.44	20
Trichloroethene		19.42	2.0	µg/L	8	0	97.1	2	130	20.9	7.34	20
Trichlorofluoromethane	e.	17.24	2.0	µg/L	20	0	86.2	20	130	20.04	15	20
1,2,3-Trichloropropane	ē	19.4	2.0	µg/L	20	0	97	2	130	19.78	1.94	20
1,2,4-Trimethylbenzene	Je	19.95	2.0	µg/L	20	0	8.66	20	130	21.49	7.43	20
1,3,5-Trimethylbenzene	Пе	20.33	2.0	µg/L	20	0	102	20	130	21.49	5.55	20
Vinyl chloride		70	2.0	µg/L	20	0	100	2	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	hg/L	40	0	96.9	2	130	41.22	6.18	20
Surr: Dibromofluoromethane	omethane	25.9	5.0	µg∕L	52	0	\$	20	130	0	0	0
Surr. 1,2-Dichloroethane-d4	thane-d4	25.19	2.0	µg/L	25	0	턴	2	130	0	0	0
Surr: Toluene-d8		26.08	2.0	hg/L	55	0	\$	92	130	0	0	0
Surr. 4-Bromofluorobenzene	орепzепе	23.25	2.0	hg/L	25	0	93	20	130	0	0	0

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

Qualifiers:

22 of 29

Date: 01-Jun-17

**CLIENT:** 

Charles Castelluccio Consulting, LLC

Lab Order:

1705043

Client Sample ID: Influent

Collection Date: 5/17/2017 9:50:00 AM

Project:

North Reading

Matrix: AQUEOUS

Lab ID:

1705043-02A

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
8260C SIM, EPA 5030C	s	W8260C			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.

<b>CLIENT:</b>	Charles Castelluccio Consulting, LLC
Work Order:	1705043
Project:	Nethod Blar

									ı			
Sample ID: mb-05/31/17	Batch ID: R59624	Test Code	Test Code: SW8260C	Units: pg/L			Analysis Da	ite: 5/31/201	Analysis Date: 5/31/2017 1:32:00 PM	Prep Date:	Prep Date: 5/31/2017	
Client ID:	8.	Run 10:	V-1_170531A	_			SeqNo:	1000278				
	QC Sample		ö	QC Spike Original Sample	ample			0	Original Sample			
Analyte	Result	겉	Units	Amount R	esult %	REC	LowLimit	HighLimit	Result %REC LowLimit HighLimit or MS Result	%RPD	RPDLimit	ŏ
1,2-Dibromoethane	QN	0.050	hg/L									
Surr: 1,2-Dichloroethane-d4	5.31	2.0	µg∕L	2	0	106	72	129	0			
Surr. 4-Bromofluorobenzene	4.8	2.0	µg/L	သ	0	8	82	119	0			
Surr: Dibromofluoromethane	5.12	2.0	µg∕L	2	0	102	83	116	0			
Surr. Toluene-d8	5.47	2.0	μg/L	rc.	0	109	55	130	0			

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

Charles Castelluccio Consulting, LLC 1705043 CLIENT:

Laboratory Control Spike

QC SUMMARY REPORT

Date: 01-Jun-17

Work Order:

North Reading Project:

												Ÿ.
Sample ID: 1cs-05/31/17	Batch ID: R59624	Test Code:	Test Code: SW8260C	Units: µg/L			Analysis D.	ate: 5/31/201	Analysis Date: 5/31/2017 12:31:00 PM	Prep Date.	Prep Date: 5/31/2017	
Client ID:		Run ID:	V-1_170531A	4			SeqNo:	1000276				
	QC Sample		σ	QC Spike Original Sample	ai Sample			U	Original Sample			
Analyte	Result	귐	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Ö
1,2-Dibromoethane	-	0.050	hg/L	<del>-</del>	0	5	76	132	0			
Surr. 1,2-Dichloroethane-d4	5.36	2.0	µg/L	S	0	107	72	129	0			
Surr: 4-Bromofluorobenzene	5.09	2.0	µg/L	ıç.	0	102	82	119	0			
Surr. Dibromofluoromethane	5.24	2.0	µg/L	S	0	105	83	116	0			
Surr. Toluene-d8	4.92	2.0	µ9/L	5	0	98.4	55	130	0			
Sample ID: Icsd-05/31/17	Batch ID: R59624	Test Code:	Test Code: SW8260C	Units: µg/L			Analysis D	late: 5/31/201	Analysis Date: 5/31/2017 1:02:00 PM	Prep Date	Prep Date: 5/31/2017	
Client ID:		Run ID:	V-1_170531A	¥			SeqNo:	1000277				
	QC Sample		o	QC Spike Original Sample	al Sample			J	Original Sample			
Analyte	Result	꿉	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	õ
1,2-Dibromoethane	1.18	0.050	µg/L	-	0	118	92	132	-	16.5	20	
Surr: 1,2-Dichloroethane-d4	4.88	2.0	hg/L	ĸ	0	97.6	72	129	0	0	0	
Surr. 4-Bromofluorobenzene	4.9	2.0	hg/L	9	0	86	82	119	0	0	0	
Surr. Dibromofluoromethane	4.7	2.0	hg∕L	တ	0	8	83	116	0	0	0	
Surr: Toluene-d8	4.91	2.0	µ9∕L	ιΩ	0	98.2	52	130	0	0	0	

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate. J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit Qualifiers:

NA - Not applicable where J values or ND results occur B - Analyte detected in the associated Method Blank

## AMRO Environmental Laboratories Corp.

Date: 01-Jun-17

CLIENT: Charles Castelluccio Consulting, LLC Lab Order: 1705043

Project: North Reading

Lab ID: 1705043-01 Collection Date: 5/17/2017 9:30:00 AM

Collection Time:

Client Sample ID: Effluent Matrix: AQUEOUS

Result **RL Qual Units** DF **Date Analyzed** Analyses **ION CHROMATOGRAPHY** E300 Analyst: AL Chloride 400 10 mg/L 20 5/25/2017 12:52:25 PM PH SM4500-H, B Analyst: JK 5/17/2017 pΗ 8.0 0 Н pH Units 1

Lab ID: 1705043-02 Collection Date: 5/17/2017 9:50:00 AM

Collection Time:

Client Sample ID: Influent Matrix: AQUEOUS

Result RL Qual Units DF **Date Analyzed Analyses** ION CHROMATOGRAPHY E300 Analyst: AL 5/25/2017 12:52:25 PM Chloride 420 10 mg/L 20 SM4500-H, B Analyst: JK PH 5/17/2017 6.9 pH Units 1 pΗ

# AMRO Environmental Laboratories Corp.

CLIENT: Charles Castelluccio Consulting, LLC
Work Order: 1705043

Method Blank

QC SUMMARY REPORT

Date: 01-Jun-17

Project: North Reading

Ö %RPD RPDLimit Prep Date: Analysis Date: 5/25/2017 12:52:25 PM Original Sample or MS Result 1000214 LowLimit HighLimit SeqNo: Result %REC QC Spike Original Sample Units: mg/L Amount **DIONEX\_170525A** Units mg/L Test Code: E300 Run ID: 0.50 뭅 Batch ID: R59619 2 Result QC Sample Sample ID: MB-052517 Client ID: Chloride Analyte

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate. J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit Qualifiers:

B - Analyte detected in the associated Method Blank
NA - Not applicable where J values or ND results occur

# AMRO Environmental Laboratories Corp.

CLIENT: Charles (Work Order: 1705043 Project: North Re	Charles Castelluccio Consulting, LLC 1705043 North Reading	, LLC	:	į	:				QC SUMMARY REPORT Laboratory Control Spike	JMMARY REPORT Laboratory Control Spike	REPOI	₹T ike
Sample ID: LCS-052517 Client ID:	Batch ID: R59619	Test Code: E300 Run ID: DION	E300 Un DIONEX_170525A	Units: mg/L '0525A	J/E		Analysis Da SeqNo:	ate: 5/25/201 1000215	Analysis Date: 5/25/2017 12:52:25 PM SeqNo: 1000215	Prep Date:		1
Analyte	QC Sample Result	궡	_	OC Spike Original Sample Amount Result	inal Sample Result	%REC	Sample Result %REC LowLimit HighLimit	_	Original Sample or MS Result	%RPD	RPDLimit	Öñ
Chloride Sample ID: LCSD-052517	12 Batch ID: R59619	U.50 mg/L Test Code: E300	mg/L 9: <b>E</b> 300	12.5 Units: mg/L	g/L	8	89 Analysis Da	110 ate: 5/25/201	Analysis Date: 5/25/2017 12:52:25 PM	Prep Date:		i
Client ID:		Run ID:	DIONEX_170525A	70525A	Ç		SeqNo:	1000220				
Analyte	QC Sample Result	꿉	Units	AC Spike Onginal Sample Amount Result		%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ŏ
Chloride	11.98	0.50	mg/L	12.5	0	92.8	88	110	12	0.196	20	
Sample ID: LCS-R59572 Client ID:	Batch ID: R59572	Test Code Run ID:	Test Code: SM4500-H, B Unit Run ID: ING-WET_170517B	B Units: pH Units 170517B	1 Units		Analysis Da SeqNo:	Analysis Date: 5/17/2017 SeqNo: 999539	21	Prep Date:		
Analyte	QC Sample Result	귙	Units	QC Spike Original Sample Amount Result		%REC	LowLimit	HighLimit	Original Sample or MS Result	%RPD	RPDLimit	Ö
ЬН	6.02	0	pH Units	9	0	100	66	101	0			
Sample ID: LCSD-R59572 Client ID:	2 Batch ID: R59572	Test Code Run ID:	Test Code: SM4500-H, B Unit Run ID: ING-WET_170517B	B Units: pH Units 170517B	f Units		Analysis Di SeqNo:	Analysis Date: 5/17/2017 SeqNo: 999542	21	Prep Date:		
Analyte	QC Sample Result	R	Units	QC Spike Original Sample Amount Result		%REC	LowLimit	C HighLimit	Original Sample or MS Result	%RPD	RPDLimit	ä
Hd	6.02	0	pH Units	ထ	0	9	66	101	6.02	0	ru.	

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

NA - Not applicable where J values or ND results occur

Date: 01-Jun-17

Sample Duplicate

QC SUMMARY REPORT

Charles Castelluccio Consulting, LLC CLIENT:

North Reading Project:

1705043 Work Order:

												1
Sample ID: 1705043-02BDUP	Batch ID: R59572	Test Code	e: SM4500-	Test Code: SM4500-H, B Units: pH Units	Units		Analysis D	Analysis Date: 5/17/2017	7	Prep Date:		
Client ID: Influent		Run 1D:	ING-WEI	ING-WET_170517B			SeqNo:	999543				
	QC Sample			QC Spike Original Sample	inal Sample			0	Original Sample			
Analyte	Result	교	Units	Amount	Result	%REC	LowLimit	HighLimit	Result %REC LowLimit HighLimit or MS Result	%RPD	%RPD RPDLimit Que	Ö
Æ	6.85	0	pH Units	0	0	0	0	0	6.9	0.727	ĸ	I

29 of 29

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at the Reporting Limit

Qualifiers:

R - RPD outside accepted recovery limits

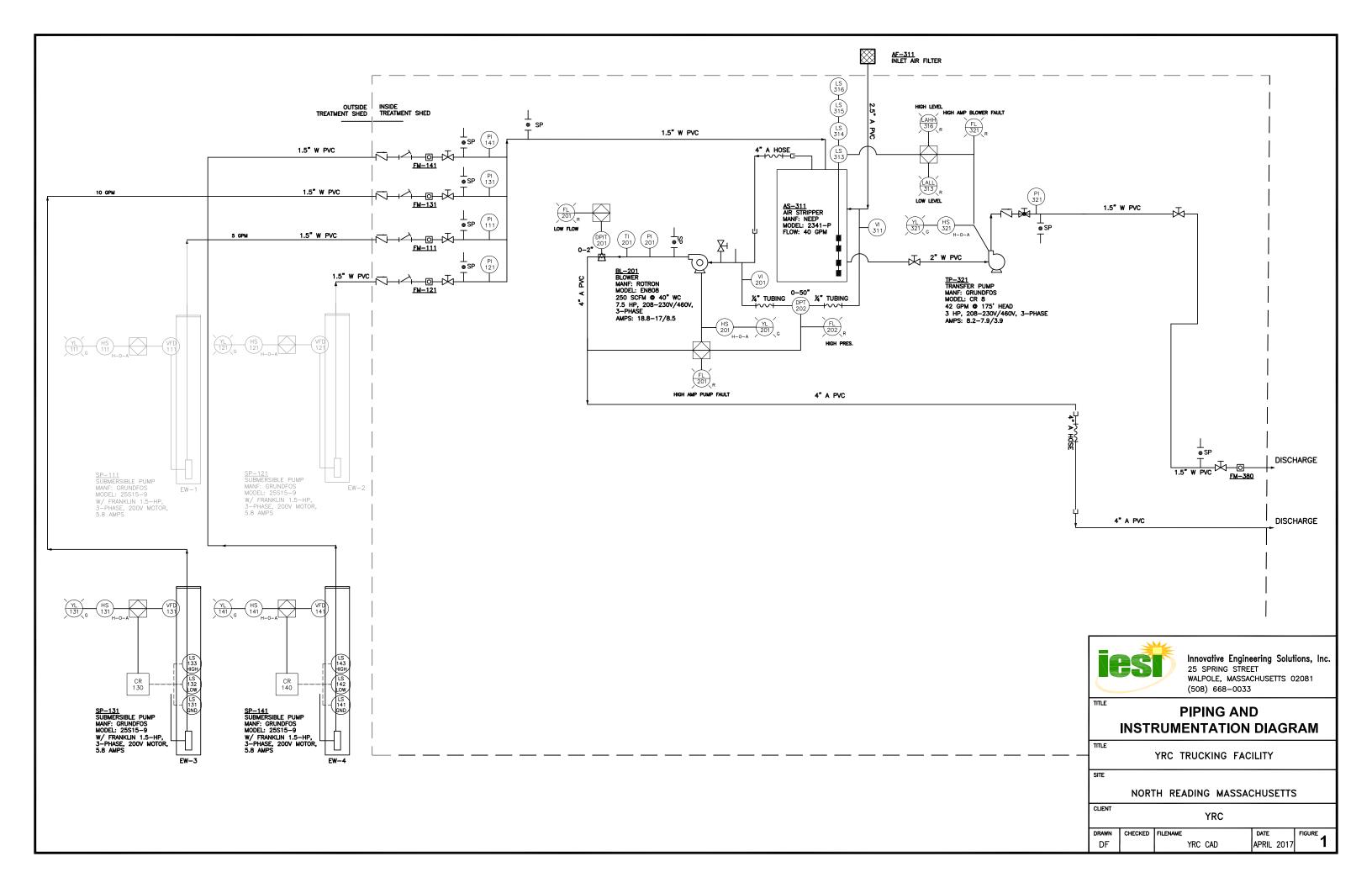
NA - Not applicable where J values or ND results occur

B - Analyte detected in the associated Method Blank

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate. J - Analyte detected below quantitation limits

## ATTACHMENT E

**Schematic of System Flow** 



## 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
	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
Barnstable	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 <sup>1</sup>	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
	Bog Turtle	Threatened	Wetlands	Egremont and Sheffield
Berkshire	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 <sup>1</sup>	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
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Piping Plover	Threatened	Coastal Beaches	All Towns
D 1.22	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Aquinnah and Chilmark
Dukes	Sandplain gerardia	Endangered	Open areas with sandy soils.	West Tisbury
	Red Knot <sup>1</sup>	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

# FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Gloucester, Essex and Manchester
Essex	Piping Plover	Threatened	Coastal Beaches	Gloucester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury
	Red Knot <sup>1</sup>	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
	Northeastern bulrush	Endangered	Wetlands	Montague, Warwick
Franklin	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
N.C. 1.11	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Groton
Middlesex	Northern Long- eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
	Piping Plover	Threatened	Coastal Beaches	Nantucket
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Nantucket
Nantucket	American burying beetle	Endangered	Upland grassy meadows	Nantucket
	Red Knot <sup>1</sup>	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

# FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

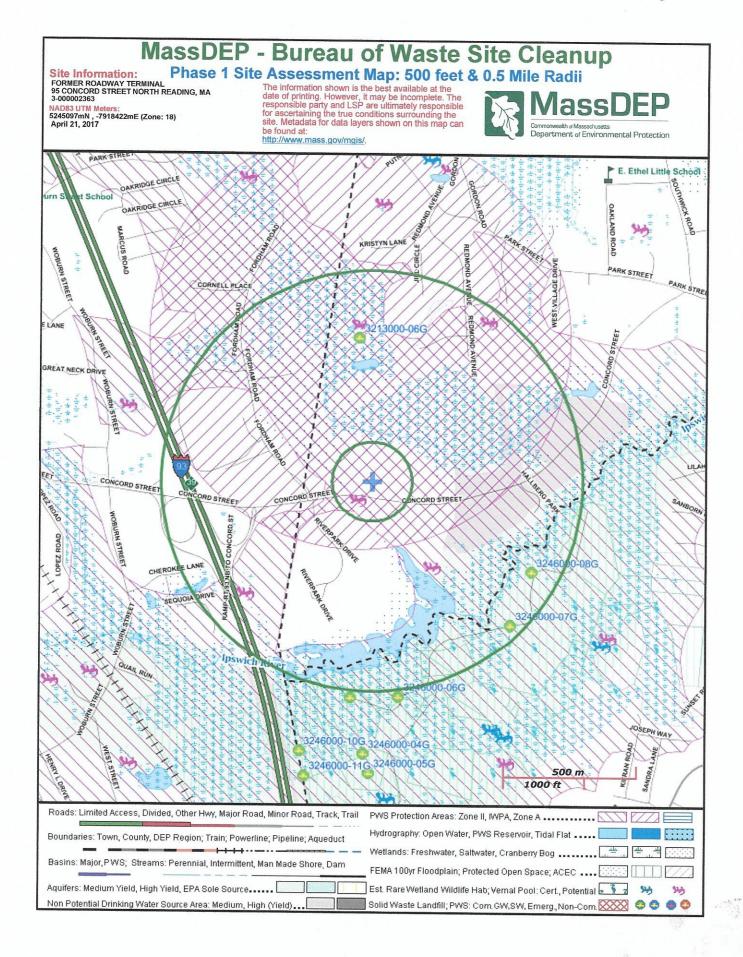
COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
	Piping Plover	Threatened	Coastal Beaches	Scituate, Marshfield, Duxbury, Plymouth, Wareham and Mattapoisett
	Northern Red- bellied Cooter	Endangered	Inland Ponds and Rivers	Kingston, Middleborough, Carver, Plymouth, Bourne, Wareham, Halifax, and Pembroke
Plymouth	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Plymouth, Marion, Wareham, and Mattapoisett.
	Red Knot <sup>1</sup>	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
	Piping Plover	Threatened	Coastal Beaches	Revere, Winthrop
Suffolk	Red Knot <sup>1</sup>	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
	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Leominster
Worcester	Northern Long- eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

<sup>&</sup>lt;sup>1</sup>Migratory only, scattered along the coast in small numbers

-Eastern cougar and gray wolf are considered extirpated in Massachusetts.

-Critical habitat for the Northern Red-bellied Cooter is present in Plymouth County.

<sup>-</sup>Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.



# 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

### **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 NRE.66 NRE.67 NRE.68 NRE.69 NRE.70 NRE.73 NRE.71 NRE.72 NRE.74 NRE.147 NRE.148 NRE.149 NRE.150 NRE.151 NRE.152 NRE.63 NRE.151 NRE.152 NRE.63 NRE.191 NRE.192 NRE.75 NRE.76 NRE.77 NRE.76 NRE.77 NRE.78 NRE.79 NRE.80 NRE.80 NRE.80	Harmony Vale Cemetery Flint - Smith, G. S. House Flint, A. House Flint, A. Barn Harris, James Z. House Burditt, Jonathan N. House and Shop Walker, Charles M. Cottage Whittredge, William House Whittredge, William Barn Upton, Frederic A Upton, Lysander House Upton, Wallace F. House Abbott, Ebenezer - Merrill, Lorenzo G. House Parker, Elijah B. House Parker, George B Abbott, Joel House Parker, Dea. George K. House Parker, George B. House and Shoe Factory Parker, Eliab Jr. House Eaton, David G. House Upton, Louis House Riverside Cemetery Upton, Benjamin House Hayward, Sylvester Shed Hayward, Leon G. House Hayward - Howard, John House McIntire, Archelaus - Jeffreys, Joseph House Tarbox, Rachel E. House Orben, Henry House
NRE.80	Tarbox, Rachel E. House
NRE.82	Parker, David Jr Rayner, Thomas House
NRE.83 NRE.84	Parker, David Jr Rayner, Thomas Barn Upton, Ebenezer - Graves, Daniel House
NRE.85	Opton, Epenezer - Graves, Danier House
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.189 NRE.190	Frye, Joseph - Upton, Alanson Augustine House 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	
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