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25 September 2023 File No. 27892-432/433

Connecticut Department of Energy and Environmental Protection Bureau of Water Protection and Land Reuse Remediation Division 79 Elm Street Hartford CT 06106-5127

Attention: Ray Frigon

Subject: Annual Status Report Rochford Field and Villano Park (formerly Mill Rock Park) Hamden, Connecticut REM ID# 9148 and 9149

Ladies and Gentlemen:

On behalf of our client, Town of Hamden, Haley & Aldrich is pleased to submit this status report on groundwater monitoring activities at Rochford Field, Villano Park (formerly known as Mill Rock Park) and the Sewer Pump Station in Hamden, Connecticut during the period from July 2022 to September 2023. The site location is shown in Figure 1. Groundwater monitoring at the site has been conducted in accordance with our 2013 Remedial Action Plans (RAPs) which were approved by Connecticut Department of Energy and Environmental Protection (CTDEEP) in November 2013. Post remediation long-term groundwater monitoring has been ongoing since 2015 and demonstrates compliance with CTDEEP Remediation Standard Regulation Groundwater Protection Criteria (GWPC) for portions of Rochford Field and Villano Park located within the groundwater area classified as GAA. Further, the monitoring has also demonstrated compliance with CTDEEP RSR Residential Volatilization Criteria (RVC) and Surface Water Protection Criteria (SWPC) based on analytical data from both parks and nearby off-site downgradient wells.

#### SITE DESCRIPTION AND BACKGROUND

The 4.84-acre Rochford Field is bounded by Newhall and Newbury Streets to the west and south, respectively, Winchester Avenue to the east and Mill Rock Road to the north. A chain link fence surrounds the recreational facility, which includes a baseball field, a softball field, dugouts, backstops, and bleachers. The 2.94-acre Villano Park is located along Mill Rock Road and Wadsworth Street with a tree-lined chain link fence separating the property from residential properties on Bryden Terrace. The 0.12-acre Sewer Pump Station, presently owned by the Greater New Haven Water Pollution Control Authority (GNHWPCA) is located at the southeast corner of Mill Rock Road and Winchester Avenue, abutting the northwestern corner of Villano Park. The pump station building is a windowless, one-story structure surrounded by grassy lawn and a chain link fence.

The Town of Hamden acquired the Rochford and Villano parcels in the 1930s. The parcels, which were historically wetlands, were used as public refuse dumps and/or as an industrial landfill/depository for "coke fill" (charcoal residue and ash) in the 1920s or and 1930s. In late 1936 and 1937, the Rochford field parcel was graded and topped with approximately 6-inches of loam and used as a recreation field. The Town of Hamden developed Villano (then Mill Rock Park) as a park in 1940 and subsequently renovated the park in 1992 with the installation of approximately 1,300 cubic yards of gravel fill and expansion of, or upgrades to existing recreational facilities. The sewer pump station was constructed in 1952 on filled land that was acquired by the Town in 1939.

On 10 July 2001, CTDEEP issued Order No. SRD-128 to the Town of Hamden, South Central Regional Water Authority (RWA), Olin Corporation (Olin), and the State Board of Education. The Order required the respondents to investigate and remediate sources of pollution on a "site" which was subsequently divided into three portions that included both publicly and privately-owned properties. The Order required the Town to investigate, characterize, and remediate Rochford Field, Mill Rock (Villano) Park and the Sewer Pump Station.

Interim remedial actions and site investigations were undertaken between 2000 and 2013. Testing encountered impacted fill material containing polyaromatic hydrocarbons (PAHs), extractable total petroleum hydrocarbons (ETPH), and metals at concentrations above the CTDEEP Remediation Standard Regulations (RSRs). Groundwater analyses detected similar compounds to those found in site soil. In June 2013, Haley & Aldrich prepared Remedial Action Plans (RAPs) for the three parcels which were approved by CTDEEP in November 2013. The RAPS outlined remedial construction (caps). The cap (Engineered Control) was constructed in 2015. Natural attenuation and compliance groundwater monitoring (MNA) has been ongoing since that time and includes monitoring wells located within the two parks and two downgradient wells located along Newhall Street, immediately downgradient of Rochford Field. An Environmental Use Restriction (EUR) will be placed on the parks to complete the Engineered Control; work on the EUR is ongoing.

#### APPLICABLE CTDEEP RSR GROUNDWATER CRITERIA

Groundwater underlying the Site was historically classified as "GAA" by CTDEEP; a "GAA" classification indicates that the water resource is regulated for potential use as a public drinking water supply. In 2005, CTDEEP reclassified a portion of the site (including parts of Rochford Field and Villano Park) "GB"; a "GB" classification indicates that the water resource is not intended to be suitable for use as a drinking water supply without prior treatment. Both the "GAA" and "GB" groundwater classification areas and associated groundwater elevation contours are shown on Figure 2. Recent groundwater elevation measurements have confirmed that groundwater flow has remained consistent over time. A public water supply system is used to supply potable water to area residences and businesses. Groundwater flow beneath the site is primarily to the west and southwest from Villano Park towards Rochford Field flowing from the GAA into the GB area. Based on groundwater elevation contour maps, there is also a northwesterly component of flow in the far northwestern portion of Rochford Field within the area classified as a "GAA" resource (see Figure 2).



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Applicable RSR criteria for groundwater quality are:

- Groundwater Protection Criteria (GWPC) ("GAA" area of the site)
- Surface Water Protection Criteria (SWPC) and,
- Residential Volatilization Criteria (RVC).

#### **GROUNDWATER MONITORING PROGRAM**

In accordance with the CTDEEP-approved RAPs, Haley & Aldrich has conducted MNA or compliance groundwater monitoring on a quarterly or annual basis since completion of remedial actions in 2015. Originally, the groundwater monitoring network includes seven monitoring wells at Rochford Field (RF-HA108-MW, RF-HA108-MWD, RF-HA110-MW, RF-HA115-MW, RF-HA123-MW, RF-HA207-MW, and RF-HA301-MW) and five monitoring wells at Villano Park (MRP-HA101-MW, MRP-HA103-MW, MRP-HA201-MW, MRP-HA202-MW and MRP-HA-204). Well locations are shown on Figure 2.

The Rochford Field wells are located downgradient of the Villano Park wells, with respect to the direction of overburden groundwater flow. Groundwater flow beneath Rochford Field is both northwesterly (in the GAA area) and southwesterly (in the GB area). The northwesterly flow component discharges into an unnamed surface water body (stream) on the northwest side of Mill Rock Road which flows northerly towards Lake Whitney. The southwesterly flow component discharges into Beaver Pond and ultimately the West River to the southwest.

In April 2020, Haley & Aldrich submitted a request to CTDEEP to change the monitoring program, eliminating certain upgradient wells (including the wells in Villano Park and Rochford Field wells RF-HA108-MWD, RF-HA110-MW and RF-HA207-MW) or eliminating certain monitoring parameters for which diminishing trends and/or RSR compliance had been demonstrated.

Beginning in 2022, Haley & Aldrich sampled two new monitoring well locations (designated as RF-401-MW and RF-402-MW), which are located on Town of Hamden property, along Newhall Street and downgradient of Rochford Field and Villano Park. The wells are located between Rochford Field and the downgradient surface water discharge locations. The additional locations, which are shown on Figure 2, include:

- The former MW-1, installed by WSP, Inc. (and renamed as RF-401-MW by Haley & Aldrich) and located on town property downgradient of the northern portion of Rochford Field ("GAA area") and Villano Park; and,
- A new well (RF-402-MW), located on Town of Hamden property near the corner of Newbury and Newhall Streets hydrologically downgradient of the southern portion of Rochford Field (and Villano Park).

In a June 2022 letter to CTDEEP (attached), Haley & Aldrich recommended eliminating sampling of the remaining Rochford Field wells because RSR GWPC compliance had been demonstrated and downgradient off-site wells (RF-401-MW and RF-402-MW) were being used to demonstrate SWPC compliance for select metals.



From February 2022 through December 2022, Haley used low flow purging and sampling methodology to sample RF-401-MW and RF-402-MW for selected total metals (arsenic, copper, lead, mercury, and zinc) via USEPA Method 200.7 or 245.2. The monitoring results were tabulated and compared against the GWPC and SWPC, as applicable, and summarized in Tables Ia (wells within the GAA groundwater classification area) and Table Ib (wells within the GB groundwater classification area.)

# **Summary of Groundwater Monitoring and Results**

Results from the recent 2022 quarterly sampling events are summarized on Tables Ia and Ib along with results from previous monitoring events conducted since 2015. The laboratory data reports for February, April, June, September, and December 2022 are attached to this letter.

The following is a summary of analytical results:

#### Downgradient wells (RF-401-MW and RF-401-MW)

**RF-401-MW-** The well, located in the GAA groundwater area, was sampled for total arsenic, copper, lead, mercury, and zinc. Except for total zinc, detected between 0.037 mg/L to 0.092 mg/L in three of the four events, no metals were detected above the laboratory detection limits. The concentrations of zinc detected do not exceed CTDEEP RSR GWPC or SWPC.

**RF-402-MW** – The well, located in and downgradient of the GB groundwater area, was sampled for total arsenic, copper, lead, mercury, and zinc; no metals were detected above the laboratory detection limits or CTDEEP RSR SWPC during the four sampling events.

#### **CONCLUSIONS & RECOMMENDATIONS**

Post remediation long-term groundwater monitoring analytical data collected since 2015 demonstrates CTDEEP RSR GWPC compliance in the GAA portions of Rochford Field and Villano Park. CTDEEP RSR RVC and SWPC compliance has been demonstrated from analytical data from both sites and from more recently installed nearby off-site downgradient wells.

In our opinion, the Town of Hamden has satisfied long-term groundwater monitoring program requirements as outlined in the CTDEEP-approved Remedial Action Plans for Rochford Field and Villano Park and that the properties are in compliance with RSR GWPC, RVC and/or SWPC. We therefore recommend cessation of groundwater monitoring and proper abandonment of the wells.

Since this is a CTDEEP-lead project, we request that CTDEEP issue a letter confirming that the Rochford Field and Villano Park Long-term Groundwater Monitoring Programs have reached their desired goal of documenting groundwater compliance and can be concluded.



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Sincerely yours, HALEY & ALDRICH, INC.

Detaal & Moticka Doxine

Deborah Motycka Downie, LEP Senior Technical Specialist

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Chris G. Harriman, LEP Senior Associate

Attachments: Table Ia - Summary of GAA Groundwater Area Analytical Data for Rochford Field Table Ib - Summary of GB Groundwater Area Analytical Data for Rochford Field Figure 1 – Site Locus Figure 2 – Well Locations and Groundwater Classification Figure 3 - Inferred Groundwater Flow Plan Laboratory Analytical Data for 2022 June 2022 Letter to CTDEEP

c: Town of Hamden, Erik Johnson



GA/GAA Surface RF-HA108-Sample ID: Groundwater Water Residential PARAMETER Comments Protection Protection Volatilization 31-Dec-15 30-Mar-16 29-Jun-16 18-Oct-16 30-Mar-Criteria Criteria Criteria Sample Date: Volatile Organic Compounds (ug/l): Method: 8260C 8260C 8260C 8260C 8260C Benzene 710 130 ND ND ND ND ND 1 Chloroform 6 14,100 26 ND ND ND ND ND 18 130 ND ND ND ND Chloromethane 10,000 ND 280 210 NE ND ND ND ND Naphthalene ND 1000 4,000,000 23,500 ND ND ND ND ND Toluene Polyaromatic Hydrocarbons (PAHs) ug/L Method: 8270D 8270D 8270D 8270D 8270D 28 62 1000 2-Methyl Naphthalene ND ND ND ND ND 420 30500 7.3 Acenaphthene 150 2.1 5.2 4.7 5 Acenaphthylene 420 0.3 NE ND ND ND ND ND 2,000 1,100,000 NE ND ND ND ND ND Anthracene 0.06 NE ND ND ND ND Benzo[a]anthracene 0.3 0.11 0.08 NE ND ND ND ND ND Benzo[b]fluoranthene 0.3 53 NE Carbazole 5 --------------Dibenzofuran 7 40 460 ---------------280 3,700 NE 1.1 1.3 1.8 2.8 1.8 Fluoranthene 280 Fluorene 140,000 NE 2.3 5.9 5.3 9.1 6.4 Naphthalene 280 210 NE ND ND ND ND ND 200 NE 0.77 0.93 1.2 0.72 Phenanthrene 14 ND 200 110,000 NE ND ND 1.1 1.7 1.1 Pyrene CT ETPH CT ETPH CT ETPH CT ETPH CT ETPH Method: Total Petroleum Hydrocarbons (mg/l): 0.25 0.25 NE ND 0.22 ND ND 0.12 Total Metals (mg/l): 200.7/7470A 200.7/245.2 200.7/245.2 200.7/245.2 200.7/245 Method 0.05 0.004 NE ND ND ND ND Arsenic 200.8 ND Barium 200.8 10 2.2 NE ---------------200.8 0.048 NE ND ND ND ND ND Copper 1.3 0.015 0.013 NE ND ND ND ND ND 200.8 Lead 0.0004 NE ND Mercury 7470A / 245.2 0.002 ND ND ND ND NE 0.1 0.88 0.05 ND 0.092 ND ND Nickel 200.8 NE NE NE Potassium 200.8 --------------NE ND ND ND ND ND Selenium 200.8 0.05 0.05 Silver 200.8 0.036 0.012 NE ND ND ND ND ND Sodium 200.8 NE NE NE ---------------Thallium 200.8 0.005 0.063 NE ND ND ND ND ND 0.123 NE 0.036 Zinc 200.8 5 0.21 0.13 0.21 0.35 Other Analyses (mg/l) Alkalinity (CaCO<sub>3</sub>) 310.1 ----------------------Ammonia as Nitrogen 350.3 ------------------------B. O. D./ 5 Day 405.1 ------------------------Chloride 300.0 -----------------------Fluoride 300.0 ---------------------NE NE NE Iron (dissolved) 200.8 -----\_\_\_ Manganese (dissolved) NE NE NE 200.8 Nitrate as Nitrogen 300.0 --------pН 150.1 --------Sulfate 300.0 ----------------Total Dissolved Solids 160.1 ------------160.2

Total Suspended Solids

NOTES:

1. Sampling methodologies changed to GAA standards as of July 2004 sampling round.

2. This table includes only those compounds detected.

3. RSR criteria means Remedial Standard Regulation criteria established by the

Connecticut Department of Environmental Protection (CTDEEP).

4. NE means numeric RSR criteria not established by CTDEEP.

5. ND means that the compound was not detected above laboratory detection limit.

6. Concentrations in bold type exceed criteria established by CTDEEP.

7. ug/L means micrograms per liter; mg/L means milligrams per liter.

8. B: Compound also detected in one or more associated laboratory blanks.

Chloromethane reported by laboratory as a likely analytical laboratory artifact.

https://haleyaldrich-my.sharepoint.com/personal/dmotyckadownie\_haleyaldrich\_com/Documents/Desktop/Final - Hamden Letter 2023/Copy of 12-15-2022 Table la-b\_Rochford Field GW Summary.xlsx

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8-MW	,							RF	-HA108-MWD				
r-17	27-Mar-18	17-May-19	8-May-20	24-Jun-21	19-Nov-04	27-Oct-14	31-Dec-15	30-Mar-16	29-Jun-16	18-Oct-16	30-Mar-17	28-Mar-18	17-May-19
C	8260C	8260C	8260C	8260C	524.2	8260C	8260C	8260C	8260C	8260C	8260C	8260C	8260C
)	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
)	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
)	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
)	ND	ND			0.98	ND	ND	ND	ND	ND	ND	ND	ND
)	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
D	8270D	8270D	8270D	8270D	525.2	8270D	8270D	8270D	8270D	8270D	8270D	8270D	8270D
)	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
	4.7	2.9			ND	ND	ND	ND	ND	ND	ND	ND	ND
)	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
)	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
1	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
)	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
					ND								
					ND								
2	2	1.1			ND	ND	ND	ND	 ND	ND	ND	ND	ND
)	6.1	2.5			ND		ND						
+						ND							
)	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
2	ND 1.2	0.08 ND			ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
I	1.2	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
ГРН	CT ETPH	CT ETPH	CTETPH	CT ETPH	CT ETPH	CT ETPH	CT ETPH	CT ETPH	CT ETPH	CT ETPH	CT ETPH	CT ETPH	CT ETPH
)	0.21	ND			ND	ND	ND	0.2	ND	0.25	0.15	ND	ND
245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2			200.7/7470A	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2
)	ND	ND			0.0047	ND	ND	ND	ND	ND	ND	ND	ND
						0.056							
)	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
)	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
)	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
)	0.058	0.081			ND	ND	ND	ND	ND	ND	ND	ND	ND
•					6.0								
)	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	0.011
, )	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
•					12								
)	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
5	0.34	0.38	0.21	0.086	0.017	ND	ND	ND	0.023	ND	ND	ND	ND
					230								
					4.6								
					ND								
					8.6								
					11								
					1.5								
					ND								
					6.45								
					1.8								

GA/GAA Surface RF-HA110-M Sample ID: Groundwater Water Residential PARAMETER Comments Protection Protection Volatilization 27-Oct-14 31-Dec-15 31-Mar-16 29-Jun-16 19-0 Criteria Criteria Criteria Sample Date: Volatile Organic Compounds (ug/l): Method: 8260C 8260C 8260C 8260C 826 Benzene 710 130 ND ND ND ND 1 Chloroform 6 14,100 26 ND ND ND ND 18 130 ND ND ND Chloromethane 10,000 ND 280 ND 210 NE ND ND ND Naphthalene 1000 4,000,000 23,500 ND ND ND ND Toluene Polyaromatic Hydrocarbons (PAHs) ug/L 8270D 8270D 8270D 8270D 827 Method: 28 62 1000 2-Methyl Naphthalene ND ND ND ND 420 Acenaphthene 150 30500 ND ND ND ND Acenaphthylene 420 0.3 NE ND ND ND ND 2,000 1,100,000 NE ND ND ND ND Anthracene 0.06 NE ND ND ND ND Benzo[a]anthracene 0.3 0.08 NE ND ND ND ND Benzo[b]fluoranthene 0.3 - N 53 NE Carbazole 5 ----------Dibenzofuran 7 40 460 -----------280 3,700 NE ND ND ND ND Fluoranthene 280 Fluorene 140,000 NE ND ND ND ND N Naphthalene 280 210 NE ND ND ND ND N 200 NE ND ND ND Phenanthrene 14 ND N 200 110,000 NE ND ND ND ND Pyrene N CT ETPH CT ETPH CT ETPH CT ETPH СТЕ Method: Total Petroleum Hydrocarbons (mg/l): 0.25 0.25 NE 0.32 ND 0.27 0.71 0. Total Metals (mg/l): 200.7/7470A 200.7/245.2 200.7/ 200.7/245.2 Method 0.05 0.004 NE 0.0086 0.033 0.013 0.02 Arsenic 200.8 0. Barium 200.8 10 2.2 NE 0.15 --------200.8 0.048 NE 0.23 0.19 0.16 0.11 Copper 1.3 0.0 0.015 0.013 NE 0.27 0.10 0.0 200.8 0.16 0.10 Lead 0.0004 NE 0.00 Mercury 7470A / 245.2 0.002 0.00078 0.0015 0.001 0.00083 NE Nickel 0.1 0.88 0.67 0.55 0.51 0.69 200.8 0.7 NE NE NE Potassium 200.8 ----------NE ND ND Selenium 200.8 0.05 0.05 ND ND N Silver 200.8 0.036 0.012 NE ND ND ND ND Sodium 200.8 NE NE NE ------------Thallium 200.8 0.005 0.063 NE ND ND ND ND 0.123 NE 11 4.7 6.2 5.2 Zinc 200.8 5 6. Other Analyses (mg/l) Alkalinity (CaCO<sub>3</sub>) 310.1 -------------------Ammonia as Nitrogen 350.3 -------------------B. O. D./ 5 Day 405.1 --------------------Chloride 300.0 --------------------Fluoride 300.0 ---------------------NE NE NE Iron (dissolved) 200.8 ---Manganese (dissolved) NE NE NE 200.8 Nitrate as Nitrogen 300.0 --------pН 150.1 --------Sulfate 300.0 -----------Total Dissolved Solids 160.1 ------------160.2

Total Suspended Solids

NOTES:

1. Sampling methodologies changed to GAA standards as of July 2004 sampling round.

2. This table includes only those compounds detected.

3. RSR criteria means Remedial Standard Regulation criteria established by the

Connecticut Department of Environmental Protection (CTDEEP).

4. NE means numeric RSR criteria not established by CTDEEP.

5. ND means that the compound was not detected above laboratory detection limit.

6. Concentrations in bold type exceed criteria established by CTDEEP.

7. ug/L means micrograms per liter; mg/L means milligrams per liter.

8. B: Compound also detected in one or more associated laboratory blanks.

Chloromethane reported by laboratory as a likely analytical laboratory artifact.

https://haleyaldrich-my.sharepoint.com/personal/dmotyckadownie\_haleyaldrich\_com/Documents/Desktop/Final - Hamden Letter 2023/Copy of 12-15-2022 Table la-b\_Rochford Field GW Summary.xlsx

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w					RF-40	91-MW	
Oct-16	29-Mar-17	28-Mar-18	17-May-19	14-Feb-22	8-Apr-22	14-Jun-22	23-Sep-22
260C	8260C	8260C	8260C	524.2	524.2	524.2	524.2
ND	ND	ND	ND				
ND	ND	ND	ND				
ND	ND	ND	ND				
ND	ND	ND	ND				
ND	ND	ND	ND				
270D	8270D	8270D	8270D	525.2	525.2	525.2	525.2
ND	ND	ND	ND				
ND	ND	ND	ND				
ND	ND	ND	ND				
ND	ND	ND	ND				
ND	ND	ND	ND				
ND	ND	ND	ND				
ND	ND	ND	ND				
ND	ND	ND	ND				
ND	ND	ND	ND				
ND	ND	ND	ND				
ND	ND	ND	ND				
<sup>-</sup> <i>ЕТРН</i> 0.51	С <i>Т ЕТРН</i> 0.29	С <i>Т ЕТРН</i> 0.21	С <i>Т ЕТРН</i> 0.34	CT ETPH 	СТ ЕТРН	СТ ЕТРН	СТ ЕТРН
.7/245.2 ).031	200.7/245.2 0.0062	200.7/245.2 0.011	200.7/245.2 0.018	ND	ND	ND	ND
0.073	0.18	0.28	0.08	ND	ND	ND	ND
).061	0.19	0.19	0.26	ND	ND	ND	ND
00058	0.0021	0.0024	0.0011	ND	ND	ND	ND
0.78	0.41	0.35	0.11				
ND	ND	ND	0.022				
ND	ND	ND	ND				
ND	ND	ND	ND				
6.3	3.5	0.94	0.66	0.037	0.092	ND	0.071

PARAMETER		Surface Water Protection	Residential Volatilization	Sample ID: Comments:				I	RF-HA115-MV	V			
		Criteria	Criteria	Sample Date:	31-Dec-15	31-Mar-16	29-Jun-16	19-Oct-16	29-Mar-17	27-Mar-18	17-May-19	8-May-20	24-Jun-21
Volatile Organic Compounds (u	ıq/l):			Method:	8260C								
4-Isopropyltoluene	5,	200	870		ND								
Benzene		710	130		ND								
Chloroform		14,100	26		ND								
Chloromethane		10,000	130		ND								
		210	NE				ND	ND			ND	ND	
Naphthalene					ND	ND			ND	ND			
Toluene		4,000,000	23,500		ND								
Semi-Volatile Organic Compou	nds (ug/l):			Method:	8270C								
2-Methyl Naphthalene		62	1000		ND								
Acenaphthene		150	30500		ND								
Acenaphthylene		0.3	NE		ND								
Anthracene		1,100,000	NE		ND								
Benzo[a]anthracene		0.3	NE		ND								
Benzo[b]fluoranthene		0.3	NE		ND								
Benzo[k]fluoranthene		0.3	NE		ND								
Fluoranthene		3,700	NE		ND								
Fluorene		140,000	NE		ND								
Indeno[1,2,3-cd]pyrene		0.54	NE		ND								
Naphthalene		210	NE		ND								
Phenanthrene		14	NE		ND								
Pyrene		110,000	NE		ND								
				Method:	505	505	505	505	505	505	505		
Chlorinated Pesticides (ug/l):													
				Method:	8082	8082	8082	8082	8082	8082	8082		8082
Polychlorinated Biphenyls (ug/l	I):	0.5	NE	incurou.									
				Method:	CT ETPH	CTETPH	CT ETPH						
Total Petroleum Hydrocarbons	(mg/l):	0.25	NE		ND	ND	ND	ND	ND	0.29	ND	ND	ND
Total Metals (mg/l):	Method				200.7/7470A	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2
Arsenic	200.8	0.004	NE		ND								
Barium	200.8	2.2	NE										
Copper	200.8	0.048	NE		ND								
Lead	200.8	0.013	NE		ND								
Mercury	7470A / 245.2	0.0004	NE		ND								
Nickel													
	200.8	0.88	NE		ND								
Potassium	200.8	NE	NE										
Selenium	200.8	0.05	NE		ND	ND	ND	0.018	ND	ND	ND		
Sodium	200.8	NE	NE										
Thallium	200.8	0.063	NE		ND								
Zinc	200.8	0.123	NE		0.2	0.34	0.2	0.15	0.27	1.1	0.37	0.093	0.58
Total Cyanide (mg/l):	335.4	NE	NE										
Other Analyses (mg/l)													
Alkalinity (CaCO <sub>3</sub> )	310.1												
Ammonia as Nitrogen	350.3												
B. O. D./ 5 Day	405.1												
Chloride	300.0												
Fluoride	300.0												
Iron (dissolved)	200.8	NE	NE										
Manganese (dissolved)	200.8	NE	NE										
-													
Nitrate as Nitrogen	300.0												
pH	150.1												
Sulfate	300.0												
Total Dissolved Solids	160.1												
Total Suspended Solids	160.2												
NOTES:													_

NOTES:

1. Sampling methodologies changed to GAA standards as of July 2004 sampling round.

This table includes only those compounds detected.
 RSR criteria means Remedial Standard Regulation criteria established by the Connecticut Department of Environmental Protection (CTDEEP).

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8. B: Compound also detected in one or more associated laboratory blanks.

Chloromethane reported by laboratory as a likely analytical laboratory artifact.

Haley & Aldrich, Inc.

PARAMETER		Surface Water Protection	Residential Volatilization	Sample ID: Comments:					RF-HA123-M	W			
		Criteria	Criteria	Sample Date:	31-Dec-15	31-Mar-16	28-Jun-16	19-Oct-16	29-Mar-17	27-Mar-18	17-May-19	8-May-20	24-Jun-21
Volatile Organic Compounds (u	ıg/l):			Method:	8260C	8260C	8260C	8260C	8260C	8260C	8260C		
4-Isopropyltoluene	- /	200	870		ND	ND	ND	ND	ND	ND	ND		
Benzene		710	130		ND	ND	ND	ND	ND	ND	ND		
Chloroform		14,100	26		ND	ND	ND	ND	ND	ND	ND		
Chloromethane		10,000	130		ND	ND	ND	ND	ND	ND	ND		
Naphthalene		210	NE		ND	ND	ND	ND	ND	ND	ND		
Toluene		4,000,000	23,500		ND	ND	ND	ND	ND	ND	ND		
Semi-Volatile Organic Compou	nds (ua/l):			Method:	8270D	8270D	8270D	8270D	8270D	8270D	8270D		8270D
2-Methyl Naphthalene		62	1000	method.	ND	ND	ND	ND	ND	ND	ND		
Acenaphthene		150	30500		ND	ND	ND	ND	ND	ND	ND		
Acenaphthylene		0.3	NE		ND	ND	ND	ND	ND	ND	ND		
Anthracene		1,100,000	NE		ND	ND	ND	ND	ND	ND	ND		
							ND						
Benzo[a]anthracene		0.3	NE		ND	ND		ND	ND	ND	ND		
Benzo[b]fluoranthene		0.3	NE		ND	ND	ND	ND	ND	ND	ND		
Benzo[k]fluoranthene		0.3	NE		ND	ND	ND	ND	ND	ND	ND		
Fluoranthene		3,700	NE		ND	ND	ND	ND	ND	ND	ND		
Fluorene		140,000	NE		ND	ND	ND	ND	ND	ND	ND		
Indeno[1,2,3-cd]pyrene		0.54	NE		ND	ND	ND	ND	ND	ND	ND		
Naphthalene		210	NE		ND	ND	ND	ND	ND	ND	ND		
Phenanthrene		14	NE		ND	0.31	ND	ND	ND	ND	ND		
Pyrene		110,000	NE		ND	ND	ND	ND	ND	ND	ND		
				Method:	505	505	505	505	505	505	505	505	505
Chlorinated Pesticides (ug/l):													
				Method:	8082	8082	8082	8082	8082	8082	8082	8082	8082
Polychlorinated Biphenyls (ug/	I):	0.5	NE										
Total Petroleum Hydrocarbons	(mg/l);	0.25	NE	Method:	<b>СТ ЕТРН</b> ND	<b>CT ETPH</b> ND	CT ETPH ND	CT ETPH ND	<b>СТ ЕТРН</b> ND	<b>СТ ЕТРН</b> ND	<b>СТ ЕТРН</b> 0.16	<b>CT ETPH</b> ND	CT ETPH ND
	(iiig/i).	0.25			ND	ND	ND	ND	ND	ND	0.10	ND	ND
Total Metals (mg/l):	Method										200.7/245.2		
Arsenic	200.8	0.004	NE		ND	ND	ND	ND	ND	ND	ND	0.0065	ND
Barium	200.8	2.2	NE									0.29	0.33
Copper	200.8	0.048	NE		0.091	0.06	0.064	0.077	0.077	0.16	0.089	ND	ND
Lead	200.8	0.013	NE		0.042	0.021	0.017	0.016	0.023	0.09	0.037	ND	0.021
Mercury	7470A / 245.2	0.0004	NE		0.00067	0.00028	ND	0.00068	0.0022	0.0039	0.0021	ND	ND
Nickel	200.8	0.88	NE		0.15	0.15	0.17	0.17	0.11	0.11	0.22		
Potassium	200.8	NE	NE										
Selenium	200.8	0.05	NE		ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	200.8	NE	NE										
Thallium	200.8	0.063	NE		ND	ND	ND	ND	ND	ND	ND		
Zinc	200.8	0.123	NE		1.2	1.3	1.3	1.3	0.94	1.1	1.5	0.62	0.81
Total Cyanide (mg/l):	335.4	NE	NE										
<b>Other Analyses (mg/l)</b> Alkalinity (CaCO <sub>3</sub> )	310.1												
Ammonia as Nitrogen	350.3												
B. O. D./ 5 Day													
	405.1												
Chloride	300.0												
Fluoride	300.0												
Iron (dissolved)	200.8	NE	NE										
Manganese (dissolved)	200.8	NE	NE										
Nitrate as Nitrogen	300.0												
рН	150.1												
Sulfate	300.0												
Total Dissolved Solids	160.1												
Total Suspended Solids	160.2												
NOTES:													

NOTES:

1. Sampling methodologies changed to GAA standards as of July 2004 sampling round.

This table includes only those compounds detected.
 RSR criteria means Remedial Standard Regulation criteria established by the Connecticut Department of Environmental Protection (CTDEEP).

4. NE means numeric RSR criteria not established by CTDEEP.

5. ND means that the compound was not detected above laboratory detection limit.

6. Concentrations in bold type exceed criteria established by CTDEEP.

7. ug/L means micrograms per liter; mg/L means milligrams per liter.

8. B: Compound also detected in one or more associated laboratory blanks.

Chloromethane reported by laboratory as a likely analytical laboratory artifact.

PARAMETER		Surface Water	Residential	Sample ID:				RF-HA207-MV	V		
		Protection Criteria	Volatilization Criteria	Comments: Sample Date:	31-Dec-15	31-Mar-16	29-Jun-16	18-Oct-16	30-Mar-17	27-Mar-18	16-May-19
Volatile Organic Compounds (ι	ug/l):			Method:	8260C	8260C	8260C	8260C	8260C	8260C	8260C
4-Isopropyltoluene	0 /	200	870		ND	ND	ND	ND	ND	ND	ND
Benzene		710	130		ND	ND	ND	ND	ND	ND	ND
Chloroform		14,100	26		ND	ND	ND	ND	ND	ND	ND
Chloromethane		10,000	130		ND	ND	ND	ND	ND	ND	ND
Naphthalene		210	NE		ND	ND	ND	ND	ND	ND	ND
oluene		4,000,000	23,500		ND	ND	ND	ND	ND	ND	ND
emi-Volatile Organic Compou	ınds (ug/l):			Method:	8270D	8270D	8270D	8270D	8270D	8270D	8270D
2-Methyl Naphthalene		62	1000		ND	ND	ND	ND	ND	ND	ND
Acenaphthene		150	30500		ND	ND	ND	1.2	ND	ND	ND
Acenaphthylene		0.3	NE		ND	ND	ND	ND	ND	ND	ND
Anthracene		1,100,000	NE		ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene		0.3	NE		0.15	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene		0.3	NE		0.14	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene		0.3	NE		ND	ND	ND	ND	ND	ND	ND
luoranthene		3,700	NE		ND	ND	ND	ND	ND	ND	ND
luorene		140,000	NE		ND	ND	ND	2.3	ND	ND	ND
ndeno[1,2,3-cd]pyrene		0.54	NE		ND	ND	ND	ND	ND	ND	ND
Japhthalene		210	NE		ND	ND	ND	ND	ND	ND	ND
Phenanthrene		14	NE		0.17	ND	0.35	3.0	0.47	ND	ND
			NE		ND	ND	ND	ND	ND	ND	ND
Pyrene		110,000									
				Method:	505	505	505	505	505	505	505
Chlorinated Pesticides (ug/l):											
				Method:	8082	8082	8082	8082	8082	8082	8082
Polychlorinated Biphenyls (ug/	I):	0.5	NE								
Fotal Petroleum Hydrocarbons	(ma/l):	0.25	NE	Method:	<b>СТ ЕТРН</b> ND	<b>СТ ЕТРН</b> ND	<b>СТ ЕТРН</b> ND	<b>СТ ЕТРН</b> 0.14	<b>СТ ЕТРН</b> ND	<b>СТ ЕТРН</b> ND	<b>CT ETPH</b> ND
-											
Total Metals (mg/l):	Method				200.7/7470A	200.7/245.2	200.7/245.2	200.7/245.2		200.7/245.2	200.7/245.
Arsenic	200.8	0.004	NE		ND	0.0073	0.0081	0.0097	ND	ND	ND
Barium	200.8	2.2	NE								
Copper	200.8	0.048	NE		ND	ND	ND	ND	ND	ND	ND
ead	200.8	0.013	NE		0.013	ND	ND	ND	ND	ND	ND
Mercury	7470A / 245.2	0.0004	NE		ND	ND	ND	ND	ND	ND	ND
Nickel	200.8	0.88	NE		ND	ND	ND	ND	ND	ND	ND
Potassium	200.8	NE	NE								
Selenium	200.8	0.05	NE		ND	ND	ND	ND	ND	ND	ND
Sodium	200.8	NE	NE								
「hallium	200.8	0.063	NE		ND	ND	ND	ND	ND	ND	ND
Zinc	200.8	0.123	NE		0.085	0.095	0.07	0.025	0.15	0.11	ND
otal Cyanide (mg/l):	335.4	NE	NE								
Other Analyses (mg/l)											
Alkalinity (CaCO <sub>3</sub> )	310.1										
mmonia as Nitrogen	350.3										
8. O. D./ 5 Day	405.1										
Chloride	300.0										
luoride	300.0										
ron (dissolved)	200.8	NE	NE								
/langanese (dissolved)	200.8	NE	NE								
litrate as Nitrogen	300.0										
эн	150.1										
Sulfate	300.0										
Total Dissolved Solids	160.1										
				Ĩ							
Fotal Suspended Solids	160.2										

Sampling methodologies changed to GAA standards as of July 2004 sampling round.
 This table includes only those compounds detected.
 RSR criteria means Remedial Standard Regulation criteria established by the Connecticut Department of Environmental Protection (CTDEEP).

4. NE means numeric RSR criteria not established by CTDEEP.

5. ND means that the compound was not detected above laboratory detection limit.
 6. Concentrations in bold type exceed criteria established by CTDEEP.

7. ug/L means micrograms per liter; mg/L means milligrams per liter.

8. B: Compound also detected in one or more associated laboratory blanks.

Chloromethane reported by laboratory as a likely analytical laboratory artifact.

Haley & Aldrich, Inc.

PARAMETER		Surface Water Protection	Residential Volatilization	Sample ID: Comments:					RF-HA301-MV	v					RF-	402-MW	
		Criteria	Criteria	Sample Date:	31-Dec-15	31-Mar-16	28-Jun-16	19-Oct-16	29-Mar-17	27-Mar-18	17-May-19	8-May-20	24-Jun-21	8-Apr-22	14-Jun-22	23-Sep-22	15-Dec-22
Volatile Organic Compounds (ι	Ja/I):			Method:	8260C	8260C			8260C								
4-Isopropyltoluene	0,	200	870		ND												
Benzene		710	130		ND												
Chloroform		14,100	26		ND												
Chloromethane		10,000	130		ND												
Naphthalene		210	NE		ND												
Toluene		4,000,000	23,500		ND												
Semi-Volatile Organic Compou	nds (ug/l):			Method:	8270D	8270D	8270D	8270D	8270D								
2-Methyl Naphthalene		62	1000		ND				•								
Acenaphthene		150	30500		ND												
Acenaphthylene		0.3	NE		ND												
Anthracene		1,100,000	NE		ND												
Benzo[a]anthracene		0.3	NE		ND												
Benzo[b]fluoranthene		0.3	NE	1	ND												
Benzo[k]fluoranthene		0.3	NE	1	ND												
Fluoranthene		3,700	NE	1	ND												
Fluorene		140,000	NE	1	ND												
Indeno[1,2,3-cd]pyrene		0.54	NE	1	ND												
Naphthalene		210	NE	1	ND												
Phenanthrene		14	NE		ND												
Pyrene		110,000	NE		ND												
				Method:	505	505	505	505	505	505	505	505	505	505	505	505	505
Chlorinated Pesticides (ug/l):																	
				Method:	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082
Polychlorinated Biphenyls (ug/	I):	0.5	NE														
				Method:	СТ ЕТРН	CT ETPH	CT ETPH	CT ETPH	CT ETPH	СТ ЕТРН	CT ETPH	CT ETPH	CT ETPH	СТ ЕТРН	CT ETPH	CT ETPH	CT ETPH
Total Petroleum Hydrocarbons	(mg/l):	0.25	NE		ND												
Total Metals (mg/l):	Method				200.7/7470A	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2		200.7/245.2	200.7/245.2	
Arsenic	200.8	0.004	NE		ND			ND	ND	ND	ND						
Barium	200.8	2.2	NE														
Copper	200.8	0.048	NE		ND			ND	ND	ND	ND						
Lead	200.8	0.013	NE		ND			ND	ND	ND	ND						
Mercury	7470A / 245.2	0.0004	NE		ND			ND	ND	ND	ND						
Nickel		0.88	NE			ND				ND							
	200.8				ND	ND	ND	ND	ND		ND						
Potassium	200.8	NE	NE														
Selenium	200.8	0.05	NE		ND												
Sodium	200.8	NE	NE														
Thallium	200.8	0.063	NE		ND												
Zinc	200.8	0.123	NE		ND	ND	ND	ND	ND	ND	0.26	0.2	0.1	ND	ND	ND	ND
Total Cyanide (mg/l):	335.4	NE	NE														
Other Analyses (mg/l)																	
Alkalinity (CaCO <sub>3</sub> )	310.1																
Ammonia as Nitrogen	350.3																
B. O. D./ 5 Day	405.1			1													
Chloride	300.0			1													
Fluoride	300.0																
Iron (dissolved)	200.8	NE	NE	1													
				1													
Manganese (dissolved)	200.8	NE	NE	1													
Nitrate as Nitrogen	300.0			1													
рН	150.1			1													
Sulfate	300.0			1													
Total Dissolved Solids	160.1			1													
Total Suspended Solids	160.2																
			1	1	1									1			

NOTES:

1. Sampling methodologies changed to GAA standards as of July 2004 sampling round.

This table includes only those compounds detected.
 RSR criteria means Remedial Standard Regulation criteria established by the Connecticut Department of Environmental Protection (CTDEEP).

4. NE means numeric RSR criteria not established by CTDEEP.

5. ND means that the compound was not detected above laboratory detection limit.

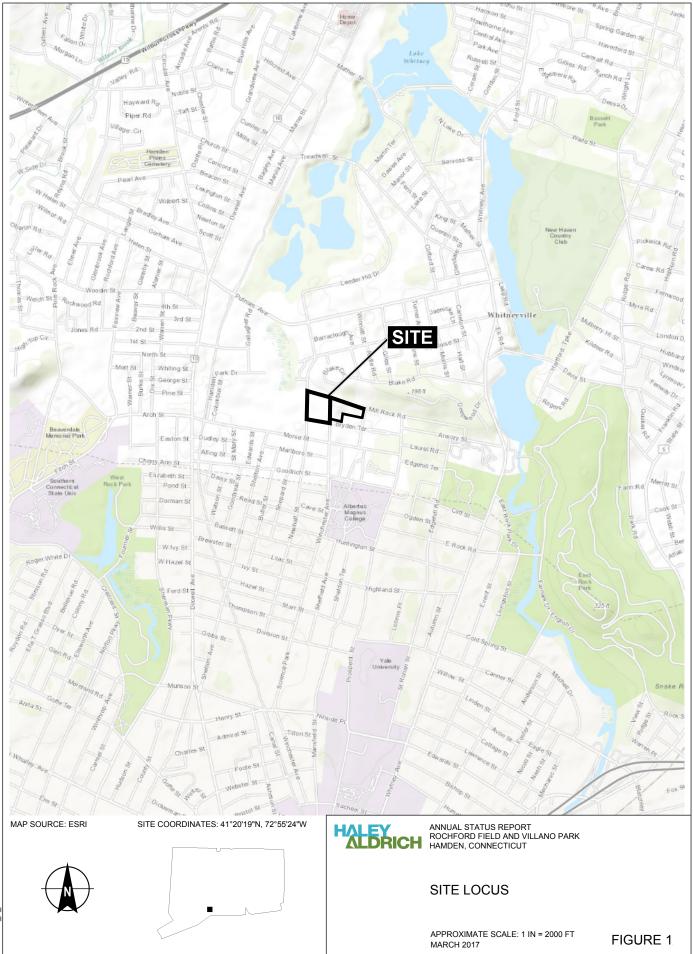
6. Concentrations in bold type exceed criteria established by CTDEEP.

7. ug/L means micrograms per liter; mg/L means milligrams per liter.

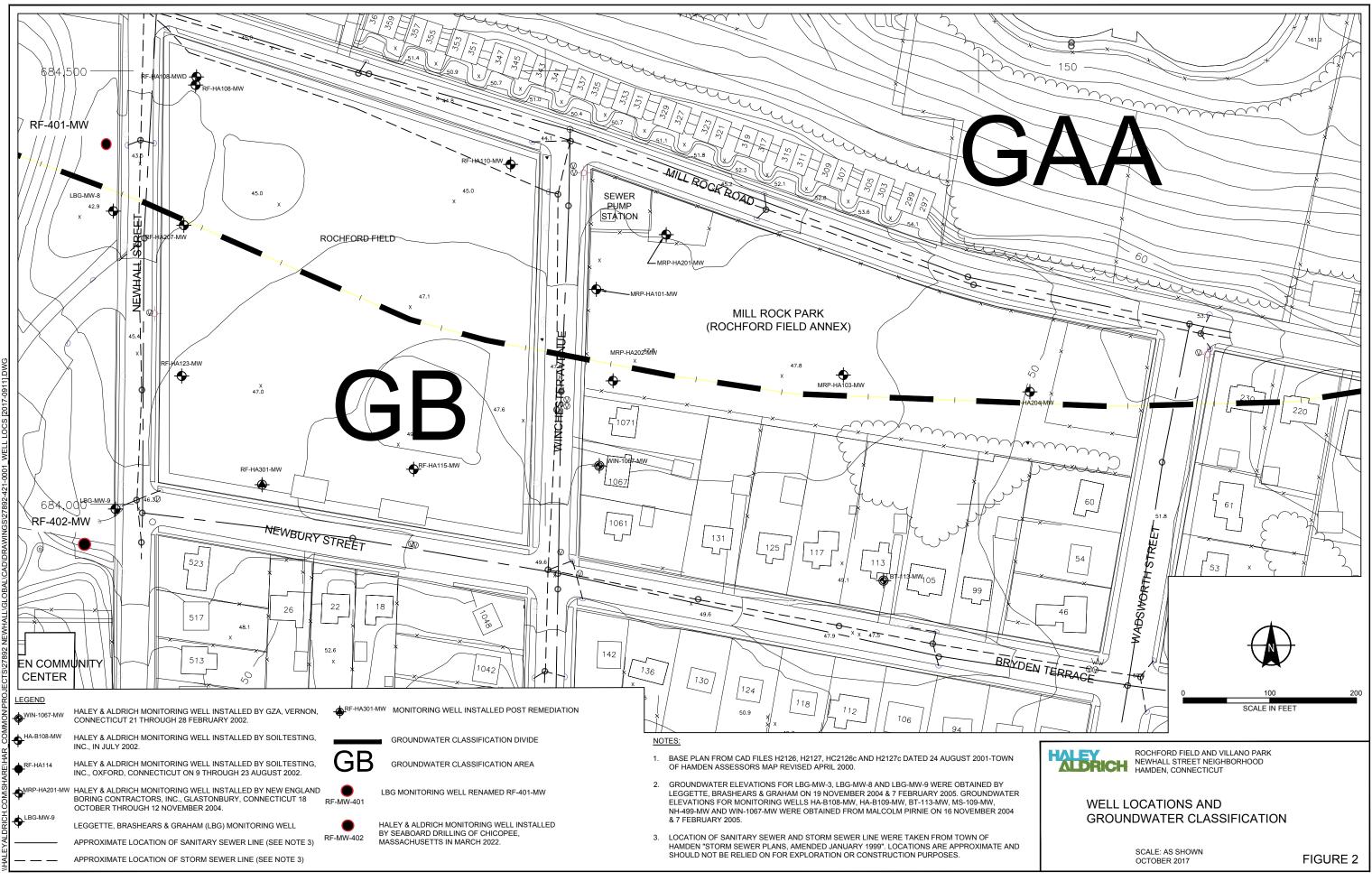
8. B: Compound also detected in one or more associated laboratory blanks.

Chloromethane reported by laboratory as a likely analytical laboratory artifact.

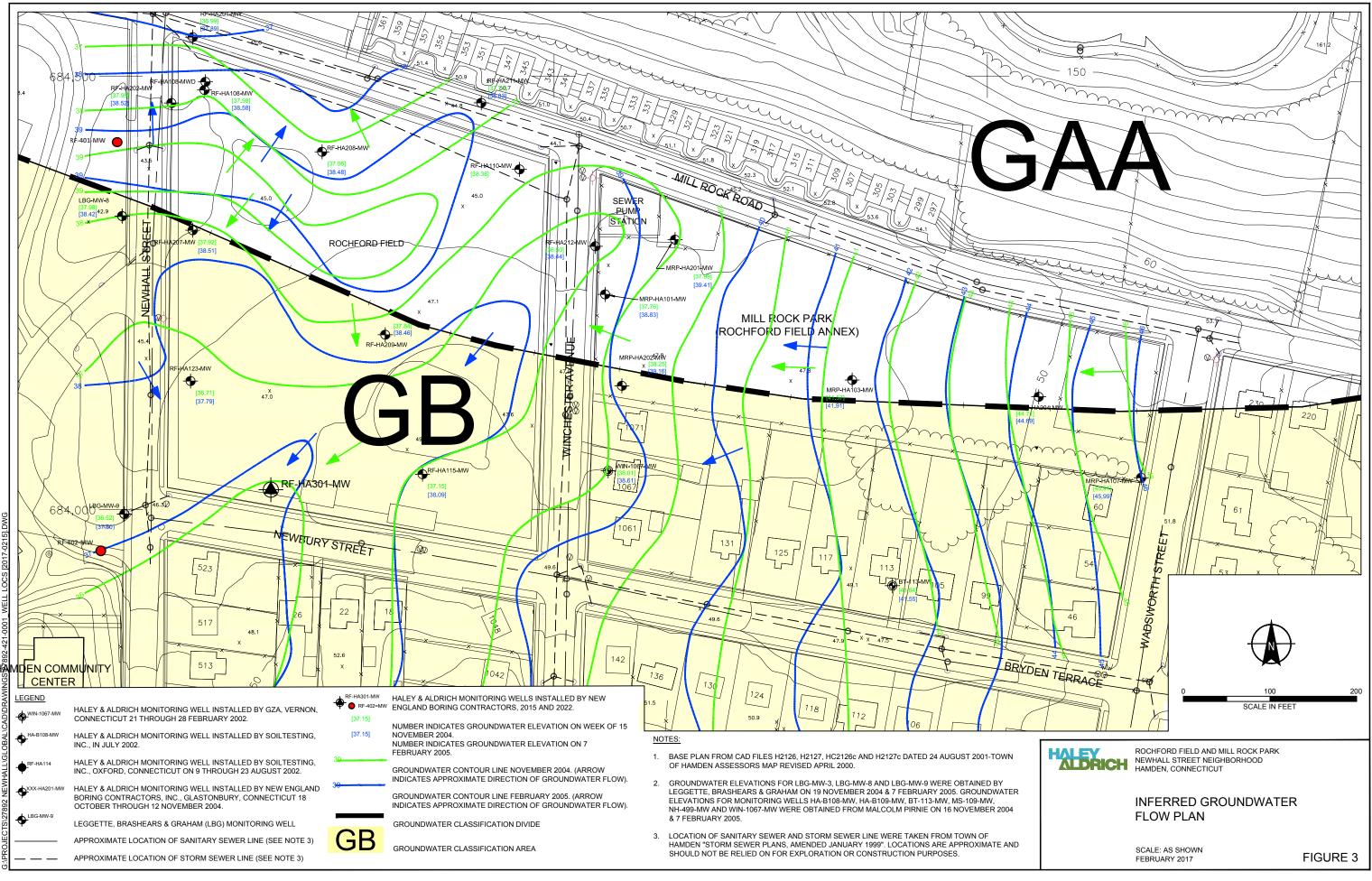
Haley & Aldrich, Inc.



27892-428\_1\_LOCUS.PDF



GENOVESI, RICHARD Printed: 10/16/2017 3:44 PM Layout: FIGURE 2-11X17





Tel: (203) 377-9984 Fax: (203) 377-9952 e-mail: cet1@cetlabs.com

Client: Ms. Debbie Motycka-Downie Haley & Aldrich 100 Corporate Place, Suite 105 Rocky Hill, CT 06067-1803

# Analytical Report CET# 2020307

Report Date:February 17, 2022 Project: 27892-430 Project Number: Rochford Field, Hamden

Connecticut Laboratory Certificate: PH 0116 Massachusetts Laboratory Certificate: M-CT903 Rhode Island Laboratory Certificate: 199



New York NELAP Accreditation: 11982 Pennsylvania Laboratory Certificate: 68-02927

#### SAMPLE SUMMARY

The sample(s) were received at 5.0°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
MW-1	2020307-01	Water	2/14/2022 12:45	02/14/2022

#### Analyte: Mercury [EPA 245.2]

#### Analyst: EAS

#### Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2020307-01	MW-1	ND	0.00020	mg/L	1	B2B1510	02/15/2022	02/15/2022 14:57	

#### Analyte: Total Zinc [EPA 200.7]

#### Analyst: SS

#### Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2020307-01	MW-1	0.037	0.020	mg/L	1	B2B1601	02/16/2022	02/16/2022 16:59	

#### Analyte: Total Lead [EPA 200.7]

## Analyst: SS

### Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2020307-01	MW-1	ND	0.013	mg/L	1	B2B1601	02/16/2022	02/16/2022 16:59	

#### Analyte: Total Copper [EPA 200.7]

#### Analyst: SS

#### Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
 2020307-01	MW-1	ND	0.040	mg/L	1	B2B1601	02/16/2022	02/16/2022 16:59	

#### Analyte: Total Arsenic [EPA 200.7]

#### Analyst: SS

#### Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2020307-01	MW-1	ND	0.0040	mg/L	1	B2B1601	02/16/2022	02/16/2022 16:59	

#### **QUALITY CONTROL SECTION**

#### Batch B2B1510 - EPA 245.2

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B2B1510-BLK1)					Prepared: 2/	15/2022 Analy	zed: 2/15/202	22	
Mercury	ND	0.00020							
LCS (B2B1510-BS1)					Prepared: 2/	15/2022 Analy	zed: 2/15/202	22	
Mercury	0.00512	0.00020	0.005		102	85 - 115			

CET #: 2020307

Lead

Zinc

Lead

Zinc

Project: 27892-430

Project Number: Rochford Field, Hamden

#### Result RL Spike Source % Rec RPD % Rec RPD Analyte (mg/L) (mg/L) Result Limits Limit Notes Level Blank (B2B1601-BLK1) Prepared: 2/16/2022 Analyzed: 2/16/2022 ND 0.013 ND Arsenic 0.0040 Copper ND 0.040 ND 0.020 LCS (B2B1601-BS1) Prepared: 2/16/2022 Analyzed: 2/16/2022 0.206 0.013 0.200 103 85 - 115 0.205 0.0040 0.200 102 85 - 115 Arsenic Copper 0.206 0.040 0.200 103 85 - 115

0.200

107

85 - 115

0.214

0.020

All questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

Dania Litta

David Ditta Laboratory Director This technical report was reviewed by Timothy Fusco

to a. quo

Project Manager

This report shall not be reproduced except in full, without the written approval of the laboratory

Report Comments:

Sample Result Flags:

- E- The result is estimated, above the calibration range.
- H- The surrogate recovery is above the control limits.
- L- The surrogate recovery is below the control limits.
- B- The compound was detected in the laboratory blank.
- P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
- D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
- +- The Surrogate was diluted out.
- \*C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
- \*C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
- \*F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
- \*F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
- \*I- Analyte exceeds method limits from second source standard in Initial Calibration Verification (ICV). No directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

For Percent Solids, if any of the following prep methods (3050B, 3540C, 3545A, 3550C, 5035 and 9013A) were used for samples pertaining to this report, the percent solids procedure is within that prep method.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at or above the specified reporting limit

Reporting Limit (RL) is the limit of detection for an analyte after any adjustment made for dilution or percent moisture. All analyses were performed in house unless a Reference Laboratory is listed. Samples will be disposed of 30 days after the report date. 80 Lupes Drive Stratford, CT 06615



Tel: (203) 377-9984 Fax: (203) 377-9952 email: cet1@cetlabs.com

#### Quality Control Definitions and Abbreviations

Internal Standard (IS)	An Analyte added to each sample or sample extract. An internal standard is used to monitor retention
	time, calculate relative response, and quantify analytes of interest.
Surrogate Recovery	The % recovery for non-target organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period.
ND	Not detected at or above the specified reporting limit.
RL	RL is the limit of detection for an analyte after any adjustment made for dilution or percent moisture.
Dilution	Multiplier added to detection levels (MDL) and/or sample results due to interferences and/or high
	concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Result	Amount of analyte found in a sample.
Spike Level	Amount of analyte added to a sample
Matrix Spike Result	Amount of analyte found including amount that was spiked.
Matrix Spike Dup	Amount of analyte found in duplicate spikes including amount that was spike.
Matrix Spike % Recovery	% Recovery of spiked amount in sample.
Matrix Spike Dup % Recovery	% Recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between Matrix Spike and Matrix Spike Duplicate.
Blank	Method Blank that has been taken through all steps of the analysis.
LCS % Recovery	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Recovery Limits	A range within which specified measurements results must fall to be compliant.
CC	Calibration Verification

Flags:

- H- Recovery is above the control limits
- L- Recovery is below the control limits
- B- Compound detected in the Blank
- P- RPD of dual column results exceeds 40%
- #- Sample result too high for accurate spike recovery.



Connecticut Laboratory Certification PH0116 Massachussets Laboratory Certification M-CT903 Pennsylvania NELAP Accreditation 68-02927 New York NELAP Accreditation 11982 Rhode Island Certification 199



# REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name:	Complete Environmental Testing, Inc.	Client: H	aley & Aldri	ch
Project Location:	27892-430	Project N	umber:	Rochford Field, Hamden
Laboratory Sample I	D(s):	Sample D	ate(s):	
2020307-01		02/14/202	2	
List RCP Methods Us	ed:	<i>CET</i> #:	2020307	

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents?	¥es ☐ No
1A	Were the method specified preservation and holding time requirements met?	Yes No
1B	VPH and EPH Methods only: Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	Yes No
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes No
3	Were samples received at an appropriate temperature (< 6 degrees C.)?	Yes No
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	Yes No
5a	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes 🖌 No
5b	b) Were these reporting limits met?	Yes No
6	For each analytical method referenced in this laboratory report package, were results reported for all consituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes 🖌 No
7	Are project specific matrix spikes and laboratory duplicates included with this data set?	Yes 🖌 No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information

must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."

This form may not be altered and all questions must be answered.

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

Authorized Signature:

re: List

Position: Laboratory Director

Printed Name: David Ditta

Date: 02/17/2022

Name of Laboratory: Complete Environmental Testing, Inc.

This certification form is to be used for RCP methods only.

# **RCP Case Narrative**

6- Client requested a subset of the RCP metals list.

7- Project specific QC was not requested by the client.

#### QC Batch/Sequence Report

Batch	Sequence	CET ID	Sample ID	Specific Method	Matrix	<b>Collection Date</b>
B2B1601	S2B1603	2020307-01	MW-1	EPA 200.7	Water	02/14/2022
B2B1510		2020307-01	MW-1	EPA 245.2	Water	02/14/2022

iy apply.		Uch Inotychia Unotychiadownig analogiadich.com		Rochy Hill (	CUI DINO TIME CUI DI NO CUI		Company Name Haley & Albrid	Client / Reporting Information	RELINQUISHED BY: DATE/TIME RECEIVED BY:	2/14 1445 DATE/TIME ARECEIVED BY:	m 1 9 3	E (PPlastic, G-Glass, V	PRESERVATIVE (CI-HCI, N-HNO3, S-H2SO4, Na-NaOH, C=Cool, O-Other)				MW-1 2/H 1245 W	Ite/Time Solid (specify) Same Da Next Day Two Day	Stratford, CT 06615 Fax: (203) 377-9952 service (check one) e-mail: cetservices@cettabs.com w-water e-mail: bottleorders@cettabs.com w-water (check one)	Tel: (203) 377-9984	COMPLETE ENVIRONMENTAL TESTING, INC.		
all issues are resolvo	Temp Upon     Subscription     Subscription     Evidence of Cooling:     N     PAGE     OF	Laboratory Certification Needed (check one)	RSR Reporting Limits (check one)  GA  GB  SWP  Other	Data Report  PDF  EDD - Specify Format Other Other	QA/QC   Std  Site Specific (MS/MSD) *  RCP Pkg *  DQAW *	CET Quote # Collector(s):	Location: Humbry CT Project #: 27892-430	Project: Rich Ray 6 Field Project Information										Std (5-7 Dz 8260 CT 8260 Arc 8260 Ha CT ETPH 8270 CT 8270 PN PCBs Pesticide 8 RCRA 13 Priori 15 CT D Total M SPLP TCLP Dissolve Field Filt Lab to F	List ogens l List As SOX A ss ty Poll EP <b>cha j</b> d ered	Metals Additional Analysis	CET:	Date and Time in Freezer	Volatile Soils Only:

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start on the next business day. All samples picked up by courier service will be considered next business day receipt for TAT purposes.

#### Jacqueline M. Bakos

From: Sent: To: Subject: Motycka Downie, Deb <DMotyckaDownie@haleyaldrich.com> Monday, February 14, 2022 5:08 PM Jacqueline M. Bakos RE: list of metals

Sorry Jacqui, we need:

total metals (arsenic, copper, lead, mercury, zinc).

Thanks Debbie

Deborah L. Motycka Downie, LEP

Senior Technical Specialist Haley & Aldrich, Inc. 100 Corporate Place, Suite 105 Rocky Hill, CT 06067 Cell: 857.488.7477 Phone:860.572.3939 dmotyckadownie@haleyaldrich.com www.haleyaldrich.com

From: Jacqueline M. Bakos <jbakos4@cetlabs.com> Sent: Monday, February 14, 2022 3:51 PM To: Motycka Downie, Deb <DMotyckaDownie@haleyaldrich.com> Subject: list of metals

**CAUTION: External Email** 

Deb, For the attached chain what list of metals are you looking for?? Thank you

Jacqui Bakos Sample Manager Complete Environmental Testing, Inc. Phone: (203) 377-9984 Fax: (203) 377-9952 www.cetlabs.com



This e-mail and any attachments contain CET confidential information that may be proprietary or privileged. If you receive this message in error or are not the intended recipient, you should not retain, distribute, disclose or use any of



Client: Ms. Debbie Motycka-Downie Haley & Aldrich 100 Corporate Place, Suite 105 Rocky Hill, CT 06067-1803

# Analytical Report CET# 2040218

Report Date:April 15, 2022 Project: 27892-433, Rochford Field, Hamden Project Number: 027892-433

Connecticut Laboratory Certificate: PH 0116 Massachusetts Laboratory Certificate: M-CT903 Rhode Island Laboratory Certificate: 199



New York NELAP Accreditation: 11982 Pennsylvania Laboratory Certificate: 68-02927

#### SAMPLE SUMMARY

The sample(s) were received at 3.1°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
RF-401	2040218-01	Water	4/08/2022 9:50	04/08/2022
RF-402	2040218-02	Water	4/08/2022 12:00	04/08/2022

#### Analyte: Mercury [EPA 245.2]

#### Analyst: EAS

#### Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2040218-01	RF-401	ND	0.00020	mg/L	1	B2D1406	04/14/2022	04/14/2022 15:34	
2040218-02	RF-402	ND	0.00020	mg/L	1	B2D1406	04/14/2022	04/14/2022 15:36	

**Client Sample ID RF-401** 

#### Lab ID: 2040218-01

## Total Metals Method: EPA 200.7

#### Analyst: SS

#### Matrix: Water

Analyte	Result (mg/L)	RL (mg/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.013	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:37	
Arsenic	ND	0.0040	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:37	
Copper	ND	0.040	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:37	
Zinc	0.092	0.020	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:37	

# Client Sample ID RF-402 Lab ID: 2040218-02

Total Metals Method: EPA 200.7 Analyst: SS

water	Matrix:	Water
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Analyte	Result (mg/L)	RL (mg/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.013	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:41	
Arsenic	ND	0.0040	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:41	
Copper	ND	0.040	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:41	
Zinc	ND	0.020	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:41	

### **QUALITY CONTROL SECTION**

#### Batch B2D1202 - EPA 200.7

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B2D1202-BLK1)					Prepared: 4	/12/22 Analyzed	1: 4/12/22		
Lead	ND	0.013							
Arsenic	ND	0.0040							
Copper	ND	0.040							
Zinc	ND	0.020							
LCS (B2D1202-BS1)					Prepared: 4	/12/22 Analyzed	1: 4/12/22		
Lead	0.193	0.013	0.200		96.7	85 - 115			
Arsenic	0.200	0.0040	0.200		100	85 - 115			
Copper	0.199	0.040	0.200		99.3	85 - 115			
Zinc	0.195	0.020	0.200		97.5	85 - 115			

# CET # : 2040218 Project: 27892-433, Rochford Field, Hamden

Project Number: 027892-433

#### Batch B2D1406 - EPA 245.2

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B2D1406-BLK1)					Prepared: 4/	14/22 Analyzed	l: 4/14/22		
Mercury	ND	0.00020							
LCS (B2D1406-BS1)					Prepared: 4/	14/22 Analyzed	l: 4/14/22		
Mercury	0.00492	0.00020	0.005		98.4	85 - 115			

All questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

Dania Litta

David Ditta Laboratory Director This technical report was reviewed by Timothy Fusco

to a. Juro

Project Manager

This report shall not be reproduced except in full, without the written approval of the laboratory

Report Comments:

Sample Result Flags:

- E- The result is estimated, above the calibration range.
- H- The surrogate recovery is above the control limits.
- L- The surrogate recovery is below the control limits.
- B- The compound was detected in the laboratory blank.
- P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
- D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
- +- The Surrogate was diluted out.
- \*C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
- \*C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
- \*F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
- \*F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
- \*I- Analyte exceeds method limits from second source standard in Initial Calibration Verification (ICV). No directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

For Percent Solids, if any of the following prep methods (3050B, 3540C, 3545A, 3550C, 5035 and 9013A) were used for samples pertaining to this report, the percent solids procedure is within that prep method.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at or above the specified reporting limit

Reporting Limit (RL) is the limit of detection for an analyte after any adjustment made for dilution or percent moisture. All analyses were performed in house unless a Reference Laboratory is listed. Samples will be disposed of 30 days after the report date. 80 Lupes Drive Stratford, CT 06615



Tel: (203) 377-9984 Fax: (203) 377-9952 email: cet1@cetlabs.com

#### Quality Control Definitions and Abbreviations

Internal Standard (IS)	An Analyte added to each sample or sample extract. An internal standard is used to monitor retention
	time, calculate relative response, and quantify analytes of interest.
Surrogate Recovery	The % recovery for non-target organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period.
ND	Not detected at or above the specified reporting limit.
RL	RL is the limit of detection for an analyte after any adjustment made for dilution or percent moisture.
Dilution	Multiplier added to detection levels (MDL) and/or sample results due to interferences and/or high
	concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Result	Amount of analyte found in a sample.
Spike Level	Amount of analyte added to a sample
Matrix Spike Result	Amount of analyte found including amount that was spiked.
Matrix Spike Dup	Amount of analyte found in duplicate spikes including amount that was spike.
Matrix Spike % Recovery	% Recovery of spiked amount in sample.
Matrix Spike Dup % Recovery	% Recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between Matrix Spike and Matrix Spike Duplicate.
Blank	Method Blank that has been taken through all steps of the analysis.
LCS % Recovery	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Recovery Limits	A range within which specified measurements results must fall to be compliant.
CC	Calibration Verification

Flags:

- H- Recovery is above the control limits
- L- Recovery is below the control limits
- B- Compound detected in the Blank
- P- RPD of dual column results exceeds 40%
- #- Sample result too high for accurate spike recovery.



Connecticut Laboratory Certification PH0116 Massachussets Laboratory Certification M-CT903 Pennsylvania NELAP Accreditation 68-02927 New York NELAP Accreditation 11982 Rhode Island Certification 199



# REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name:	Complete Environmental Testing, Inc.	Client: Ha	aley & Aldri	ch
Project Location:	27892-433, Rochford Field, Hamden	Project Ni	umber:	027892-433
Laboratory Sample II	D(s):	Sample D	ate(s):	
2040218-01 thru 20402	18-02	04/08/2022	2	
List RCP Methods Us	ed:	<i>CET</i> #:	2040218	
,				

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents?	☑ Yes
1A	Were the method specified preservation and holding time requirements met?	Yes No
1B	VPH and EPH Methods only: Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	Yes No
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes No
3	Were samples received at an appropriate temperature (< 6 degrees C.)?	Yes No
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	Yes No
5a	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes 🖌 No
5b	b) Were these reporting limits met?	Yes No
6	For each analytical method referenced in this laboratory report package, were results reported for all consituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes 🖌 No
7	Are project specific matrix spikes and laboratory duplicates included with this data set?	Yes 🖌 No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information

must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."

This form may not be altered and all questions must be answered.

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

Authorized Signature:

re: List

Position: Laboratory Director

Printed Name: David Ditta

Date: 04/14/2022

Name of Laboratory: Complete Environmental Testing, Inc.

This certification form is to be used for RCP methods only.

# **RCP Case Narrative**

6- The client requested a subset of the RCP metals list.

7- Project specific QC was not requested by the client.

#### QC Batch/Sequence Report

Batch	Sequence	CET ID	Sample ID	Specific Method	Matrix	<b>Collection Date</b>
B2D1202	S2D1208	2040218-01	RF-401	EPA 200.7	Water	04/08/2022
B2D1202	S2D1208	2040218-02	RF-402	EPA 200.7	Water	04/08/2022
B2D1406		2040218-01	RF-401	EPA 245.2	Water	04/08/2022
B2D1406		2040218-02	RF-402	EPA 245.2	Water	04/08/2022

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Client: Ms. Debbie Motycka-Downie Haley & Aldrich 100 Corporate Place, Suite 105 Rocky Hill, CT 06067-1803

# Analytical Report CET# 2060389

Report Date:June 20, 2022 Project: 27892-433, Rochford Field, Hamden Project Number: 27892-433

Connecticut Laboratory Certificate: PH 0116 Massachusetts Laboratory Certificate: M-CT903 Rhode Island Laboratory Certificate: 199



New York NELAP Accreditation: 11982 Pennsylvania Laboratory Certificate: 68-02927

#### SAMPLE SUMMARY

The sample(s) were received at 6.0°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
RF-402	2060389-01	Water	6/14/2022 9:10	06/14/2022
RF-401	2060389-02	Water	6/14/2022 10:30	06/14/2022

#### Analyte: Mercury [EPA 245.2]

#### Analyst: EAS

#### Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2060389-01	RF-402	ND	0.00020	mg/L	1	B2F1510	06/15/2022	06/15/2022 15:21	
2060389-02	RF-401	ND	0.00020	mg/L	1	B2F1510	06/15/2022	06/15/2022 15:23	

**Client Sample ID RF-402** 

#### Lab ID: 2060389-01

### Total Metals Method: EPA 200.7

#### Analyst: SS

#### Matrix: Water

Analyte	Result (mg/L)	RL (mg/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.013	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:07	
Arsenic	ND	0.0040	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:07	
Copper	ND	0.040	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:07	
Zinc	ND	0.020	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:07	

## Client Sample ID RF-401 Lab ID: 2060389-02

Total Metals Method: EPA 200.7 Analyst: SS

Analyte	Result (mg/L)	RL (mg/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.013	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:12	
Arsenic	ND	0.0040	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:12	
Copper	ND	0.040	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:12	
Zinc	ND	0.020	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:12	

#### CET # : 2060389 Project: 27892-433, Rochford Field, Hamden Project Number: 27892-433

#### **QUALITY CONTROL SECTION**

#### Batch B2F1508 - EPA 200.7

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B2F1508-BLK1)					Prepared: 6	/15/22 Analyzed	1: 6/15/22		
Lead	ND	0.013							
Arsenic	ND	0.0040							
Copper	ND	0.040							
Zinc	ND	0.020							
LCS (B2F1508-BS1)					Prepared: 6	/15/22 Analyzed	l: 6/15/22		
Lead	0.200	0.013	0.200		100	85 - 115			
Arsenic	0.196	0.0040	0.200		98.0	85 - 115			
Copper	0.195	0.040	0.200		97.3	85 - 115			
Zinc	0.211	0.020	0.200		105	85 - 115			

## CET # : 2060389 Project: 27892-433, Rochford Field, Hamden

Project Number: 27892-433

#### Batch B2F1510 - EPA 245.2

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B2F1510-BLK1)					Prepared: 6/	15/22 Analyzed	l: 6/15/22		
Mercury	ND	0.00020							
LCS (B2F1510-BS1)					Prepared: 6/	15/22 Analyzed	l: 6/15/22		
Mercury	0.00502	0.00020	0.005		100	85 - 115			

All questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

Dania Litta

David Ditta Laboratory Director This technical report was reviewed by Robert Blake

R Blah J

Project Manager

This report shall not be reproduced except in full, without the written approval of the laboratory

Report Comments:

Sample Result Flags:

- E- The result is estimated, above the calibration range.
- H- The surrogate recovery is above the control limits.
- L- The surrogate recovery is below the control limits.
- B- The compound was detected in the laboratory blank.
- P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
- D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
- +- The Surrogate was diluted out.
- \*C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
- \*C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
- \*F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
- \*F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
- \*I- Analyte exceeds method limits from second source standard in Initial Calibration Verification (ICV). No directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

For Percent Solids, if any of the following prep methods (3050B, 3540C, 3545A, 3550C, 5035 and 9013A) were used for samples pertaining to this report, the percent solids procedure is within that prep method.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at or above the specified reporting limit

Reporting Limit (RL) is the limit of detection for an analyte after any adjustment made for dilution or percent moisture. All analyses were performed in house unless a Reference Laboratory is listed. Samples will be disposed of 30 days after the report date. 80 Lupes Drive Stratford, CT 06615



Tel: (203) 377-9984 Fax: (203) 377-9952 email: cet1@cetlabs.com

#### Quality Control Definitions and Abbreviations

Internal Standard (IS)	An Analyte added to each sample or sample extract. An internal standard is used to monitor retention
	time, calculate relative response, and quantify analytes of interest.
Surrogate Recovery	The % recovery for non-target organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period.
ND	Not detected at or above the specified reporting limit.
RL	RL is the limit of detection for an analyte after any adjustment made for dilution or percent moisture.
Dilution	Multiplier added to detection levels (MDL) and/or sample results due to interferences and/or high
	concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Result	Amount of analyte found in a sample.
Spike Level	Amount of analyte added to a sample
Matrix Spike Result	Amount of analyte found including amount that was spiked.
Matrix Spike Dup	Amount of analyte found in duplicate spikes including amount that was spike.
Matrix Spike % Recovery	% Recovery of spiked amount in sample.
Matrix Spike Dup % Recovery	% Recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between Matrix Spike and Matrix Spike Duplicate.
Blank	Method Blank that has been taken through all steps of the analysis.
LCS % Recovery	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Recovery Limits	A range within which specified measurements results must fall to be compliant.
CC	Calibration Verification

Flags:

- H- Recovery is above the control limits
- L- Recovery is below the control limits
- B- Compound detected in the Blank
- P- RPD of dual column results exceeds 40%
- #- Sample result too high for accurate spike recovery.



Connecticut Laboratory Certification PH0116 Massachussets Laboratory Certification M-CT903 Pennsylvania NELAP Accreditation 68-02927 New York NELAP Accreditation 11982 Rhode Island Certification 199



## REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name:	Complete Environmental Testing, Inc.	Client: Haley & Aldı	rich				
Project Location:	27892-433, Rochford Field, Hamden	Project Number: 27892-4					
Laboratory Sample I	D(s):	Sample Date(s):					
2060389-01 thru 20603	89-02	06/14/2022					
List RCP Methods Us	sed:	<b>CET #:</b> 2060389					
,							

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents?	Yes No
1A	Were the method specified preservation and holding time requirements met?	Yes No
1B	VPH and EPH Methods only: Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	Yes No
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes No
3	Were samples received at an appropriate temperature (< 6 degrees C.)?	Yes No
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	Yes No
5a	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes 🖌 No
5b	b) Were these reporting limits met?	Yes No
6	For each analytical method referenced in this laboratory report package, were results reported for all consituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes 🖌 No
7	Are project specific matrix spikes and laboratory duplicates included with this data set?	Yes 🖌 No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information

must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."

This form may not be altered and all questions must be answered.

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

Authorized Signature:

re: List

Position: Laboratory Director

Printed Name: David Ditta

Date: 06/20/2022

Name of Laboratory: <u>Complete Environmental Testing, Inc.</u>

This certification form is to be used for RCP methods only.

## **RCP Case Narrative**

6- The client requested a subset of the RCP metals list.

7- Project specific QC was not requested by the client.

#### QC Batch/Sequence Report

Batch	Sequence	CET ID	Sample ID	Specific Method	Matrix	<b>Collection Date</b>
B2F1508	S2F1504	2060389-01	RF-402	EPA 200.7	Water	06/14/2022
B2F1508	S2F1504	2060389-02	RF-401	EPA 200.7	Water	06/14/2022
B2F1510		2060389-01	RF-402	EPA 245.2	Water	06/14/2022
B2F1510		2060389-02	RF-401	EPA 245.2	Water	06/14/2022

Validie Solis Only:         Date and Time in Freezor         Only:         Date and Time in Freezor         Clion:         Date and Time in Freezor         Clion:         Clion: <tr< th=""><th>al charge may apply.</th><th>939</th><th>Deb Materia Dawnie Amotyckadownie Chartyaldrich.co</th><th></th><th>Sock - Han CT</th><th><math display="block">\frac{1}{Citv}</math></th><th></th><th>Haley &amp; Aldrich</th><th><b>&gt;</b></th><th>Client / Reporting Information</th><th>HEELINGUISHED BY DATE/TIME REGEIVED BY:</th><th>6/14/12 1130</th><th>(M=MeOH B=Bisulfate W=Water</th><th>1</th><th><math>+ \circ</math></th><th></th><th></th><th></th><th>-</th><th>RF-401 6/14/17 1030 W</th><th>N 10160 22/1/1/9 201-201-201-2</th><th>(include Units for any sample depths provided) Collection wipe end Day (include Units for any sample depths provided) Date/Time (specify) S to Day</th><th>e-mail: cetservices@cettabs.com w=Water e-mail: bottleorders@cettabs.com w=Drinking *</th><th>80 Lupes Drive Tel: (203) 377-9984 (Animuta Animation Turnaround Time Stratford, CT 06615 Fax: (203) 377-9952 (Second Check one)</th><th>Motiv</th><th>COMPLETE ENVIRONMENTAL TESTING INC.</th><th></th></tr<>	al charge may apply.	939	Deb Materia Dawnie Amotyckadownie Chartyaldrich.co		Sock - Han CT	$\frac{1}{Citv}$		Haley & Aldrich	<b>&gt;</b>	Client / Reporting Information	HEELINGUISHED BY DATE/TIME REGEIVED BY:	6/14/12 1130	(M=MeOH B=Bisulfate W=Water	1	$+ \circ$				-	RF-401 6/14/17 1030 W	N 10160 22/1/1/9 201-201-201-2	(include Units for any sample depths provided) Collection wipe end Day (include Units for any sample depths provided) Date/Time (specify) S to Day	e-mail: cetservices@cettabs.com w=Water e-mail: bottleorders@cettabs.com w=Drinking *	80 Lupes Drive Tel: (203) 377-9984 (Animuta Animation Turnaround Time Stratford, CT 06615 Fax: (203) 377-9952 (Second Check one)	Motiv	COMPLETE ENVIRONMENTAL TESTING INC.	
	are resolved. TAT for samples received after 3 p.m. will	Temp Upon C Evidence of N PAGE	Taboratory Certification Needed (check one)	RSR Reporting Limits (check one)  GA  GB  SWP	PDF EDD - Specify Format	Std Site Specific (MS/MSD) *  RCP Pkg *	# Collector(s): Frq.n		Project # のファタイン	Project:												Three Da Std (5-7 Da 8260 CT 8260 Arc 8260 Ha CT ETPI 8270 CT 8270 PN PCBs Pesticide 8 RCRA 13 Priori 15 CT D Total SPLP TCLP Dissolve Field Filt Lab to Fi	ays) List Domatics logens H List As SOX SS ty Poll EP d lered lter			CHAIN OF CUSIODY	Volatile Soils Only:

#### **Jacqueline M. Bakos**

From: Sent: To: Subject: Motycka Downie, Deb <DMotyckaDownie@haleyaldrich.com> Tuesday, June 14, 2022 3:40 PM Jacqueline M. Bakos RE: test??

Jacqui Sorry – new field people. Total metals (mercury, zinc, lead, copper, arsenic) – same for both wells.

Do you need me to annotate the COC?

He also turned in samples from another project - did he include metals we want on that one?

Thanks!

Deborah L. Motycka Downie, LEP Senior Technical Specialist Haley & Aldrich, Inc. 100 Corporate Place, Suite 105 Rocky Hill, CT 06067 Cell: 857.488.7477 Phone:860.572.3939 dmotyckadownie@haleyaldrich.com www.haleyaldrich.com

From: Jacqueline M. Bakos <jbakos4@cetlabs.com> Sent: Tuesday, June 14, 2022 3:28 PM To: Motycka Downie, Deb <DMotyckaDownie@haleyaldrich.com> Subject: test??

and press game in a service

CAUTION: External Email

Debbie, What list of metals??

Jacqui Bakos Sample Manager Complete Environmental Testing, Inc. Phone: (203) 377-9984 Fax: (203) 377-9952





Client: Ms. Debbie Motycka-Downie Haley & Aldrich 100 Corporate Place, Suite 105 Rocky Hill, CT 06067-1803

## Analytical Report CET# 2090690

Report Date:September 30, 2022 Project: 27892-433, Rochford Field, Hamden Project Number: 27892-433

Connecticut Laboratory Certificate: PH 0116 Massachusetts Laboratory Certificate: M-CT903 Rhode Island Laboratory Certificate: 199



New York NELAP Accreditation: 11982 Pennsylvania Laboratory Certificate: 68-02927

#### SAMPLE SUMMARY

The sample(s) were received at 5.1°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
RF-401	2090690-01	Water	9/23/2022 11:40	09/23/2022
RF-402	2090690-02	Water	9/23/2022 13:00	09/23/2022

#### Analyte: Mercury [EPA 245.2]

#### Analyst: EAS

#### Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2090690-01	RF-401	ND	0.00020	mg/L	1	B2I2817	09/28/2022	09/28/2022 13:32	
2090690-02	RF-402	ND	0.00020	mg/L	1	B2I2817	09/28/2022	09/28/2022 13:40	

**Client Sample ID RF-401** 

Lab ID: 2090690-01

## Total Metals Method: EPA 200.7

#### Analyst: SS

#### Matrix: Water

Analyte	Result (mg/L)	RL (mg/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.013	1	EPA 200.7	B2I2841	09/28/2022	09/29/2022 15:57	
Arsenic	ND	0.0040	1	EPA 200.7	B2I2841	09/28/2022	09/29/2022 15:57	
Copper	ND	0.040	1	EPA 200.7	B2I2841	09/28/2022	09/29/2022 15:57	
Zinc	0.071	0.020	1	EPA 200.7	B2I2841	09/28/2022	09/29/2022 15:57	

## Client Sample ID RF-402 Lab ID: 2090690-02

Total Metals Method: EPA 200.7 Analyst: SS

#### Matrix: Water

Analyte	Result (mg/L)	RL (mg/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.013	1	EPA 200.7	B2I2841	09/28/2022	09/29/2022 16:09	
Arsenic	ND	0.0040	1	EPA 200.7	B2I2841	09/28/2022	09/29/2022 16:09	
Copper	ND	0.040	1	EPA 200.7	B2I2841	09/28/2022	09/29/2022 16:09	
Zinc	ND	0.020	1	EPA 200.7	B2I2841	09/28/2022	09/29/2022 16:09	

#### **QUALITY CONTROL SECTION**

#### Batch B2I2817 - EPA 245.2

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B2I2817-BLK1)					Prepared: 9/	28/22 Analyzed	1: 9/28/22		
Mercury	ND	0.00020							
LCS (B2I2817-BS1)					Prepared: 9/	28/22 Analyzed	1: 9/28/22		
Mercury	0.00516	0.00020	0.005		103	85 - 115			
Duplicate (B2I2817-DUP1)		Source: 2090	590-01		Prepared: 9/	28/22 Analyzed	1: 9/28/22		
Mercury	ND	0.00020		ND				20	
Matrix Spike (B2I2817-MS1)		Source: 2090	590-01		Prepared: 9/	28/22 Analyzed	1: 9/28/22		
Mercury	0.00502	0.00020	0.005	ND	100	70 - 130			
Matrix Spike Dup (B2I2817-MSD1)		Source: 2090	590-01		Prepared: 9/	28/22 Analyzed	1: 9/28/22		
Mercury	0.00504	0.00020	0.005	ND	101	70 - 130	0.398	20	

#### CET # : 2090690

Project: 27892-433, Rochford Field, Hamden

Project Number: 27892-433

#### Batch B2I2841 - EPA 200.7

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B2I2841-BLK1)					Prepared: 9	/28/22 Analyzed	1: 9/29/22		
Lead	ND	0.013							
Arsenic	ND	0.0040							
Copper	ND	0.040							
Zinc	ND	0.020							
LCS (B2I2841-BS1)					Prepared: 9	/28/22 Analyzed	1: 9/29/22		
Lead	0.199	0.013	0.200		99.3	85 - 115			
Arsenic	0.197	0.0040	0.200		98.6	85 - 115			
Copper	0.196	0.040	0.200		98.2	85 - 115			
Zinc	0.198	0.020	0.200		99.0	85 - 115			

All questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

Dania Litta

David Ditta Laboratory Director This technical report was reviewed by Timothy Fusco

to a. Juro

Project Manager

This report shall not be reproduced except in full, without the written approval of the laboratory

Report Comments:

Sample Result Flags:

- E- The result is estimated, above the calibration range.
- H- The surrogate recovery is above the control limits.
- L- The surrogate recovery is below the control limits.
- B- The compound was detected in the laboratory blank.
- P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
- D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
- +- The Surrogate was diluted out.
- \*C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
- \*C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
- \*F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
- \*F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
- \*I- Analyte exceeds method limits from second source standard in Initial Calibration Verification (ICV). No directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

For Percent Solids, if any of the following prep methods (3050B, 3540C, 3545A, 3550C, 5035 and 9013A) were used for samples pertaining to this report, the percent solids procedure is within that prep method.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at or above the specified reporting limit

Reporting Limit (RL) is the limit of detection for an analyte after any adjustment made for dilution or percent moisture. All analyses were performed in house unless a Reference Laboratory is listed. Samples will be disposed of 30 days after the report date. 80 Lupes Drive Stratford, CT 06615



Tel: (203) 377-9984 Fax: (203) 377-9952 email: cet1@cetlabs.com

#### Quality Control Definitions and Abbreviations

Internal Standard (IS)	An Analyte added to each sample or sample extract. An internal standard is used to monitor retention
	time, calculate relative response, and quantify analytes of interest.
Surrogate Recovery	The % recovery for non-target organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period.
ND	Not detected at or above the specified reporting limit.
RL	RL is the limit of detection for an analyte after any adjustment made for dilution or percent moisture.
Dilution	Multiplier added to detection levels (MDL) and/or sample results due to interferences and/or high
	concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Result	Amount of analyte found in a sample.
Spike Level	Amount of analyte added to a sample
Matrix Spike Result	Amount of analyte found including amount that was spiked.
Matrix Spike Dup	Amount of analyte found in duplicate spikes including amount that was spike.
Matrix Spike % Recovery	% Recovery of spiked amount in sample.
Matrix Spike Dup % Recovery	% Recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between Matrix Spike and Matrix Spike Duplicate.
Blank	Method Blank that has been taken through all steps of the analysis.
LCS % Recovery	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Recovery Limits	A range within which specified measurements results must fall to be compliant.
CC	Calibration Verification

Flags:

- H- Recovery is above the control limits
- L- Recovery is below the control limits
- B- Compound detected in the Blank
- P- RPD of dual column results exceeds 40%
- #- Sample result too high for accurate spike recovery.



Connecticut Laboratory Certification PH0116 Massachussets Laboratory Certification M-CT903 Pennsylvania NELAP Accreditation 68-02927 New York NELAP Accreditation 11982 Rhode Island Certification 199



## REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name:	Complete Environmental Testing, Inc.	Client: Haley & A	ldrich
Project Location:	27892-433, Rochford Field, Hamden	Project Number:	27892-433
Laboratory Sample I	D(s):	Sample Date(s):	
2090690-01 thru 20906	90-02	09/23/2022	
List RCP Methods Us	ed:	<b>CET #:</b> 209069	90
,			

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents?	yes ☐ No
1A	Were the method specified preservation and holding time requirements met?	Yes No
1B	VPH and EPH Methods only: Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	Yes No ✓ N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes No
3	Were samples received at an appropriate temperature (< 6 degrees C.)?	Yes No
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	Yes No
5a	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes 🔽 No
5b	b) Were these reporting limits met?	Yes No
6	For each analytical method referenced in this laboratory report package, were results reported for all consituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes 🖌 No
7	Are project specific matrix spikes and laboratory duplicates included with this data set?	Yes No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information

must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."

This form may not be altered and all questions must be answered.

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

Authorized Signature:

re: Lift

Position: Laboratory Director

Printed Name: David Ditta

Date: 09/30/2022

Name of Laboratory: <u>Complete Environmental Testing, Inc.</u>

This certification form is to be used for RCP methods only.

## **RCP Case Narrative**

6- Client requested a subset of the RCP metals list.

#### QC Batch/Sequence Report

Batch	Sequence	CET ID	Sample ID	Specific Method	Matrix	<b>Collection Date</b>
B2I2841	S2I2901	2090690-01	RF-401	EPA 200.7	Water	09/23/2022
B2I2841	S2I2901	2090690-02	RF-402	EPA 200.7	Water	09/23/2022
B2I2817		2090690-01	RF-401	EPA 245.2	Water	09/23/2022
B2I2817		2090690-02	RF-402	EPA 245.2	Water	09/23/2022

Fax #       Temp Upon 5.1.         Fax #       Temp Upon 5.1.         Fax #       Temp Upon 5.1.         * Additional charge may apply. ** TAT begins when the samples are received at the Lab and all issues a	notucka	Rochy 14:11 CT 06067	the Plane	Address ()	Company Name Hinky & Aldrich	Client / Reporting Information	RELINQUISHED BY: DATE/TIME RECEIVED BY:	0423/22 (405) RECEIVED BY:	Soil VOCs Only (M=MeOH B=Solium W=Water F= Value Empty E=Encore)	CONTAINER TYPE (P-Plastic, G-Glass, V-Vial, O-Other)	PRESERVATIVE (CI-HCI, N-HNO3, S-H2SO4, Na-NaOH, C=Cool, O=Other)				RE-402 "123/22 1300 W	RF-401 4/22/22 140 w	Same Da Next Day Two Day Three Da	Stratford, CT 06615 Fax: (203) 377-9952 Stratford, CT 06615 e-mail: cetservices@cetlabs.com water e-mail: bottleorders@cetlabs.com water to the strate to th	Tel: (203) 377-9984	COMPLETE ENVIRONMENTAL TESTING, INC.			
C Evidence of N PAGE OF OF	RSR Reporting Limits (check one)       GA       GB       SWP       Other         []A       Laboratory Certification Needed (check one)       CT       NY       RI       MA       PA	Data Report  PDF  EDD - Specify Format Other	QA/QC   Std  Site Specific (MS/MSD)*  RCP Pkg*  DQAW*	CET Quote # Collector(s):	Location: 14m/10, CT Project #: 027892-433	Project Roch Field Project Information		* Total arounic, Cupper, Lead, martury and Zinc	-k								Std (5-7 Da 8260 CT 8260 Arc 8260 Ha CT ETPP 8270 CT 8270 PN PCBs Pesticide 8 RCRA 13 Priori 15 CT D Total SPLP TCLP Dissolve Field Filt Lab to Fi	ays) List Iogens H List As SOX [] / as ty Poll EP d ered ilter	** Metals Additional Analysis	CET:	CHAIN OF CUSTODY Client: 10	ne in Freezer	Volatile Coile Only

start off the next pushess day. All samples 7.0 and receipt in IAI purposes.



Tel: (203) 377-9984 Fax: (203) 377-9952 e-mail: cet1@cetlabs.com

Client: Ms. Debbie Motycka-Downie Haley & Aldrich 100 Corporate Place, Suite 105 Rocky Hill, CT 06067-1803

## Analytical Report CET# 2120503

Report Date:December 21, 2022 Project: 27892-433, Rochford Field, Hamden Project Number: 27892-433

Connecticut Laboratory Certificate: PH 0116 Massachusetts Laboratory Certificate: M-CT903 Rhode Island Laboratory Certificate: 199



New York NELAP Accreditation: 11982 Pennsylvania Laboratory Certificate: 68-02927

#### SAMPLE SUMMARY

The sample(s) were received at 1.7°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
RF-402	2120503-01	Water	12/15/2022 13:20	12/15/2022

#### Analyte: Mercury [EPA 245.2]

#### Analyst: EAS

#### Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2120503-01	RF-402	ND	0.00020	mg/L	1	B2L1914	12/19/2022	12/19/2022 14:36	
			Clie	ent Samj	ple ID RF	-402			

Lab ID: 2120503-01

### Total Metals Method: EPA 200.7

#### Analyst: SS

#### Matrix: Water

Analyte	Result (mg/L)	RL (mg/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.013	1	EPA 200.7	B2L1939	12/19/2022	12/20/2022 11:42	
Arsenic	ND	0.0040	1	EPA 200.7	B2L1939	12/19/2022	12/20/2022 11:42	
Copper	ND	0.040	1	EPA 200.7	B2L1939	12/19/2022	12/20/2022 11:42	
Zinc	ND	0.020	1	EPA 200.7	B2L1939	12/19/2022	12/20/2022 11:42	

#### **QUALITY CONTROL SECTION**

#### Batch B2L1914 - EPA 245.2

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B2L1914-BLK1)					Prepared: 12	2/19/2022 Anal	yzed: 12/19/2	2022	
Mercury	ND	0.00020							
LCS (B2L1914-BS1)					Prepared: 12	2/19/2022 Anal	yzed: 12/19/2	2022	
Mercury	0.00514	0.00020	0.005		103	85 - 115			

#### CET # : 2120503 Project: 27892-433, Rochford Field, Hamden

Project Number: 27892-433

#### Batch B2L1939 - EPA 200.7

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B2L1939-BLK1)					Prepared: 12	2/19/2022 Analy	yzed: 12/20/2	2022	
Lead	ND	0.013							
Arsenic	ND	0.0040							
Copper	ND	0.040							
Zinc	ND	0.020							
LCS (B2L1939-BS1)					Prepared: 12	2/19/2022 Analy	yzed: 12/20/2	2022	
Lead	0.199	0.013	0.200		99.4	85 - 115			
Arsenic	0.205	0.0040	0.200		103	85 - 115			
Copper	0.210	0.040	0.200		105	85 - 115			
Zinc	0.215	0.020	0.200		108	85 - 115			

All questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

Dania Litta

David Ditta Laboratory Director This technical report was reviewed by Timothy Fusco

to a. quo

Project Manager

This report shall not be reproduced except in full, without the written approval of the laboratory

Report Comments:

Sample Result Flags:

- E- The result is estimated, above the calibration range.
- H- The surrogate recovery is above the control limits.
- L- The surrogate recovery is below the control limits.
- B- The compound was detected in the laboratory blank.
- P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
- D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
- +- The Surrogate was diluted out.
- \*C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
- \*C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
- \*F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
- \*F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
- \*I- Analyte exceeds method limits from second source standard in Initial Calibration Verification (ICV). No directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

For Percent Solids, if any of the following prep methods (3050B, 3540C, 3545A, 3550C, 5035 and 9013A) were used for samples pertaining to this report, the percent solids procedure is within that prep method.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at or above the specified reporting limit

Reporting Limit (RL) is the limit of detection for an analyte after any adjustment made for dilution or percent moisture. All analyses were performed in house unless a Reference Laboratory is listed. Samples will be disposed of 30 days after the report date. 80 Lupes Drive Stratford, CT 06615



Tel: (203) 377-9984 Fax: (203) 377-9952 email: cet1@cetlabs.com

#### Quality Control Definitions and Abbreviations

Internal Standard (IS)	An Analyte added to each sample or sample extract. An internal standard is used to monitor retention
	time, calculate relative response, and quantify analytes of interest.
Surrogate Recovery	The % recovery for non-target organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period.
ND	Not detected at or above the specified reporting limit.
RL	RL is the limit of detection for an analyte after any adjustment made for dilution or percent moisture.
Dilution	Multiplier added to detection levels (MDL) and/or sample results due to interferences and/or high
	concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Result	Amount of analyte found in a sample.
Spike Level	Amount of analyte added to a sample
Matrix Spike Result	Amount of analyte found including amount that was spiked.
Matrix Spike Dup	Amount of analyte found in duplicate spikes including amount that was spike.
Matrix Spike % Recovery	% Recovery of spiked amount in sample.
Matrix Spike Dup % Recovery	% Recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between Matrix Spike and Matrix Spike Duplicate.
Blank	Method Blank that has been taken through all steps of the analysis.
LCS % Recovery	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Recovery Limits	A range within which specified measurements results must fall to be compliant.
CC	Calibration Verification

Flags:

- H- Recovery is above the control limits
- L- Recovery is below the control limits
- B- Compound detected in the Blank
- P- RPD of dual column results exceeds 40%
- #- Sample result too high for accurate spike recovery.



Connecticut Laboratory Certification PH0116 Massachussets Laboratory Certification M-CT903 Pennsylvania NELAP Accreditation 68-02927 New York NELAP Accreditation 11982 Rhode Island Certification 199



## REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name:	Complete Environmental Testing, Inc.	Client: Haley & Ald	rich
Project Location:	27892-433, Rochford Field, Hamden	<b>Project</b> Number:	27892-433
Laboratory Sample I	(D(s):	Sample Date(s):	
2120503-01		12/15/2022	
List RCP Methods Us	sed:	<b>CET #:</b> 2120503	
,			

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents?	Yes No
1A	Were the method specified preservation and holding time requirements met?	Yes No
1B	VPH and EPH Methods only: Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	Yes No
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes No
3	Were samples received at an appropriate temperature (< 6 degrees C.)?	Yes No
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	Yes No
5a	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes 🖌 No
5b	b) Were these reporting limits met?	Yes No
6	For each analytical method referenced in this laboratory report package, were results reported for all consituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes 🖌 No
7	Are project specific matrix spikes and laboratory duplicates included with this data set?	Yes 🖌 No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information

must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."

This form may not be altered and all questions must be answered.

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

Authorized Signature:

re: Lat

Position: Laboratory Director

Printed Name: David Ditta

Date: <u>12/21/2022</u>

Name of Laboratory: <u>Complete Environmental Testing, Inc.</u>

This certification form is to be used for RCP methods only.

## **RCP Case Narrative**

6- Client requested a subset of the RCP metals list.

7- Project specific QC was not requested by the client.

#### QC Batch/Sequence Report

Batch	Sequence	CET ID	Sample ID	Specific Method	Matrix	<b>Collection Date</b>
B2L1939	S2L2002	2120503-01	RF-402	EPA 200.7	Water	12/15/2022
B2L1914		2120503-01	RF-402	EPA 245.2	Water	12/15/2022

CTDEP RCP Laboratory Analysis QA/QC Certification Form - November 2007 Laboratory Quality Assurance and Quality Control Guidance Reasonable Confidence Protocols

2120503       2120503         COMPLETE ENVIRONMENTAL TESTING, INC.         COMPLETE ENVIRONMENTAL TESTING, INC.         ROMPLETE ENVIRONMENTAL TESTING, INC.         ROMPLETE ENVIRONMENTAL TESTING, INC.         ROMPLETE ENVIRONMENTAL TESTING, INC.         Sample Depths (include Units for any sample depths provided)       Matrix Fax: (203) 377-9952 e-mail: bottleorders@cettabs.com e-mail: bottleorders@cettabs.com         Collection Other       Collection Other         Next Day * Next Day *         Not Day * Next Day *         Next Day * Next Day *	Std (5-7 Days)   8260 CT List   8260 Aromatics   8260 Halogens   CT ETPH   8270 CT List   8270 PNAs   PCBs   SOX   ASE   Pesticides   8 RCRA   13 Priority Poll   15 CT DEP   Total   SPLP   TCLP	TCLP     Is       Dissolved     Field Filtered       Lab to Filter     Client:       Additional Analysis     CET:       Additional Analysis     CET:
11/2 12/2 12/2 12/2 12/2 12/2 12/2 12/2		
PRESERVATIVE (CI-HCI, N-HNO <sub>3</sub> , S-H <sub>2</sub> SO <sub>4</sub> , Na-NaOH, C=Cool, O-Other) CONTAINER TYPE (P-Plastic, G-Glass, V-Vial, O-Other)		
(M=MeOH		
12/17-22-1330 JZ 1/17-22-15:05 DATE/TIME	- <sup>β</sup> β, μ, μ, μ, β, 2n	2
Client / Reporting Information	Proje	
Haley & Aldrich Address 100 Carponnal, Place		Collector(s):
City City State Zip City State Zip City City Bill CT 06067	n Handry CT	
Deb Motycka dnotycka downie@haloyald.nik . cun Phone # Fax#	te # Std	(MS/MSD)*
	ote # CT ote # Std port PDF EDD - Sp porting Limits (check one) ory Certification Needed (check on	(MS/MSD)* □ RCP Pkg* □ GB □ SWP □ Other GB □ SWP □ Other



HALEY & ALDRICH, INC. 100 Corporate Place Suite 105 Rocky Hill, CT 06067 860.282.9400

28 June 2022 File No. 27892-430

Connecticut Department of Energy and Environmental Protection Bureau of Water Protection and Land Reuse Remediation Division 79 Elm Street Hartford CT 06106-5127

Attention: Ray Frigon

Subject: Annual Status Report Rochford Field and Villano Park (formerly Mill Rock Park) Hamden, Connecticut REM ID# 9148 and 9149

Ladies and Gentlemen:

On behalf of our client, Town of Hamden, Haley & Aldrich is pleased to submit this status report on groundwater monitoring activities at Rochford Field, Villano Park (formerly known as Mill Rock Park) and the Sewer Pump Station in Hamden, Connecticut during the period from April 2021 to June 2022. The site location is shown in Figure 1. Groundwater monitoring at the site has been conducted in accordance with our 2013 Remedial Action Plans (RAPs) which were approved by Connecticut Department of Energy and Environmental Protection (CTDEEP) in November 2013.

#### SITE DESCRIPTION AND BACKGROUND

The 4.84-acre Rochford Field is bounded by Newhall and Newbury Streets to the west and south, respectively, Winchester Avenue to the east and Mill Rock Road to the north. A chain link fence surrounds the recreational facility, which includes a baseball field, a softball field, dugouts, backstops, and bleachers. The 2.94-acre Villano Park is located along Mill Rock Road and Wadsworth Street with a tree-lined chain link fence separating the property from residential properties on Bryden Terrace. The 0.12-acre Sewer Pump Station, presently owned by the Greater New Haven Water Pollution Control Authority (GNHWPCA) is located at the southeast corner of Mill Rock Road and Winchester Avenue, abutting the northwestern corner of Villano Park. The pump station building is a windowless, one-story structure surrounded by grassy lawn and a chain link fence.

The Town of Hamden acquired the Rochford and Villano parcels in the 1930s. The parcels, which were historically wetlands, were used as public refuse dumps and/or as an industrial landfill/depository for "coke fill" (charcoal residue and ash) in the 1920s or and 1930s. In late 1936 and 1937, the Rochford field parcel was graded and topped with approximately 6-inches of loam and used as a recreation field. The Town of Hamden developed Villano (then Mill Rock Park) as a park in 1940 and subsequently

Connecticut Department of Energy and Environmental Protection 28 June 2022 Page 2

renovated the park in 1992 with the installation of approximately 1,300 cubic yards of gravel fill and expansion of, or upgrades to existing recreational facilities. The sewer pump station was constructed in 1952 on filled land that was acquired by the Town in 1939.

On 10 July 2001, CTDEEP issued Order No. SRD-128 to the Town of Hamden, South Central Regional Water Authority (RWA), Olin Corporation (Olin), and the State Board of Education. The Order required the respondents to investigate and remediate sources of pollution on a "site" which was subsequently divided into three portions that included both publicly and privately-owned properties. The Order required the Town to investigate, characterize, and remediate Rochford Field, Mill Rock (Villano) Park and the Sewer Pump Station.

Interim remedial actions and site investigations were undertaken between 2000 and 2013. Testing encountered impacted fill material containing polyaromatic hydrocarbons (PAHs), extractable total petroleum hydrocarbons (ETPH), and metals at concentrations above the CTDEEP Remediation Standard Regulations (RSRs). Groundwater analyses detected similar compounds to those found in site soil. In June 2013, Haley & Aldrich prepared Remedial Action Plans (RAPs) for the three parcels which were approved by CTDEEP in November 2013. The RAPS outlined remedial construction (caps), the construction of which was completed by November 2015, and natural attenuation groundwater monitoring (MNA).

#### APPLICABLE CTDEEP RSR GROUNDWATER CRITERIA

Groundwater underlying the Site was historically classified as "GAA" by CTDEEP; a "GAA" classification indicates that the water resource is regulated for potential use as a public drinking water supply. In 2005, CTDEEP reclassified a portion of the site (including parts of Rochford Field and Villano Park) "GB"; a "GB" classification indicates that the water resource is not intended to be suitable for use as a drinking water supply without prior treatment. Both the "GAA" and "GB" groundwater classification areas and associated groundwater elevation contours are shown on Figure 2. A public water supply system is used to supply potable water to area residences and businesses. Groundwater flow beneath the site is primarily to the west and southwest from Villano Park towards Rochford Field flowing from the GAA into the GB area. Based on groundwater elevation contour maps, there is also a northwesterly component of flow in the far northwestern portion of Rochford Field within the area classified as a "GAA" resource (see Figure 2).

Applicable RSR criteria for groundwater quality are:

- Groundwater Protection Criteria (GWPC) ("GAA" area of the site)
- Surface Water Protection Criteria (SWPC) and,
- Residential Volatilization Criteria (RVC).

#### **GROUNDWATER MONITORING PROGRAM**

In accordance with the CTDEEP-approved RAPs, Haley & Aldrich has conducted MNA or compliance groundwater monitoring on a quarterly or annual basis since completion of remedial actions in 2015.



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Originally, the groundwater monitoring network includes seven monitoring wells at Rochford Field (RF-HA108-MW, RF-HA108-MWD, RF-HA110-MW, RF-HA115-MW, RF-HA123-MW, RF-HA207-MW, and RF-HA301-MW) and five monitoring wells at Villano Park (MRP-HA101-MW, MRP-HA103-MW, MRP-HA201-MW, MRP-HA202-MW and MRP-HA-204). Well locations are shown on Figure 2.

In April 2020, Haley & Aldrich submitted a request to CTDEEP to change the monitoring program, eliminating certain upgradient wells (including the wells in Villano Park and RF-HA108-MWD, RF-HA110-MW and RF-HA207-MW) or eliminating certain monitoring parameters for which diminishing trends and/or RSR compliance had been demonstrated.

In June 2021, Haley & Aldrich used low flow purging and sampling methodology to sample four wells in Rochford Field (RF-HA115-MW, RF-HA123-MW, RF-HA108-MW and RF-HA301-MW) for ETPH and/or total selected metals via USEPA Method 200.7 and 7470A or 245.2 and Connecticut Department of Public Health ETPH Method. The monitoring results are tabulated and compared against the GWPC (applicable to the "GAA" area), SWPC and RVC; data is summarized in Tables Ia and Ib. As shown, and discussed below, RSR GWPC compliance has been demonstrated in the "GAA" area of the site. As of June 2021, one or more metals were detected in certain downgradient property line wells at concentrations above SWPC.

Groundwater flow beneath Rochford Field (which is downgradient of Villano Park) is both northwesterly (in the GAA area) and southwesterly (in the GB area). The northwesterly flow component discharges into an unnamed surface water body (stream) on the northwest side of Mill Rock Road which flows northerly towards Lake Whitney. The southwesterly flow component discharges into Beaver Pond and ultimately the West River to the southwest. Since SWPC is based on demonstrating RSR compliance at a point of compliance closest to the surface water discharge, Haley & Aldrich sampled locations on Town property (i.e., the former Middle School property) which is located between Rochford Field/Villano Park and the downgradient surface water discharge locations. The additional locations, which are shown on Figure 2, include:

- The former MW-1, installed by WSP, Inc. (and renamed as RF-401-MW by Haley & Aldrich) and located on town property downgradient of the northern portion of Rochford Field ("GAA area") and Villano Park; and,
- A new well (RF-402-MW), located on Town of Hamden property near the corner of Newbury and Newhall Streets hydrologically downgradient of the southern portion of Rochford Field (and Villano Park).

On 14 February 2022, Haley used low flow purging and sampling methodology to sample RF-401-MW for selected total metals (arsenic, copper, lead, mercury, and zinc) via USEPA Method 200.7 or 245.2. On 5 April 2022 and 14 June 2022, Haley & Aldrich used low flow purging and sampling methodology to sample RF-401-MW and RF-401-MW for selected total metals (arsenic, copper, lead, mercury, and zinc) via USEPA Method 200.7 or 245.2. The monitoring results were tabulated and compared against the GWPC and SWPC, as applicable, and summarized in Tables Ia and 1b.



## **Summary of Groundwater Monitoring and Results**

Results from the 2021 and 2022 sampling events are summarized on Tables Ia and Ib along with results from previous monitoring events. The laboratory data reports for 2021 and 2022 are attached to this letter.

The following is a summary of analytical results:

#### Rochford Park (2021)

**RF-HA108-MW** ("GAA" area) – The well was sampled for analysis for total zinc only. Zinc was detected at 0.086 mg/L, below both the RSR SWPC and GWPC.

**RF-HA115-MW**: The well was sampled for analysis for total zinc and ETPH. ETPH was previously detected in one sampling event (March 2018) and was not detected prior to that time or in three subsequent (2019, 2020, 2021) sampling events supporting the conclusion that the one-time detection was an anomaly. Total zinc was detected at 0.58 mg/L, which is above the RSR SWPC of 0.123 mg/L.

**RF-HA123-MW**: The well was sampled for analysis for ETPH and total selected metals (8 RCRA metals plus copper and zinc). ETPH was previously detected in one sampling event (May 2019) and was not detected prior to that time. ETPH was not detected in the May 2020 or the June 2021 sampling event supporting the conclusion that the one-time detection was an anomaly. Zinc was detected at 0.81 mg/L, above the RSR SWPC of 0.123 mg/L. The level of total lead detected in the sample (0.021 mg/L) also exceeds the SWPC of 0.013 mg/L. Barium was detected at 0.33 mg/L, well below the RSR SWPC of 2.2 mg/L. Arsenic, copper, mercury, and selenium were not detected above the laboratory detection limit.

**RF-HA301-MW** – The well was sampled for analysis for total zinc only. Zinc was detected at 0.1 mg/L, slightly below the RSR SWPC of 0.123 mg/L.

#### Downgradient wells (RF-401-MW and RF-401-MW, 2022)

**RF-401-MW-** The well was sampled for total arsenic, copper, lead, mercury, and zinc. Except for total zinc, detected at 0.037 mg/L in February 2022 and 0.092 mg/L in April 2022, no metals were detected above the laboratory detection limits. The concentrations of zinc detected do not exceed CTDEEP RSR GWPC or SWPC.

**RF-402-MW** – The well was sampled for total arsenic, copper, lead, mercury, and zinc; no metals were detected above the laboratory detection limits.

#### RECOMMENDATIONS

In our opinion, analytical data collected during the long-term groundwater monitoring program continues to demonstrate an overall diminishing trend. Recent testing did not detect ETPH, which suggests that the one-time detections in RF-HA115-MW and RF-HA123-MW were anomalous. Previous



Connecticut Department of Energy and Environmental Protection 28 June 2022 Page 5

groundwater testing (2015 to 2019) at Villano Park demonstrated RSR compliance for GWPC. Except for the concentration of lead in RF-HA110-MW, the wells in the "GAA" area have previously demonstrated RSR GWPC compliance. Groundwater from the vicinity of RF-HA-110-MW flows southerly into the "GB" groundwater area.

## We therefore recommend the elimination of ETPH in future monitoring events. We also recommend the elimination of other parameters that have demonstrated compliance for RSR GWPC and/or SWPC.

Rochford Field is downgradient of Villano Park, the Rochford field wells, and more recently the wells on town property between Rochford field and the surface water discharge locations, have been used as a point of compliance for SWPC for both parcels. To date, compliance monitoring (February and/or April and June 2022) have demonstrated RSR compliance in both RF-401-MW and RF-402-MW. We plan to conduct one additional quarter of compliance monitoring (fall 2022) at RF-401- MW and two additional quarters (fall and winter 2022) at RF-402-MW. If results of the monitoring continue to demonstrate SWPC compliance, we will contact CTDEEP to discuss terminating the groundwater monitoring program.

We therefore recommend that ongoing monitoring include quarterly compliance groundwater monitoring to demonstrate SWPC compliance.

Sincerely yours, HALEY & ALDRICH, INC.

Lebral HMolycks

Deborah Motycka Downie, LEP Senior Technical Specialist

ANC

Chris G. Harriman, LEP Senior Associate

Attachments: Table Ia and Ib – Summary of Groundwater Analytical Data for Rochford Field (2015 to present) Figure 1 – Site Locus Figure 2 – Well Locations and Groundwater Classification Laboratory Analytical Data for 2021 and 2022

c: Town of Hamden, Erik Johnson



PARAMETER		GA/GAA Groundwater	Surface Water	Residential	Sample ID:				R	F-HA108-MW	I							RF	-HA108-MWD	)			
		Protection Criteria	Protection Criteria	Volatilization Criteria	Comments: Sample Date:	31-Dec-15	30-Mar-16	29-Jun-16	18-Oct-16	30-Mar-17	27-Mar-18	17-May-19	8-May-20	24-Jun-21	19-Nov-04	27-Oct-14	31-Dec-15	30-Mar-16	29-Jun-16	18-Oct-16	30-Mar-17	28-Mar-18	17-May-19
Volatile Organic Compounds (ug/l):					Method:	8260C	8260C	8260C	8260C	8260C	8260C	8260C	8260C	8260C	524.2	8260C	8260C	8260C	8260C	8260C	8260C	8260C	8260C
Benzene		1	710	130		ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform		6	14,100	26		ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane		18	10,000	130		ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene		280	210	NE		ND	ND	ND	ND	ND	ND	ND			0.98	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		1000	4,000,000	23,500		ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
Polyaromatic Hydrocarbons (PAHs)	ug/L				Method:	8270D	8270D	8270D	8270D	8270D	8270D	8270D	8270D	8270D	525.2	8270D	8270D	8270D	8270D	8270D	8270D	8270D	8270D
2-Methyl Naphthalene		28	62	1000		ND	ND	ND	ND	ND 5	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene		420 420	150	30500		2.1 ND	5.2 ND	4.7	7.3	5 ND	4.7	2.9 ND			ND	ND	ND ND	ND	ND	ND ND	ND ND	ND	ND
Acenaphthylene			0.3	NE NE		ND		ND ND	ND ND	ND	ND ND				ND	ND		ND	ND		ND	ND ND	ND
Anthracene Benzo[a]anthracene		2,000 0.06	1,100,000 0.3	NE NE		ND ND	ND ND	ND ND	ND ND	ND 0.11	ND ND	ND ND			ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
Benzolblfluoranthene		0.08	0.3	NE		ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
		0.08					NU				ND	ND					ND		ND		ND		
Carbazole Dibenzofuran		5	53 40	NE 460											ND ND								
Fluoranthene		280	3,700	460 NE			1.3	1.8	2.8	 1.8	2	1.1			ND ND	 ND	ND	 ND	ND	ND	ND	 ND	 ND
				NE			5.9	5.3	2.0	6.4					ND		ND	ND		ND	ND	ND	
Fluorene Naphthalene		280 280	140,000 210	NE		2.3 ND	5.9 ND	5.3 ND	9.1 ND	6.4 ND	6.1 ND	2.5 ND			ND ND	ND ND	ND	ND	ND ND	ND	ND	ND	ND ND
		280	210	NE		ND	0.77	0.93			ND				ND ND	ND	ND	ND		ND	ND	ND	ND ND
Phenanthrene		200		NE		ND	0.77 ND		1.2 1.7	0.72		0.08 ND			ND ND	ND	ND	ND	ND ND	ND	ND	ND	ND ND
Pyrene		200	110,000	INE		ND	ND	1.1	1.7	1.1	1.2	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Petroleum Hydrocarbons (mg/	):	0.25	0.25	NE	Method:	CT ETPH ND	СТ ЕТРН 0.12	CT ETPH ND	СТ ЕТРН 0.22	CT ETPH ND	СТ ЕТРН 0.21	CT ETPH ND	CTETPH 	CT ETPH 	CT ETPH ND	CT ETPH ND	CT ETPH ND	СТ ЕТРН 0.2	CT ETPH ND	СТ ЕТРН 0.25	СТ ЕТРН 0.15	CT ETPH ND	CT ETPH ND
Total Metals (mg/l):	Method					200.7/7470A	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2			200.7/7470A	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	2 200.7/245.2
Arsenic	200.8	0.05	0.004	NE		ND	ND	ND	ND	ND	ND	ND			0.0047	ND	ND	ND	ND	ND	ND	ND	ND
Barium	200.8	10	2.2	NE												0.056							
Copper	200.8	1.3	0.048	NE		ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	200.8	0.015	0.013	NE		ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	7470A / 245.2	0.002	0.0004	NE		ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	200.8	0.1	0.88	NE		0.05	ND	0.092	ND	ND	0.058	0.081			ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	200.8	NE	NE	NE											6.0								
Selenium	200.8	0.05	0.05	NE		ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	0.011
Silver	200.8	0.036	0.012	NE		ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	200.8	NE	NE	NE											12								
Thallium	200.8	0.005	0.063	NE		ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	200.8	5	0.123	NE		0.21	0.13	0.21	0.036	0.35	0.34	0.38	0.21	0.086	0.017	ND	ND	ND	0.023	ND	ND	ND	ND
Other Analyses (mg/l)																							ł
Alkalinity (CaCO <sub>3</sub> )	310.1														230								
Ammonia as Nitrogen	350.3														4.6								
B. O. D./ 5 Day	405.1														ND								
Chloride	300.0														8.6								
Fluoride	300.0																						
Iron (dissolved)	200.8	NE	NE	NE											11								
Manganese (dissolved)	200.8	NE	NE	NE											1.5								
Nitrate as Nitrogen	300.0														ND								
pH	150.1														6.45								
Sulfate	300.0														1.8								
Total Dissolved Solids	160.1														230								
Total Suspended Solids	160.2														28								

NOTES:

NOTES: 1. Sampling methodologies changed to GAA standards as of July 2004 sampling round. 2. This table includes only those compounds detected. 3. RSR criteria means Remedial Standard Regulation criteria established by the Connecticut Department of Environmental Protection (CTDEEP). 4. NE means numeric RSR criteria not established by CTDEEP. 5. ND means that the compound was not detected above laboratory detection limit. 6. Concentrations in bold type exceed criteria established by CTDEEP. 3. vell, means migner profilers moll, means milliamen profilers.

ugL means micrograms per liter, mg/L means miligrams per liter.
 B: Compound also detected in one or more associated laboratory blanks. Chloromethane reported by laboratory as a likely analytical laboratory artifact.

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PARAMETER	GA/GAA Groundwater Protection	Surface Water Protection	Residential Volatilization	Sample ID: Comments:				RF-HA	110-MW					RF-401-MW	
	Criteria	Criteria	Criteria	Sample Date:	27-Oct-14	31-Dec-15	31-Mar-16	29-Jun-16	19-Oct-16	29-Mar-17	28-Mar-18	17-May-19	14-Feb-22	8-Apr-22	14-Jun-22
Volatile Organic Compounds (ug/l):				Method:	8260C	8260C	8260C	8260C	8260C	8260C	8260C	8260C	524.2	524.2	524.2
Benzene	1	710	130		ND	ND	ND	ND	ND	ND	ND	ND			
Chloroform	6	14,100	26		ND	ND	ND	ND	ND	ND	ND	ND			
Chloromethane	18	10,000	130		ND	ND	ND	ND	ND	ND	ND	ND			
Naphthalene	280	210	NE		ND	ND	ND	ND	ND	ND	ND	ND			
Toluene	1000	4,000,000	23,500		ND	ND	ND	ND	ND	ND	ND	ND			
Polyaromatic Hydrocarbons (PAHs) ug/L				Method:	8270D	8270D	8270D	8270D	8270D	8270D	8270D	8270D	525.2	525.2	525.2
2-Methyl Naphthalene	28	62	1000		ND	ND	ND	ND	ND	ND	ND	ND			
Acenaphthene	420	150	30500		ND	ND	ND	ND	ND	ND	ND	ND			
Acenaphthylene	420	0.3	NE		ND	ND	ND	ND	ND	ND	ND	ND			
Anthracene	2,000	1,100,000	NE		ND	ND	ND	ND	ND	ND	ND	ND			
Benzo[a]anthracene	0.06	0.3	NE		ND	ND	ND	ND	ND	ND	ND	ND			
Benzo[b]fluoranthene	0.08	0.3	NE		ND	ND	ND	ND	ND	ND	ND	ND			
Carbazole	5	53	NE												
Dibenzofuran	7	40	460												
Fluoranthene	280	3,700	NE		ND	ND	ND	ND	ND	ND	ND	ND			
Fluorene	280	140,000	NE		ND	ND	ND	ND	ND	ND	ND	ND			
Naphthalene	280	210	NE		ND	ND	ND	ND	ND	ND	ND	ND			
Phenanthrene	200	14	NE		ND	ND	ND	ND	ND	ND	ND	ND			
Pyrene	200	110,000	NE		ND	ND	ND	ND	ND	ND	ND	ND			
				Method:	CT ETPH	CT ETPH	CT ETPH	CT ETPH	СТ ЕТРН	CT ETPH	CT ETPH	CT ETPH	CT ETPH	CT ETPH	CT ETPH
Total Petroleum Hydrocarbons (mg/l):	0.25	0.25	NE	wenou.	0.27	0.71	0.32	ND	0.51	0.29	0.21	0.34	-	CIEIFH	CIEIFH
Total Metals (mg/l): Method						200.7/7470A	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2			
Arsenic 200.8	0.05	0.004	NE		0.0086	0.033	0.013	0.02	0.031	0.0062	0.011	0.018	ND	ND	ND
Barium 200.8	10	2.2	NE		0.15										
Copper 200.8	1.3	0.048	NE		0.23	0.19	0.16	0.11	0.073	0.18	0.28	0.08	ND	ND	ND
Lead 200.8	0.015	0.013	NE		0.27	0.16	0.10	0.10	0.061	0.19	0.19	0.26	ND	ND	ND
Mercury 7470A / 245.2	0.002	0.0004	NE		0.00078	0.0015	0.001	0.00083	0.00058	0.0021	0.0024	0.0011	ND	ND	ND
Nickel 200.8	0.1	0.88	NE		0.67	0.55	0.51	0.69	0.78	0.41	0.35	0.11			
Potassium 200.8	NE	NE	NE												
Selenium 200.8	0.05	0.05	NE		ND	ND	ND	ND	ND	ND	ND	0.022			
Silver 200.8	0.036	0.012	NE		ND	ND	ND	ND	ND	ND	ND	ND			
Sodium 200.8	NE	NE	NE												
Thallium 200.8	0.005	0.063	NE		ND	ND	ND	ND	ND	ND	ND	ND			
Zinc 200.8	5	0.123	NE		11	4.7	6.2	5.2	6.3	3.5	0.94	0.66	0.037	0.092	ND
Other Analyses (mg/l)	1	l													
Alkalinity (CaCO <sub>3</sub> ) 310.1															
Ammonia as Nitrogen 350.3															
B. O. D./ 5 Day 405.1															
Chloride 300.0															
Fluoride 300.0															
Iron (dissolved) 200.8	NE	NE	NE												
Manganese (dissolved) 200.8	NE	NE	NE												
Nitrate as Nitrogen 300.0															
pH 150.1															
Sulfate 300.0															
Total Dissolved Solids 160.1	1														
Total Suspended Solids 160.2															

Total Susp NOTES:

NOTES: 1. Sampling methodologies changed to GAA standards as of July 2004 sampling round. 2. This table includes only those compounds detected. 3. RSR criteria means Remedial Standard Regulation criteria established by the Connecticut Department of Environmental Protection (CTDEEP). 4. NEr means numeric RSR criteria not established by CTDEEP. 5. ND means that the compound was not detected above laboratory detection limit.

Concentrations in bold type exceed criteria established by CTDEEP.

ugL means micrograms per liter, mg/L means miligrams per liter.
 B: Compound also detected in one or more associated laboratory blanks. Chloromethane reported by laboratory as a likely analytical laboratory artifact.

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PARAMETER		Surface Water Protection	Residential Volatilization	Sample ID: Comments:				F	RF-HA115-MV	v			
		Criteria	Criteria	Sample Date:	31-Dec-15	31-Mar-16	29-Jun-16	19-Oct-16	29-Mar-17	27-Mar-18	17-May-19	8-May-20	24-Jun-21
Volatile Organic Compounds (u	ug/l):			Method:	8260C	8260C	8260C	8260C	8260C	8260C	8260C	8260C	8260C
4-Isopropyltoluene	5 /	200	870		ND	ND	ND	ND	ND	ND	ND	ND	
Benzene		710	130		ND	ND	ND	ND	ND	ND	ND	ND	
Chloroform		14,100	26		ND	ND	ND	ND	ND	ND	ND	ND	
Chloromethane		10,000	130		ND	ND	ND	ND	ND	ND	ND	ND	
Naphthalene		210	NE		ND	ND	ND	ND	ND	ND	ND	ND	
Toluene		4,000,000	23,500		ND	ND	ND	ND	ND	ND	ND	ND	
Semi-Volatile Organic Compou	inds (ua/l):			Method:	8270C	8270C	8270C	8270C	8270C	8270C	8270C	8270C	8270C
2-Methyl Naphthalene	(ug.).	62	1000	method.	ND	ND	ND	ND	ND	ND	ND	ND	
Acenaphthene		150	30500		ND	ND	ND	ND	ND	ND	ND	ND	
Acenaphthylene		0.3	NE		ND	ND	ND	ND	ND	ND	ND	ND	
Anthracene		1,100,000	NE		ND	ND	ND	ND	ND	ND	ND	ND	
Benzo[a]anthracene		0.3	NE		ND	ND	ND	ND	ND	ND	ND	ND	
Benzo[b]fluoranthene		0.3	NE		ND	ND	ND	ND	ND	ND	ND	ND	
Benzo[k]fluoranthene		0.3	NE		ND	ND	ND	ND	ND	ND	ND	ND	
Fluoranthene		3,700	NE	1	ND ND	ND	ND	ND	ND	ND	ND	ND	
			NE		ND ND	ND	ND	ND	ND	ND	ND	ND	
Fluorene		140,000		1									
Indeno[1,2,3-cd]pyrene		0.54	NE		ND	ND	ND	ND	ND	ND	ND	ND	
Naphthalene		210	NE	1	ND	ND	ND	ND	ND	ND	ND	ND	
Phenanthrene		14	NE	1	ND	ND	ND	ND	ND	ND	ND	ND	
Pyrene		110,000	NE		ND	ND	ND	ND	ND	ND	ND	ND	
				Method:	505	505	505	505	505	505	505		
Chlorinated Pesticides (ug/I):													
				Method:	8082	8082	8082	8082	8082	8082	8082		8082
Polychlorinated Biphenyls (ug/	1):	0.5	NE										
Total Batalana Ibala and an	(	0.25	NE	Method:	CT ETPH ND	CT ETPH ND	СТ ЕТРН ND	СТ ЕТРН ND	CT ETPH ND	СТ ЕТРН 0.29	СТ ЕТРН ND	CTETPH ND	СТ ЕТРН ND
Total Petroleum Hydrocarbons	(mg/i):	0.25	INE		ND	ND	ND	ND	ND	0.29	ND	ND	ND
Total Metals (mg/l):	Method				200.7/7470A		200.7/245.2	200.7/245.2		200.7/245.2		200.7/245.2	200.7/245.2
Arsenic	200.8	0.004	NE		ND	ND	ND	ND	ND	ND	ND		
Barium	200.8	2.2	NE										
Copper	200.8	0.048	NE		ND	ND	ND	ND	ND	ND	ND		
Lead	200.8	0.013	NE		ND	ND	ND	ND	ND	ND	ND		
Mercury	7470A / 245.2	0.0004	NE		ND	ND	ND	ND	ND	ND	ND		
Nickel	200.8	0.88	NE		ND	ND	ND	ND	ND	ND	ND		
Potassium	200.8	NE	NE	1									
Selenium	200.8	0.05	NE	1	ND	ND	ND	0.018	ND	ND	ND		
Sodium	200.8	NE	NE	1									
Thallium	200.8	0.063	NE	1	ND	ND	ND	ND	ND	ND	ND		
Zinc	200.8	0.123	NE		0.2	0.34	0.2	0.15	0.27	1.1	0.37	0.093	0.58
Total Cyanide (mg/l):	335.4	NE	NE										
Other Analyses (mg/l) Alkalinity (CaCO <sub>3</sub> )	310.1												
Ammonia as Nitrogen	350.3			1									
B. O. D./ 5 Day	405.1												
Chloride	300.0			1									
Fluoride	300.0			1									
Iron (dissolved)	200.8	NE	NE	1									
Manganese (dissolved)	200.8	NE	NE	1									
Nitrate as Nitrogen	300.0	INC.											
pH	150.1			1									
Sulfate	300.0			1									
Total Dissolved Solids	160.1			1									
Total Suspended Solids	160.2												
rotar odspended oblids	100.2												

Total Suspended Solids NOTES:

 NOTES:

 NOTES:

 1. Sampling methodologies changed to GAA standards as of July 2004 sampling round.

 2. This table includes only those compounds detected.

 3. RSR criteria means Remedial Standard Regulation criteria established by the Connecticut Department of Environmental Protection (CTDEEP).

 4. NE means numeric RSR criteria not established by CTDEEP.

 5. ND means that the compound was not detected above laboratory detection limit.

 6. Concentrations in bold type exceed criteria established by CTDEEP.

 7. ug/L means micrograms per liter; mg/L means milligrams per liter.

 8. B: Compound also detected in one or more associated laboratory blanks.

 Chloromethane reported by laboratory as a likely analytical laboratory artifact.

PARAMETER		Surface Water Protection	Residential Volatilization	Sample ID: Comments:					RF-HA123-M	w			
		Criteria	Criteria	Sample Date:	31-Dec-15	31-Mar-16	28-Jun-16	19-Oct-16	29-Mar-17	27-Mar-18	17-May-19	8-May-20	24-Jun-21
Volatile Organic Compounds	(ug/l):			Method:	8260C								
4-Isopropyltoluene		200	870		ND								
Benzene		710	130		ND								
Chloroform		14,100	26		ND								
Chloromethane		10,000	130		ND								
Naphthalene		210	NE		ND								
Toluene		4,000,000	23,500		ND								
Semi-Volatile Organic Compo	unds (ua/l):			Method:	8270D		8270D						
2-Methyl Naphthalene		62	1000		ND								
Acenaphthene		150	30500		ND								
Acenaphthylene		0.3	NE		ND								
Anthracene		1.100.000	NE		ND								
Benzo[a]anthracene		0.3	NE		ND								
Benzo[b]fluoranthene		0.3	NE	I	ND								
Benzo[k]fluoranthene		0.3	NE	I	ND								
Fluoranthene		3,700	NE		ND								
Fluorene		140,000	NE	I	ND								
Indeno[1,2,3-cd]pyrene		0.54	NE	I	ND								
Naphthalene		210	NE	I	ND								
Phenanthrene		14	NE		ND	0.31	ND	ND	ND	ND	ND		
Pyrene		110,000	NE		ND								
1 )1010		110,000		Method:	505	505	505	505	505	505	505	505	505
Chlorinated Pesticides (ug/l):				wethoa:									
Polychlorinated Biphenyls (ug	w.	0.5	NE	Method:	8082	8082	8082	8082	8082	8082	8082	8082	8082
r offoniormatica Dipriorifio (ag		0.0											
Total Petroleum Hydrocarbons	s (mg/l):	0.25	NE	Method:	CT ETPH ND	СТ ЕТРН 0.16	CT ETPH ND	CT ETPH ND					
Total Metals (mg/l):	Method				200.7/7470A	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2
Arsenic	200.8	0.004	NE	I	ND	0.0065	ND						
Barium	200.8	2.2	NE									0.29	0.33
Copper	200.8	0.048	NE		0.091	0.06	0.064	0.077	0.077	0.16	0.089	ND	ND
Lead	200.8	0.013	NE		0.042	0.021	0.017	0.016	0.023	0.09	0.037	ND	0.021
Mercury	7470A / 245.2	0.0004	NE		0.00067	0.00028	ND	0.00068	0.0022	0.0039	0.0021	ND	ND
Nickel	200.8	0.88	NE	I	0.15	0.15	0.17	0.17	0.11	0.11	0.22		
Potassium	200.8	NE	NE	I									
Selenium	200.8	0.05	NE	I	ND	ND	ND						
Sodium	200.8	NE	NE	I									
Thallium	200.8	0.063	NE	I	ND								
Zinc	200.8	0.123	NE		1.2	1.3	1.3	1.3	0.94	1.1	1.5	0.62	0.81
Total Cyanide (mg/l):	335.4	NE	NE										
Other Analyses (mg/l) Alkalinity (CaCO <sub>3</sub> )	310.1												
Ammonia as Nitrogen	350.3			I									
B. O. D./ 5 Day	405.1												
Chloride	300.0												
Fluoride	300.0												
Iron (dissolved)	200.8	NE	NE	I									
Manganese (dissolved)	200.8	NE	NE	I									
Nitrate as Nitrogen	300.0												
pH	150.1			I									
Sulfate	300.0			I									
Total Dissolved Solids	160.1												
Total Suspended Solids	160.2			I									
		-	•	•									

Total Suspended Solids NOTES:

 NOTES:

 NOTES:

 1. Sampling methodologies changed to GAA standards as of July 2004 sampling round.

 2. This table includes only those compounds detected.

 3. RSR criteria means Remedial Standard Regulation criteria established by the Connecticut Department of Environmental Protection (CTDEEP).

 4. NE means numeric RSR criteria not established by CTDEEP.

 5. ND means that the compound was not detected above laboratory detection limit.

 6. Concentrations in bold type exceed criteria established by CTDEEP.

 7. ug/L means micrograms per liter, mg/L means milligrams per liter.

 8. B: Compound also detected in one or more associated laboratory blanks.

 Chloromethane reported by laboratory as a likely analytical laboratory artifact.

PARAMETER		Surface Water	Residential	Sample ID: Comments:				RF-HA207-MV	,		
		Protection Criteria	Volatilization Criteria	Sample Date:	31-Dec-15	31-Mar-16	29-Jun-16	18-Oct-16	30-Mar-17	27-Mar-18	16-May-19
Volatile Organic Compounds (ug	/I):			Method:	8260C	8260C	8260C	8260C	8260C	8260C	8260C
4-Isopropyltoluene		200	870		ND	ND	ND	ND	ND	ND	ND
Benzene		710	130		ND	ND	ND	ND	ND	ND	ND
Chloroform		14,100	26		ND	ND	ND	ND	ND	ND	ND
Chloromethane		10.000	130		ND	ND	ND	ND	ND	ND	ND
Naphthalene		210	NE		ND	ND	ND	ND	ND	ND	ND
Toluene		4,000,000	23,500		ND	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compound	ds (ug/l):			Method:	8270D	8270D	8270D	8270D	8270D	8270D	8270D
2-Methyl Naphthalene		62	1000		ND	ND	ND	ND	ND	ND	ND
Acenaphthene		150	30500		ND	ND	ND	1.2	ND	ND	ND
Acenaphthylene		0.3	NE		ND	ND	ND	ND	ND	ND	ND
Anthracene		1.100.000	NE		ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene		0.3	NE		0.15	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene		0.3	NE		0.14	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene		0.3	NE		ND	ND	ND	ND	ND	ND	ND
		3.700	NE		ND ND	ND	ND	ND	ND	ND	ND
Fluoranthene			NE			ND					
Fluorene		140,000			ND		ND	2.3	ND	ND	ND
Indeno[1,2,3-cd]pyrene		0.54	NE		ND	ND	ND	ND	ND	ND	ND
Naphthalene		210	NE		ND	ND	ND	ND	ND	ND	ND
Phenanthrene		14	NE		0.17	ND	0.35	3.0	0.47	ND	ND
Pyrene		110,000	NE		ND	ND	ND	ND	ND	ND	ND
				Method:	505	505	505	505	505	505	505
Chlorinated Pesticides (ug/l):											
				Method:	8082	8082	8082	8082	8082	8082	8082
Polychlorinated Biphenyls (ug/l):		0.5	NE								
Total Petroleum Hydrocarbons (n	ng/l):	0.25	NE	Method:	CT ETPH ND	CT ETPH ND	CT ETPH ND	СТ ЕТРН 0.14	CT ETPH ND	CT ETPH ND	CT ETPH ND
Total Metals (mg/l):	Method				200.7/7470A	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2
Arsenic	200.8	0.004	NE		200.7/7470A ND	0.0073	0.0081	0.0097	200.7/245.2 ND	200.7/245.2 ND	200.77245.2 ND
						0.0073	0.0081	0.0097	IND	ND	ND
Barium	200.8	2.2	NE								
Copper	200.8	0.048	NE		ND	ND	ND	ND	ND	ND	ND
Lead	200.8	0.013	NE		0.013	ND	ND	ND	ND	ND	ND
Mercury	7470A / 245.2	0.0004	NE		ND	ND	ND	ND	ND	ND	ND
Nickel	200.8	0.88	NE	1	ND	ND	ND	ND	ND	ND	ND
Potassium	200.8	NE	NE	1							
Selenium	200.8	0.05	NE		ND	ND	ND	ND	ND	ND	ND
Sodium	200.8	NE	NE								
Thallium	200.8	0.063	NE	1	ND	ND	ND	ND	ND	ND	ND
Zinc	200.8	0.123	NE		0.085	0.095	0.07	0.025	0.15	0.11	ND
Total Cyanide (mg/l):	335.4	NE	NE			-			-		
Other Analyses (mg/l) Alkalinity (CaCO <sub>3</sub> )	310.1										
Ammonia as Nitrogen	350.3										
B. O. D./ 5 Day	405.1			1					-		
Chloride	300.0										
Fluoride	300.0										
Iron (dissolved)	200.8	NE	NE	1							
Manganese (dissolved)	200.8	NE	NE								
Nitrate as Nitrogen	300.0										
pH	150.1										
Sulfate	300.0			1							
Total Dissolved Solids	160.1										
Total Suspended Solids	160.2										
NOTES:	100.2			l							

Total Suspended Solids NOTES:

 NOTES:

 NOTES:

 1. Sampling methodologies changed to GAA standards as of July 2004 sampling round.

 2. This table includes only those compounds detected.

 3. RSR criteria means Remedial Standard Regulation criteria established by the Connecticut Department of Environmental Protection (CTDEEP).

 4. NE means numeric RSR criteria not established by CTDEEP.

 5. ND means that the compound was not detected above laboratory detection limit.

 6. Concentrations in bold type exceed criteria established by CTDEEP.

 7. ug/L means micrograms per liter, mg/L means milligrams per liter.

 8. B: Compound also detected in one or more associated laboratory blanks.

 Chloromethane reported by laboratory as a likely analytical laboratory artifact.

PARAMETER		Surface Water Protection	Residential Volatilization	Sample ID: Comments:					RF-HA301-MV	v				RF-4	102-MW
		Criteria	Criteria	Sample Date:	31-Dec-15	31-Mar-16	28-Jun-16	19-Oct-16	29-Mar-17	27-Mar-18	17-May-19	8-May-20	24-Jun-21	8-Apr-22	14-Jun-22
Volatile Organic Compounds (ug/	1):			Method:	8260C	8260C	8260C	8260C	8260C						
4-Isopropyltoluene		200	870		ND										
Benzene		710	130		ND										
Chloroform		14,100	26		ND										
Chloromethane		10,000	130		ND										
Naphthalene		210	NE		ND										
Toluene		4,000,000	23,500		ND										
Semi-Volatile Organic Compound	ls (ug/l):			Method:	8270D	8270D	8270D	8270D	8270D						
2-Methyl Naphthalene		62	1000		ND										
Acenaphthene		150	30500		ND										
Acenaphthylene		0.3	NE		ND										
Anthracene		1,100,000	NE		ND										
Benzo[a]anthracene		0.3	NE NF		ND	ND	ND	ND	ND	ND	ND ND				
Benzo[b]fluoranthene		0.3			ND	ND	ND	ND	ND	ND					
Benzo[k]fluoranthene Fluoranthene		0.3 3,700	NE NE		ND ND										
			NE NE			ND ND	ND ND	ND ND	ND ND	ND ND	ND ND				
Fluorene		140,000 0.54	NE NE		ND ND										
Indeno[1,2,3-cd]pyrene Naphthalene		0.54 210	NE NE		ND ND										
Phenanthrene		210	NE		ND										
Pyrene		110,000	NE		ND										
Pyrene		110,000	INE												
Chlorinated Pesticides (ug/l):				Method:	505	505	505	505	505	505	505	505	505	505	505
Chiormated Pesticides (ug/l):															
				Method:	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082
Polychlorinated Biphenyls (ug/l):		0.5	NE												
Total Petroleum Hydrocarbons (n	ng/l):	0.25	NE	Method:	CT ETPH ND	CT ETPH 	CT ETPH 	CT ETPH 	СТ ЕТРН 						
Total Metals (mg/l):	Method				200.7/7470A	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2	200.7/245.2		
Arsenic	200.8	0.004	NE		ND			ND	ND						
Barium	200.8	2.2	NE												
Copper	200.8	0.048	NE		ND			ND	ND						
Lead	200.8	0.013	NE		ND			ND	ND						
Mercury	7470A / 245.2	0.0004	NE		ND			ND	ND						
Nickel	200.8	0.88	NE		ND										
Potassium	200.8	NE	NE												
Selenium	200.8	0.05	NE		ND										
Sodium	200.8	NE	NE												
Thallium	200.8	0.063	NE		ND										
Zinc	200.8	0.123	NE		ND	ND	ND	ND	ND	ND	0.26	0.2	0.1	ND	ND
Total Cyanide (mg/l):	335.4	NE	NE			-									
Other Analyses (mg/l) Alkalinity (CaCO <sub>3</sub> )	310.1														
Ammonia as Nitrogen	350.3														
B. O. D./ 5 Day	405.1														
Chloride	300.0														
Fluoride	300.0														
Iron (dissolved)	200.8	NE	NE												
Manganese (dissolved)	200.8	NE	NE												
Nitrate as Nitrogen	300.0			1											
рН	150.1														
Sulfate	300.0														-
Total Dissolved Solids	160.1														
Total Suspended Solids	160.2														

Total Suspended Solids NOTES:

 NOTES:

 NOTES:

 1. Sampling methodologies changed to GAA standards as of July 2004 sampling round.

 2. This table includes only those compounds detected.

 3. RSR criteria means Remedial Standard Regulation criteria established by the Connecticut Department of Environmental Protection (CTDEEP).

 4. NE means numeric RSR criteria not established by CTDEEP.

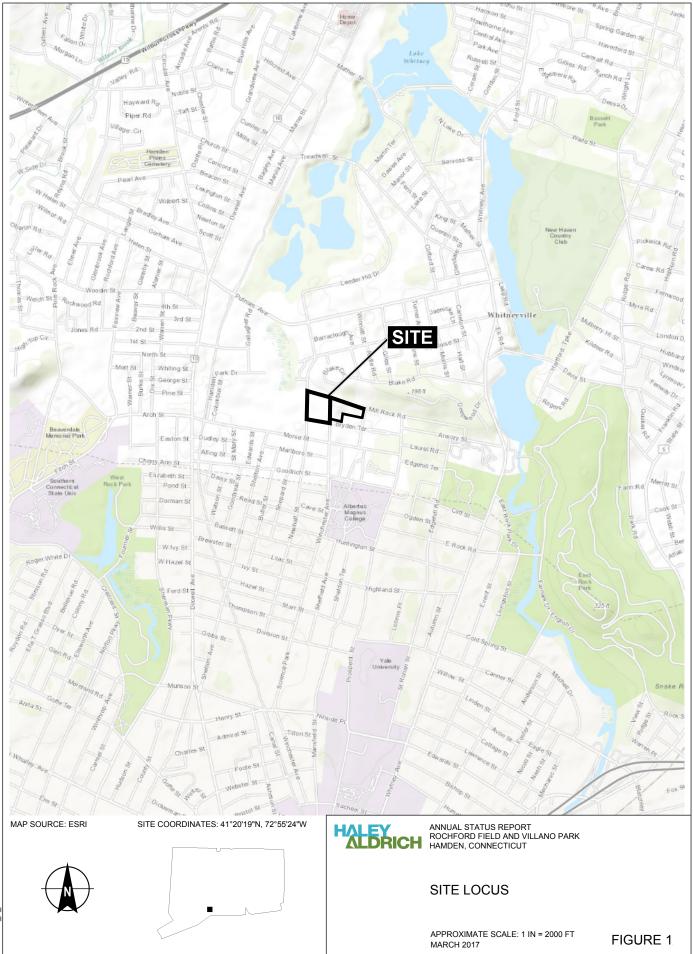
 5. ND means that the compound was not detected above laboratory detection limit.

 6. Concentrations in bold type exceed criteria established by CTDEEP.

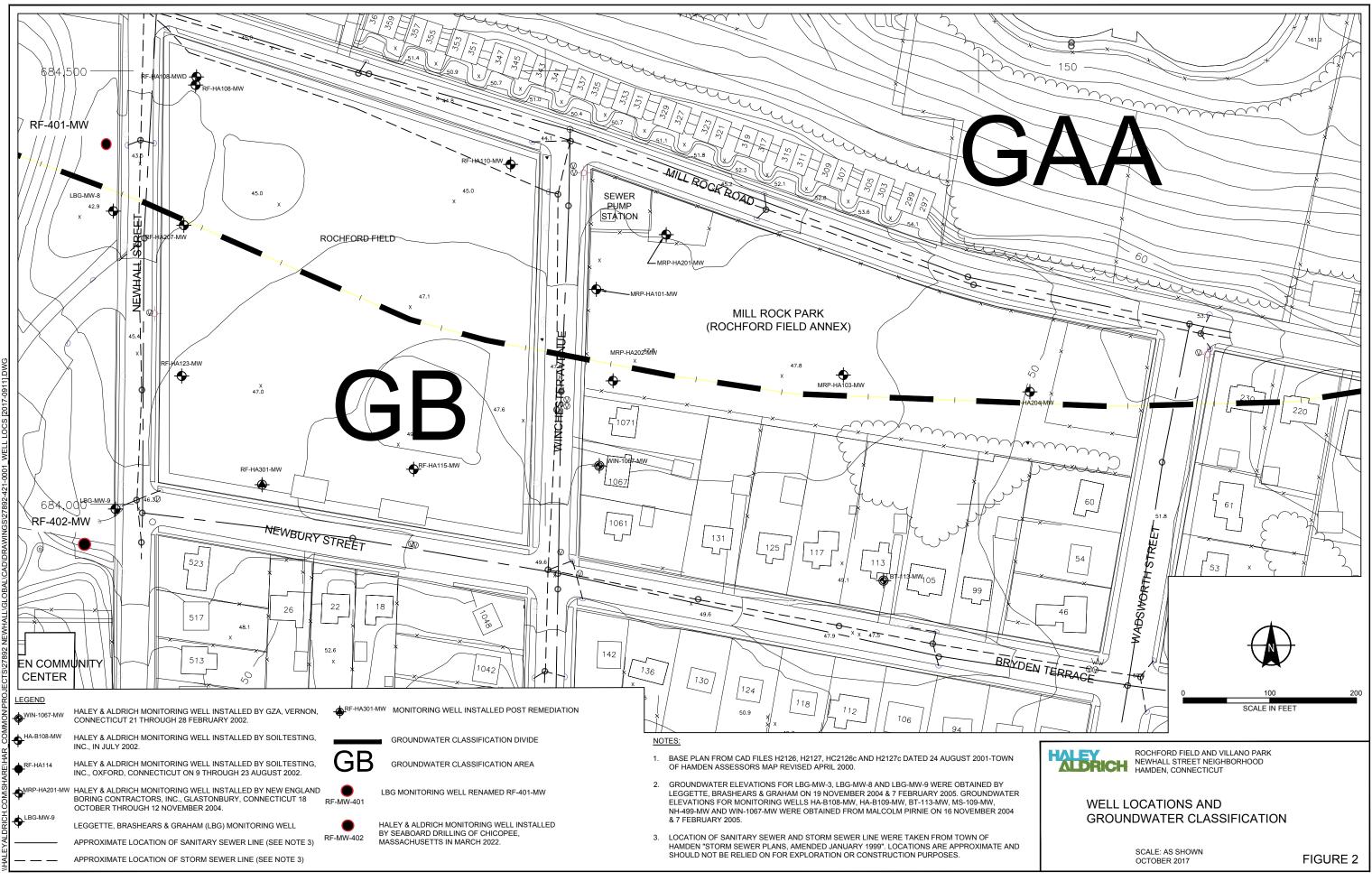
 7. ug/L means micrograms per liter, mg/L means milligrams per liter.

 8. B: Compound also detected in one or more associated laboratory blanks.

 Chloromethane reported by laboratory as a likely analytical laboratory artifact.



27892-428\_1\_LOCUS.PDF



GENOVESI, RICHARD Printed: 10/16/2017 3:44 PM Layout: FIGURE 2-11X17



Client: Ms. Debbie Motycka-Downie Haley & Aldrich 100 Corporate Place, Suite 105 Rocky Hill, CT 06067-1803

# Analytical Report CET# 2060389

Report Date:June 20, 2022 Project: 27892-433, Rochford Field, Hamden Project Number: 27892-433

Connecticut Laboratory Certificate: PH 0116 Massachusetts Laboratory Certificate: M-CT903 Rhode Island Laboratory Certificate: 199



New York NELAP Accreditation: 11982 Pennsylvania Laboratory Certificate: 68-02927

## SAMPLE SUMMARY

The sample(s) were received at 6.0°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
RF-402	2060389-01	Water	6/14/2022 9:10	06/14/2022
RF-401	2060389-02	Water	6/14/2022 10:30	06/14/2022

## Analyte: Mercury [EPA 245.2]

## Analyst: EAS

## Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2060389-01	RF-402	ND	0.00020	mg/L	1	B2F1510	06/15/2022	06/15/2022 15:21	
2060389-02	RF-401	ND	0.00020	mg/L	1	B2F1510	06/15/2022	06/15/2022 15:23	

**Client Sample ID RF-402** 

#### Lab ID: 2060389-01

## Total Metals Method: EPA 200.7

## Analyst: SS

#### Matrix: Water

Analyte	Result (mg/L)	RL (mg/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.013	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:07	
Arsenic	ND	0.0040	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:07	
Copper	ND	0.040	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:07	
Zinc	ND	0.020	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:07	

## Client Sample ID RF-401 Lab ID: 2060389-02

Total Metals Method: EPA 200.7 Analyst: SS

Analyte	Result (mg/L)	RL (mg/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.013	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:12	
Arsenic	ND	0.0040	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:12	
Copper	ND	0.040	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:12	
Zinc	ND	0.020	1	EPA 200.7	B2F1508	06/15/2022	06/15/2022 20:12	

## CET # : 2060389 Project: 27892-433, Rochford Field, Hamden Project Number: 27892-433

## **QUALITY CONTROL SECTION**

#### Batch B2F1508 - EPA 200.7

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B2F1508-BLK1)					Prepared: 6	/15/22 Analyzed	1: 6/15/22		
Lead	ND	0.013							
Arsenic	ND	0.0040							
Copper	ND	0.040							
Zinc	ND	0.020							
LCS (B2F1508-BS1)					Prepared: 6	/15/22 Analyzed	l: 6/15/22		
Lead	0.200	0.013	0.200		100	85 - 115			
Arsenic	0.196	0.0040	0.200		98.0	85 - 115			
Copper	0.195	0.040	0.200		97.3	85 - 115			
Zinc	0.211	0.020	0.200		105	85 - 115			

## CET # : 2060389 Project: 27892-433, Rochford Field, Hamden

Project Number: 27892-433

#### Batch B2F1510 - EPA 245.2

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B2F1510-BLK1)					Prepared: 6/	15/22 Analyzed	l: 6/15/22		
Mercury	ND	0.00020							
LCS (B2F1510-BS1)					Prepared: 6/	15/22 Analyzed	l: 6/15/22		
Mercury	0.00502	0.00020	0.005		100	85 - 115			

All questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

Dania Litta

David Ditta Laboratory Director This technical report was reviewed by Robert Blake

R Blah J

Project Manager

This report shall not be reproduced except in full, without the written approval of the laboratory

Report Comments:

Sample Result Flags:

- E- The result is estimated, above the calibration range.
- H- The surrogate recovery is above the control limits.
- L- The surrogate recovery is below the control limits.
- B- The compound was detected in the laboratory blank.
- P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
- D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
- +- The Surrogate was diluted out.
- \*C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
- \*C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
- \*F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
- \*F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
- \*I- Analyte exceeds method limits from second source standard in Initial Calibration Verification (ICV). No directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

For Percent Solids, if any of the following prep methods (3050B, 3540C, 3545A, 3550C, 5035 and 9013A) were used for samples pertaining to this report, the percent solids procedure is within that prep method.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at or above the specified reporting limit

Reporting Limit (RL) is the limit of detection for an analyte after any adjustment made for dilution or percent moisture. All analyses were performed in house unless a Reference Laboratory is listed. Samples will be disposed of 30 days after the report date. 80 Lupes Drive Stratford, CT 06615



Tel: (203) 377-9984 Fax: (203) 377-9952 email: cet1@cetlabs.com

## Quality Control Definitions and Abbreviations

Internal Standard (IS)	An Analyte added to each sample or sample extract. An internal standard is used to monitor retention
	time, calculate relative response, and quantify analytes of interest.
Surrogate Recovery	The % recovery for non-target organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period.
ND	Not detected at or above the specified reporting limit.
RL	RL is the limit of detection for an analyte after any adjustment made for dilution or percent moisture.
Dilution	Multiplier added to detection levels (MDL) and/or sample results due to interferences and/or high
	concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Result	Amount of analyte found in a sample.
Spike Level	Amount of analyte added to a sample
Matrix Spike Result	Amount of analyte found including amount that was spiked.
Matrix Spike Dup	Amount of analyte found in duplicate spikes including amount that was spike.
Matrix Spike % Recovery	% Recovery of spiked amount in sample.
Matrix Spike Dup % Recovery	% Recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between Matrix Spike and Matrix Spike Duplicate.
Blank	Method Blank that has been taken through all steps of the analysis.
LCS % Recovery	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Recovery Limits	A range within which specified measurements results must fall to be compliant.
CC	Calibration Verification

Flags:

- H- Recovery is above the control limits
- L- Recovery is below the control limits
- B- Compound detected in the Blank
- P- RPD of dual column results exceeds 40%
- #- Sample result too high for accurate spike recovery.



Connecticut Laboratory Certification PH0116 Massachussets Laboratory Certification M-CT903 Pennsylvania NELAP Accreditation 68-02927 New York NELAP Accreditation 11982 Rhode Island Certification 199



## REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name:	Complete Environmental Testing, Inc.	Client: Haley & Aldı	rich
Project Location:	27892-433, Rochford Field, Hamden	<b>Project</b> Number:	27892-433
Laboratory Sample I	D(s):	Sample Date(s):	
2060389-01 thru 20603	89-02	06/14/2022	
List RCP Methods Us	sed:	<b>CET #:</b> 2060389	
,			

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents?	Yes No
1A	Were the method specified preservation and holding time requirements met?	Yes No
1B	VPH and EPH Methods only: Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	Yes No
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes No
3	Were samples received at an appropriate temperature (< 6 degrees C.)?	Yes No
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	Yes No
5a	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes 🖌 No
5b	b) Were these reporting limits met?	Yes No
6	For each analytical method referenced in this laboratory report package, were results reported for all consituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes 🖌 No
7	Are project specific matrix spikes and laboratory duplicates included with this data set?	Yes 🖌 No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information

must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."

This form may not be altered and all questions must be answered.

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

Authorized Signature:

re: List

Position: Laboratory Director

Printed Name: David Ditta

Date: 06/20/2022

Name of Laboratory: <u>Complete Environmental Testing, Inc.</u>

This certification form is to be used for RCP methods only.

## **RCP Case Narrative**

6- The client requested a subset of the RCP metals list.

7- Project specific QC was not requested by the client.

## QC Batch/Sequence Report

Batch	Sequence	CET ID	Sample ID	Specific Method	Matrix	<b>Collection Date</b>
B2F1508	S2F1504	2060389-01	RF-402	EPA 200.7	Water	06/14/2022
B2F1508	S2F1504	2060389-02	RF-401	EPA 200.7	Water	06/14/2022
B2F1510		2060389-01	RF-402	EPA 245.2	Water	06/14/2022
B2F1510		2060389-02	RF-401	EPA 245.2	Water	06/14/2022

Validie Solis Only:         Date and Time in Freezor         Only:         Date and Time in Freezor         Clion:         Date and Time in Freezor         Clion:         Clion: <tr< th=""><th>al charge may apply.</th><th>939</th><th>Deb Materia Dawnie Amotyckadownie Chartyaldrich.co</th><th></th><th>Sock - Han CT</th><th>City Col Col Col Col Col Col Col Col Col Col</th><th></th><th>Haley &amp; Aldrich</th><th><b>&gt;</b></th><th>Client / Reporting Information</th><th>HEELINGUISHED BY DATE/TIME REGEIVED BY:</th><th>6/14/12 1130</th><th>(M=MeOH B=Bisulfate W=Water</th><th>1</th><th><math>+ \circ</math></th><th></th><th></th><th></th><th>-</th><th>RF-401 6/14/17 1030 W</th><th>N 10160 22/1/1/9 201-201-201-2</th><th>(include Units for any sample depths provided) Collection wipe end Day (include Units for any sample depths provided) Date/Time (specify) S to Day</th><th>e-mail: cetservices@cettabs.com e-mail: bottleorders@cettabs.com w=-mail: bottleorders@cettabs.com</th><th>80 Lupes Drive Tel: (203) 377-9984 (Animuta Animation Turnaround Time Stratford, CT 06615 Fax: (203) 377-9952 (Second Animatic An</th><th>Motiv</th><th>COMPLETE ENVIRONMENTAL TESTING INC.</th><th></th></tr<>	al charge may apply.	939	Deb Materia Dawnie Amotyckadownie Chartyaldrich.co		Sock - Han CT	City Col		Haley & Aldrich	<b>&gt;</b>	Client / Reporting Information	HEELINGUISHED BY DATE/TIME REGEIVED BY:	6/14/12 1130	(M=MeOH B=Bisulfate W=Water	1	$+ \circ$				-	RF-401 6/14/17 1030 W	N 10160 22/1/1/9 201-201-201-2	(include Units for any sample depths provided) Collection wipe end Day (include Units for any sample depths provided) Date/Time (specify) S to Day	e-mail: cetservices@cettabs.com e-mail: bottleorders@cettabs.com w=-mail: bottleorders@cettabs.com	80 Lupes Drive Tel: (203) 377-9984 (Animuta Animation Turnaround Time Stratford, CT 06615 Fax: (203) 377-9952 (Second Animatic An	Motiv	COMPLETE ENVIRONMENTAL TESTING INC.	
	are resolved. TAT for samples received after 3 p.m. will	Temp Upon C Evidence of N PAGE	Taboratory Certification Needed (check one)	RSR Reporting Limits (check one)  GA  GB  SWP	PDF EDD - Specify Format	Std Site Specific (MS/MSD) *  RCP Pkg *	# Collector(s): Frq.n		Project # のファタイン	Project:												Three Da Std (5-7 Da 8260 CT 8260 Arc 8260 Ha CT ETPI 8270 CT 8270 PN PCBs Pesticide 8 RCRA 13 Priori 15 CT D Total SPLP TCLP Dissolve Field Filt Lab to Fi	ays) List Domatics logens H List As SOX SS ty Poll EP d lter			CHAIN OF CUSIODY	Volatile Soils Only:

## **Jacqueline M. Bakos**

From: Sent: To: Subject: Motycka Downie, Deb <DMotyckaDownie@haleyaldrich.com> Tuesday, June 14, 2022 3:40 PM Jacqueline M. Bakos RE: test??

Jacqui Sorry – new field people. Total metals (mercury, zinc, lead, copper, arsenic) – same for both wells.

Do you need me to annotate the COC?

He also turned in samples from another project - did he include metals we want on that one?

Thanks!

Deborah L. Motycka Downie, LEP Senior Technical Specialist Haley & Aldrich, Inc. 100 Corporate Place, Suite 105 Rocky Hill, CT 06067 Cell: 857.488.7477 Phone:860.572.3939 dmotyckadownie@haleyaldrich.com www.haleyaldrich.com

From: Jacqueline M. Bakos <jbakos4@cetlabs.com> Sent: Tuesday, June 14, 2022 3:28 PM To: Motycka Downie, Deb <DMotyckaDownie@haleyaldrich.com> Subject: test??

and press game in a service

CAUTION: External Email

Debbie, What list of metals??

Jacqui Bakos Sample Manager Complete Environmental Testing, Inc. Phone: (203) 377-9984 Fax: (203) 377-9952





Client: Ms. Debbie Motycka-Downie Haley & Aldrich 100 Corporate Place, Suite 105 Rocky Hill, CT 06067-1803

# Analytical Report CET# 2040218

Report Date:April 15, 2022 Project: 27892-433, Rochford Field, Hamden Project Number: 027892-433

Connecticut Laboratory Certificate: PH 0116 Massachusetts Laboratory Certificate: M-CT903 Rhode Island Laboratory Certificate: 199



New York NELAP Accreditation: 11982 Pennsylvania Laboratory Certificate: 68-02927

## SAMPLE SUMMARY

The sample(s) were received at 3.1°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
RF-401	2040218-01	Water	4/08/2022 9:50	04/08/2022
RF-402	2040218-02	Water	4/08/2022 12:00	04/08/2022

## Analyte: Mercury [EPA 245.2]

## Analyst: EAS

## Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2040218-01	RF-401	ND	0.00020	mg/L	1	B2D1406	04/14/2022	04/14/2022 15:34	
2040218-02	RF-402	ND	0.00020	mg/L	1	B2D1406	04/14/2022	04/14/2022 15:36	

**Client Sample ID RF-401** 

## Lab ID: 2040218-01

## Total Metals Method: EPA 200.7

## Analyst: SS

#### Matrix: Water

Analyte	Result (mg/L)	RL (mg/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.013	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:37	
Arsenic	ND	0.0040	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:37	
Copper	ND	0.040	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:37	
Zinc	0.092	0.020	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:37	

## Client Sample ID RF-402 Lab ID: 2040218-02

Total Metals Method: EPA 200.7 Analyst: SS

water	Matrix:	Water
-------	---------	-------

Analyte	Result (mg/L)	RL (mg/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.013	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:41	
Arsenic	ND	0.0040	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:41	
Copper	ND	0.040	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:41	
Zinc	ND	0.020	1	EPA 200.7	B2D1202	04/12/2022	04/12/2022 19:41	

## **QUALITY CONTROL SECTION**

#### Batch B2D1202 - EPA 200.7

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B2D1202-BLK1)					Prepared: 4	/12/22 Analyzed	d: 4/12/22		
Lead	ND	0.013							
Arsenic	ND	0.0040							
Copper	ND	0.040							
Zinc	ND	0.020							
LCS (B2D1202-BS1)					Prepared: 4	/12/22 Analyzed	d: 4/12/22		
Lead	0.193	0.013	0.200		96.7	85 - 115			
Arsenic	0.200	0.0040	0.200		100	85 - 115			
Copper	0.199	0.040	0.200		99.3	85 - 115			
Zinc	0.195	0.020	0.200		97.5	85 - 115			

## CET # : 2040218 Project: 27892-433, Rochford Field, Hamden

Project Number: 027892-433

#### Batch B2D1406 - EPA 245.2

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B2D1406-BLK1)					Prepared: 4/	14/22 Analyzed	1: 4/14/22		
Mercury	ND	0.00020							
LCS (B2D1406-BS1)					Prepared: 4/	14/22 Analyzed	1: 4/14/22		
Mercury	0.00492	0.00020	0.005		98.4	85 - 115			

All questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

Dania Litta

David Ditta Laboratory Director This technical report was reviewed by Timothy Fusco

to a. Juro

Project Manager

This report shall not be reproduced except in full, without the written approval of the laboratory

Report Comments:

Sample Result Flags:

- E- The result is estimated, above the calibration range.
- H- The surrogate recovery is above the control limits.
- L- The surrogate recovery is below the control limits.
- B- The compound was detected in the laboratory blank.
- P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
- D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
- +- The Surrogate was diluted out.
- \*C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
- \*C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
- \*F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
- \*F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
- \*I- Analyte exceeds method limits from second source standard in Initial Calibration Verification (ICV). No directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

For Percent Solids, if any of the following prep methods (3050B, 3540C, 3545A, 3550C, 5035 and 9013A) were used for samples pertaining to this report, the percent solids procedure is within that prep method.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at or above the specified reporting limit

Reporting Limit (RL) is the limit of detection for an analyte after any adjustment made for dilution or percent moisture. All analyses were performed in house unless a Reference Laboratory is listed. Samples will be disposed of 30 days after the report date. 80 Lupes Drive Stratford, CT 06615



Tel: (203) 377-9984 Fax: (203) 377-9952 email: cet1@cetlabs.com

## Quality Control Definitions and Abbreviations

Internal Standard (IS)	An Analyte added to each sample or sample extract. An internal standard is used to monitor retention
	time, calculate relative response, and quantify analytes of interest.
Surrogate Recovery	The % recovery for non-target organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period.
ND	Not detected at or above the specified reporting limit.
RL	RL is the limit of detection for an analyte after any adjustment made for dilution or percent moisture.
Dilution	Multiplier added to detection levels (MDL) and/or sample results due to interferences and/or high
	concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Result	Amount of analyte found in a sample.
Spike Level	Amount of analyte added to a sample
Matrix Spike Result	Amount of analyte found including amount that was spiked.
Matrix Spike Dup	Amount of analyte found in duplicate spikes including amount that was spike.
Matrix Spike % Recovery	% Recovery of spiked amount in sample.
Matrix Spike Dup % Recovery	% Recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between Matrix Spike and Matrix Spike Duplicate.
Blank	Method Blank that has been taken through all steps of the analysis.
LCS % Recovery	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Recovery Limits	A range within which specified measurements results must fall to be compliant.
CC	Calibration Verification

Flags:

- H- Recovery is above the control limits
- L- Recovery is below the control limits
- B- Compound detected in the Blank
- P- RPD of dual column results exceeds 40%
- #- Sample result too high for accurate spike recovery.



Connecticut Laboratory Certification PH0116 Massachussets Laboratory Certification M-CT903 Pennsylvania NELAP Accreditation 68-02927 New York NELAP Accreditation 11982 Rhode Island Certification 199



## REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name:	Complete Environmental Testing, Inc.	Client: Ha	aley & Aldri	ch
Project Location:	27892-433, Rochford Field, Hamden	Project Ni	umber:	027892-433
Laboratory Sample II	D(s):	Sample D	ate(s):	
2040218-01 thru 20402	18-02	04/08/2022	2	
List RCP Methods Us	ed:	<i>CET</i> #:	2040218	
,				

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents?	yes ☐ No
1A	Were the method specified preservation and holding time requirements met?	Yes No
1B	VPH and EPH Methods only: Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	Yes No
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes No
3	Were samples received at an appropriate temperature (< 6 degrees C.)?	yes □ No N/A
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	Yes No
5a	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes 🔽 No
5b	b) Were these reporting limits met?	Yes No
6	For each analytical method referenced in this laboratory report package, were results reported for all consituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes 🖌 No
7	Are project specific matrix spikes and laboratory duplicates included with this data set?	Yes 🖌 No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information

must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."

This form may not be altered and all questions must be answered.

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

Authorized Signature:

e: Litt

Position: Laboratory Director

Printed Name: David Ditta

Date: <u>04/14/2022</u>

Name of Laboratory: Complete Environmental Testing, Inc.

This certification form is to be used for RCP methods only.

## **RCP Case Narrative**

6- The client requested a subset of the RCP metals list.

7- Project specific QC was not requested by the client.

## QC Batch/Sequence Report

Batch	Sequence	CET ID	Sample ID	Specific Method	Matrix	<b>Collection Date</b>
B2D1202	S2D1208	2040218-01	RF-401	EPA 200.7	Water	04/08/2022
B2D1202	S2D1208	2040218-02	RF-402	EPA 200.7	Water	04/08/2022
B2D1406		2040218-01	RF-401	EPA 245.2	Water	04/08/2022
B2D1406		2040218-02	RF-402	EPA 245.2	Water	04/08/2022

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Tel: (203) 377-9984 Fax: (203) 377-9952 e-mail: cet1@cetlabs.com

Client: Ms. Debbie Motycka-Downie Haley & Aldrich 100 Corporate Place, Suite 105 Rocky Hill, CT 06067-1803

# Analytical Report CET# 2020307

Report Date:February 17, 2022 Project: 27892-430 Project Number: Rochford Field, Hamden

Connecticut Laboratory Certificate: PH 0116 Massachusetts Laboratory Certificate: M-CT903 Rhode Island Laboratory Certificate: 199



New York NELAP Accreditation: 11982 Pennsylvania Laboratory Certificate: 68-02927

## SAMPLE SUMMARY

The sample(s) were received at 5.0°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
MW-1	2020307-01	Water	2/14/2022 12:45	02/14/2022

## Analyte: Mercury [EPA 245.2]

## Analyst: EAS

#### Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2020307-01	MW-1	ND	0.00020	mg/L	1	B2B1510	02/15/2022	02/15/2022 14:57	

## Analyte: Total Zinc [EPA 200.7]

## Analyst: SS

## Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2020307-01	MW-1	0.037	0.020	mg/L	1	B2B1601	02/16/2022	02/16/2022 16:59	

## Analyte: Total Lead [EPA 200.7]

## Analyst: SS

## Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2020307-01	MW-1	ND	0.013	mg/L	1	B2B1601	02/16/2022	02/16/2022 16:59	

## Analyte: Total Copper [EPA 200.7]

## Analyst: SS

## Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
 2020307-01	MW-1	ND	0.040	mg/L	1	B2B1601	02/16/2022	02/16/2022 16:59	

## Analyte: Total Arsenic [EPA 200.7]

## Analyst: SS

## Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2020307-01	MW-1	ND	0.0040	mg/L	1	B2B1601	02/16/2022	02/16/2022 16:59	

## **QUALITY CONTROL SECTION**

#### Batch B2B1510 - EPA 245.2

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes	
Blank (B2B1510-BLK1)					Prepared: 2/15/2022 Analyzed: 2/15/2022					
Mercury	ND	0.00020								
LCS (B2B1510-BS1)					Prepared: 2/15/2022 Analyzed: 2/15/2022					
Mercury	0.00512	0.00020	0.005		102	85 - 115				

CET #: 2020307

Lead

Zinc

Lead

Zinc

Project: 27892-430

Project Number: Rochford Field, Hamden

#### Batch B2B1601 - EPA 200.7 Result RL Spike Source % Rec RPD % Rec RPD Analyte (mg/L) (mg/L) Result Limits Limit Notes Level Blank (B2B1601-BLK1) Prepared: 2/16/2022 Analyzed: 2/16/2022 ND 0.013 ND Arsenic 0.0040 Copper ND 0.040 ND 0.020 LCS (B2B1601-BS1) Prepared: 2/16/2022 Analyzed: 2/16/2022 0.206 0.013 0.200 103 85 - 115 0.205 0.0040 0.200 102 85 - 115 Arsenic Copper 0.206 0.040 0.200 103 85 - 115

0.200

107

85 - 115

0.214

0.020

All questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

Dania Litta

David Ditta Laboratory Director This technical report was reviewed by Timothy Fusco

to a. quo

Project Manager

This report shall not be reproduced except in full, without the written approval of the laboratory

Report Comments:

Sample Result Flags:

- E- The result is estimated, above the calibration range.
- H- The surrogate recovery is above the control limits.
- L- The surrogate recovery is below the control limits.
- B- The compound was detected in the laboratory blank.
- P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
- D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
- +- The Surrogate was diluted out.
- \*C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
- \*C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
- \*F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
- \*F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
- \*I- Analyte exceeds method limits from second source standard in Initial Calibration Verification (ICV). No directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

For Percent Solids, if any of the following prep methods (3050B, 3540C, 3545A, 3550C, 5035 and 9013A) were used for samples pertaining to this report, the percent solids procedure is within that prep method.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at or above the specified reporting limit

Reporting Limit (RL) is the limit of detection for an analyte after any adjustment made for dilution or percent moisture. All analyses were performed in house unless a Reference Laboratory is listed. Samples will be disposed of 30 days after the report date. 80 Lupes Drive Stratford, CT 06615



Tel: (203) 377-9984 Fax: (203) 377-9952 email: cet1@cetlabs.com

#### Quality Control Definitions and Abbreviations

Internal Standard (IS)	An Analyte added to each sample or sample extract. An internal standard is used to monitor retention
	time, calculate relative response, and quantify analytes of interest.
Surrogate Recovery	The % recovery for non-target organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period.
ND	Not detected at or above the specified reporting limit.
RL	RL is the limit of detection for an analyte after any adjustment made for dilution or percent moisture.
Dilution	Multiplier added to detection levels (MDL) and/or sample results due to interferences and/or high
	concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Result	Amount of analyte found in a sample.
Spike Level	Amount of analyte added to a sample
Matrix Spike Result	Amount of analyte found including amount that was spiked.
Matrix Spike Dup	Amount of analyte found in duplicate spikes including amount that was spike.
Matrix Spike % Recovery	% Recovery of spiked amount in sample.
Matrix Spike Dup % Recovery	% Recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between Matrix Spike and Matrix Spike Duplicate.
Blank	Method Blank that has been taken through all steps of the analysis.
LCS % Recovery	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Recovery Limits	A range within which specified measurements results must fall to be compliant.
CC	Calibration Verification

Flags:

- H- Recovery is above the control limits
- L- Recovery is below the control limits
- B- Compound detected in the Blank
- P- RPD of dual column results exceeds 40%
- #- Sample result too high for accurate spike recovery.



Connecticut Laboratory Certification PH0116 Massachussets Laboratory Certification M-CT903 Pennsylvania NELAP Accreditation 68-02927 New York NELAP Accreditation 11982 Rhode Island Certification 199



# REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name:	Complete Environmental Testing, Inc.	Client: Haley & Aldrich						
Project Location:	27892-430	Project N	umber:	Rochford Field, Hamden				
Laboratory Sample I	D(s):	Sample D	ate(s):					
2020307-01		02/14/202	2					
List RCP Methods Us	ed:	<i>CET</i> #:	2020307					

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents?	¥es ☐ No
1A	Were the method specified preservation and holding time requirements met?	Yes No
1B	VPH and EPH Methods only: Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	Yes No
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes No
3	Were samples received at an appropriate temperature (< 6 degrees C.)?	Yes No
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	Yes No
5a	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes 🔽 No
5b	b) Were these reporting limits met?	Yes No
6	For each analytical method referenced in this laboratory report package, were results reported for all consituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes 🖌 No
7	Are project specific matrix spikes and laboratory duplicates included with this data set?	Yes 🖌 No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information

must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."

This form may not be altered and all questions must be answered.

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

Authorized Signature:

re: List

Position: Laboratory Director

Printed Name: David Ditta

Date: 02/17/2022

Name of Laboratory: Complete Environmental Testing, Inc.

This certification form is to be used for RCP methods only.

# **RCP Case Narrative**

6- Client requested a subset of the RCP metals list.

7- Project specific QC was not requested by the client.

#### QC Batch/Sequence Report

Batch	Sequence	CET ID	Sample ID	Specific Method	Matrix	<b>Collection Date</b>
B2B1601	S2B1603	2020307-01	MW-1	EPA 200.7	Water	02/14/2022
B2B1510		2020307-01	MW-1	EPA 245.2	Water	02/14/2022

iy apply.	•	Uch Inotychia Unotychiadownig analogiadich.com		Rochy Hill (	CUI DINO TIME CUI DI NO CUI		Company Name Haley & Albrid	Client / Reporting Information	RELINQUISHED BY: DATE/TIME RECEIVED BY:	2/14/14/15 DATE/TIME ARECEIVED BY:	m 1 9 3	E (PPlastic, G-Glass, V	PRESERVATIVE (CI-HCI, N-HNO3, S-H2SO4, Na-NaOH, C=Cool, O-Other)				MW-1 2/H 1245 W	Ite/Time Solid (specify) Same Da Next Day Three Da	Stratford, CT 06615 Fax: (203) 377-9952 service (check one) e-mail: cetservices@cettabs.com www.water e-mail: bottleorders@cettabs.com www.water ow-brinking check one)	Tel: (203) 377-9984	COMPLETE ENVIRONMENTAL TESTING, INC.		
all issues are resolvo	Temp Upon     Subscription     Subscription     Evidence of Cooling:     N     PAGE     OF	Laboratory Certification Needed (check one)	RSR Reporting Limits (check one)  GA  GB  SWP  Other	Data Report  PDF  EDD - Specify Format Other Other	QA/QC Std Site Specific (MS/MSD) * RCP Pkg * DQAW *	CET Quote # Collector(s):	Location: Humbry CT Project #: 27892-430	Project: Rich Ray 6 Field Project Information										Std (5-7 Dz 8260 CT 8260 Arc 8260 Ha CT ETPH 8270 CT 8270 PN PCBs Pesticide 8 RCRA 13 Priori 15 CT D Total M SPLP TCLP Dissolve Field Filt Lab to F	List ogens l List As SOX A ss ty Poll EP <b>cha j</b> d ered	Metals Additional Analysis	CET:	Date and Time in Freezer	Volatile Soils Only: 12

.

start on the next business day. All samples picked up by courier service will be considered next business day receipt for TAT purposes.

#### Jacqueline M. Bakos

From: Sent: To: Subject: Motycka Downie, Deb <DMotyckaDownie@haleyaldrich.com> Monday, February 14, 2022 5:08 PM Jacqueline M. Bakos RE: list of metals

Sorry Jacqui, we need:

total metals (arsenic, copper, lead, mercury, zinc).

Thanks Debbie

Deborah L. Motycka Downie, LEP

Senior Technical Specialist Haley & Aldrich, Inc. 100 Corporate Place, Suite 105 Rocky Hill, CT 06067 Cell: 857.488.7477 Phone:860.572.3939 dmotyckadownie@haleyaldrich.com www.haleyaldrich.com

From: Jacqueline M. Bakos <jbakos4@cetlabs.com> Sent: Monday, February 14, 2022 3:51 PM To: Motycka Downie, Deb <DMotyckaDownie@haleyaldrich.com> Subject: list of metals

**CAUTION: External Email** 

Deb, For the attached chain what list of metals are you looking for?? Thank you

Jacqui Bakos Sample Manager Complete Environmental Testing, Inc. Phone: (203) 377-9984 Fax: (203) 377-9952 www.cetlabs.com



This e-mail and any attachments contain CET confidential information that may be proprietary or privileged. If you receive this message in error or are not the intended recipient, you should not retain, distribute, disclose or use any of



Client: Ms. Debbie Motycka-Downie Haley & Aldrich 100 Corporate Place, Suite 105 Rocky Hill, CT 06067-1803

# Analytical Report CET# 1060737R

Report Date:July 07, 2021 Project: 27892-430 Project Number: Rochford Field, Hamden

Connecticut Laboratory Certificate: PH 0116 Massachusetts Laboratory Certificate: M-CT903 Rhode Island Laboratory Certificate: 199



New York NELAP Accreditation: 11982 Pennsylvania Laboratory Certificate: 68-02927

#### SAMPLE SUMMARY

The sample(s) were received at 4.0°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
RF-HA123-MW	1060737-01	Water	6/24/2021 11:25	06/25/2021
RF-HA301-MW	1060737-02	Water	6/24/2021 12:03	06/25/2021
RF-HA108-MW	1060737-03	Water	6/24/2021 12:55	06/25/2021
RF-HA115-MW	1060737-04	Water	6/24/2021 13:18	06/25/2021

#### Analyte: Total Zinc [EPA 200.7]

#### Analyst: SS

#### Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1060737-01	RF-HA123-MW	0.81	0.020	mg/L	1	B1F2926	06/29/2021	06/30/2021 15:54	
1060737-02	RF-HA301-MW	0.10	0.020	mg/L	1	B1F2926	06/29/2021	06/30/2021 15:58	
1060737-03	RF-HA108-MW	0.086	0.020	mg/L	1	B1F2926	06/29/2021	06/30/2021 16:11	
1060737-04	RF-HA115-MW	0.58	0.020	mg/L	1	B1F2926	06/29/2021	06/30/2021 16:15	

#### Analyte: Total Mercury [EPA 200.8]

# Analyst: SS

#### Matrix: Water

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
 1060737-01	RF-HA123-MW	0.0013	0.00040	mg/L	1	B1F2902	06/29/2021	06/29/2021 14:02	

### Analyte: Total Copper [EPA 200.7]

#### Analyst: SS

#### Matrix: Water

Γ	Laboratory ID	Client Sample ID	D1t	DI	T. i.i.	Dilution	Detal	Durana	Date/Time	Notas
L		Cheft Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Analyzed	Notes
	1060737-01	RF-HA123-MW	ND	0.040	mg/L	1	B1F2926	06/29/2021	06/30/2021 15:54	

Complete Environmental Testing, Inc.

80 Lupes Drive, Stratford, CT 06615 • Tel: 203-377-9984 • Fax: 203-377-9952 • www.cetlabs.com

# Client Sample ID RF-HA123-MW Lab ID: 1060737-01

#### Total Metals Method: EPA 200.7

Analyst: SS

#### Matrix: Water

Analyte	Result (mg/L)	RL (mg/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	0.021	0.013	1	EPA 200.7	B1F2926	06/29/2021	06/30/2021 15:54	
Selenium	ND	0.010	1	EPA 200.7	B1F2926	06/29/2021	06/30/2021 15:54	
Cadmium	ND	0.0050	1	EPA 200.7	B1F2926	06/29/2021	06/30/2021 15:54	
Chromium	ND	0.050	1	EPA 200.7	B1F2926	06/29/2021	06/30/2021 15:54	
Arsenic	ND	0.0040	1	EPA 200.7	B1F2926	06/29/2021	06/30/2021 15:54	
Barium	0.33	0.050	1	EPA 200.7	B1F2926	06/29/2021	06/30/2021 15:54	
Silver	ND	0.012	1	EPA 200.7	B1F2926	06/29/2021	06/30/2021 15:54	

#### Conn. Extractable TPH Method: CT-ETPH

#### Analyst: ACS

Method: CI-EIPH							Ma	atrix: Water
Analyte	Result (mg/L)	RL (mg/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	ND	0.10	1	EPA 3510C	B1F2905	06/29/2021	06/29/2021 23:29	
Surrogate: Octacosane	97.1 %	5	0 - 150		B1F2905	06/29/2021	06/29/2021 23:29	

#### **Client Sample ID RF-HA115-MW**

#### Lab ID: 1060737-04

Conn. Extractable TPH							Ar	nalyst: ACS
Method: CT-ETPH							Ma	trix: Water
Analyte	Result (mg/L)	RL (mg/L)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ЕТРН	ND	0.10	1	EPA 3510C	B1F2905	06/29/2021	06/29/2021 23:53	
Surrogate: Octacosane	95.4 %	5	0 - 150		B1F2905	06/29/2021	06/29/2021 23:53	

#### **QUALITY CONTROL SECTION**

#### Batch B1F2902 - EPA 200.8

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B1F2902-BLK1)					Prepared: 6	29/21 Analyze	d: 6/29/21		
Mercury	ND	0.00040							
LCS (B1F2902-BS1)					Prepared: 6	29/21 Analyze	d: 6/29/21		
Mercury	0.00494	0.00040	0.005		98.7	85 - 115			

CET # : 1060737

Project: 27892-430

Project Number: Rochford Field, Hamden

#### Batch B1F2905 - CT-ETPH

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B1F2905-BLK1)					Prepared: 6/	29/21 Analyze	d: 6/29/21		
ETPH	ND	0.10							
Surrogate: Octacosane					110	50 - 150			
LCS (B1F2905-BS1)					Prepared: 6/	29/21 Analyze	d: 6/29/21		
ЕТРН	0.340	0.10	0.500		68.0	60 - 120			
Surrogate: Octacosane					87.6	50 - 150			

#### CET # : 1060737

Project: 27892-430

Project Number: Rochford Field, Hamden

#### Batch B1F2926 - EPA 200.7

Analyte	Result (mg/L)	RL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Analyte	(IIIg/L)	(ing/L)	Level	Result	70 KCC	Linits	ΝD	Liiiit	Notes
Blank (B1F2926-BLK1)					Prepared: 6/	29/21 Analyze	d: 6/30/21		
Lead	ND	0.013							
Selenium	ND	0.010							
Cadmium	ND	0.0050							
Chromium	ND	0.050							
Arsenic	ND	0.0040							
Barium	ND	0.050							
Silver	ND	0.012							
Copper	ND	0.0050							
Zinc	ND	0.0050							
LCS (B1F2926-BS1)					Prepared: 6/	29/21 Analyze	d: 6/30/21		
Lead	0.199	0.013	0.200		99.3	85 - 115			
Selenium	0.385	0.010	0.400		96.3	85 - 115			
Cadmium	0.194	0.0050	0.200		97.1	85 - 115			
Chromium	0.185	0.050	0.200		92.6	85 - 115			
Arsenic	0.194	0.0040	0.200		96.8	85 - 115			
Barium	0.185	0.050	0.200		92.5	85 - 115			
Silver	0.0948	0.012	0.100		94.8	85 - 115			
Copper	0.184	0.0050	0.200		92.0	85 - 115			
Zinc	0.206	0.0050	0.200		103	85 - 115			

#### CASE NARRATIVE

Revision: Original report dated (7/1/2021); Reported total zinc and copper for 1060737-01 per client request.

All questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

Dania Litta

David Ditta Laboratory Director

This technical report was reviewed by Robert Blake

R Blah J

Project Manager

Report Comments:

Sample Result Flags:

- E- The result is estimated, above the calibration range.
- H- The surrogate recovery is above the control limits.
- L- The surrogate recovery is below the control limits.
- B- The compound was detected in the laboratory blank.
- P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
- D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
- +- The Surrogate was diluted out.
- \*C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
- \*C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
- \*F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
- \*F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
- \*I- Analyte exceeds method limits from second source standard in Initial Calibration Verification (ICV). No directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

For Percent Solids, if any of the following prep methods (3050B, 3540C, 3545A, 3550C, 5035 and 9013A) were used for samples pertaining to this report, the percent solids procedure is within that prep method.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at or above the specified reporting limit

Reporting Limit (RL) is the limit of detection for an analyte after any adjustment made for dilution or percent moisture. All analyses were performed in house unless a Reference Laboratory is listed. Samples will be disposed of 30 days after the report date. 80 Lupes Drive Stratford, CT 06615



Tel: (203) 377-9984 Fax: (203) 377-9952 email: cet1@cetlabs.com

#### Quality Control Definitions and Abbreviations

Internal Standard (IS)	An Analyte added to each sample or sample extract. An internal standard is used to monitor retention
	time, calculate relative response, and quantify analytes of interest.
Surrogate Recovery	The % recovery for non-target organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration	An analytical standard analyzed with each set of samples to verify initial calibration of the system.
Batch	Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period.
ND	Not detected at or above the specified reporting limit.
RL	RL is the limit of detection for an analyte after any adjustment made for dilution or percent moisture.
Dilution	Multiplier added to detection levels (MDL) and/or sample results due to interferences and/or high
	concentration of target compounds.
Duplicate	Result from the duplicate analysis of a sample.
Result	Amount of analyte found in a sample.
Spike Level	Amount of analyte added to a sample
Matrix Spike Result	Amount of analyte found including amount that was spiked.
Matrix Spike Dup	Amount of analyte found in duplicate spikes including amount that was spike.
Matrix Spike % Recovery	% Recovery of spiked amount in sample.
Matrix Spike Dup % Recovery	% Recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between Matrix Spike and Matrix Spike Duplicate.
Blank	Method Blank that has been taken through all steps of the analysis.
LCS % Recovery	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Recovery Limits	A range within which specified measurements results must fall to be compliant.
CC	Calibration Verification

Flags:

- H- Recovery is above the control limits
- L- Recovery is below the control limits
- B- Compound detected in the Blank
- P- RPD of dual column results exceeds 40%
- #- Sample result too high for accurate spike recovery.



Connecticut Laboratory Certification PH0116 Massachussets Laboratory Certification M-CT903 Pennsylvania NELAP Accreditation 68-02927 New York NELAP Accreditation 11982 Rhode Island Certification 199



# REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name:	Complete Environmental Testing, Inc.	Client: Haley & A	ldrich
Project Location:	27892-430	<b>Project</b> Number:	Rochford Field, Hamden
Laboratory Sample I	D(s):	Sample Date(s):	
1060737-01 thru 10607	37-04	06/24/2021	
List RCP Methods Us	ed:	<b>CET</b> #: 106073	37
CT-ETPH			

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents?	Yes No
1A	Were the method specified preservation and holding time requirements met?	Yes No
1B	VPH and EPH Methods only: Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	Yes No
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes No
3	Were samples received at an appropriate temperature (< 6 degrees C.)?	Yes No
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	Yes No
5a	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes 🖌 No
5b	b) Were these reporting limits met?	Yes No
6	For each analytical method referenced in this laboratory report package, were results reported for all consituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes 🖌 No
7	Are project specific matrix spikes and laboratory duplicates included with this data set?	Yes 🖌 No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information

must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."

This form may not be altered and all questions must be answered.

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

Authorized Signature:

re: Lat

Position: Laboratory Director

Printed Name: David Ditta

Date: 07/01/2021

Name of Laboratory: Complete Environmental Testing, Inc.

This certification form is to be used for RCP methods only.

# **RCP Case Narrative**

6- The client requested a subset of the RCP metals list.

7- Project specific QC was not requested by the client.

#### QC Batch/Sequence Report

Batch	Sequence	CET ID	Sample ID	Specific Method	Matrix	<b>Collection Date</b>
B1F2905		1060737-01	RF-HA123-MW	CT-ETPH	Water	06/24/2021
B1F2905		1060737-04	RF-HA115-MW	CT-ETPH	Water	06/24/2021
B1F2926	S1F3005	1060737-01	RF-HA123-MW	EPA 200.7	Water	06/24/2021
B1F2926	S1F3005	1060737-02	RF-HA301-MW	EPA 200.7	Water	06/24/2021
B1F2926	S1F3005	1060737-03	RF-HA108-MW	EPA 200.7	Water	06/24/2021
B1F2926	S1F3005	1060737-04	RF-HA115-MW	EPA 200.7	Water	06/24/2021
B1F2902	S1F2908	1060737-01	RF-HA123-MW	EPA 200.8	Water	06/24/2021

COMPLETE ENVIRONMENTAL TESTING, INC.	Project Information  Project I	CT       Same Day*         Next Day*       Next Day*         Two Day*       Three Day*         Std (5-7 Days)       Std (5-7 Days)         Std (5-7 Days)       Std (5-7 Days)         Std (5-7 Days)       Std (5-7 Days)         RSR Reporting Limits (check one)       8260 Aromatics         Std (5-7 Days)       Std (5-7 Days)         RSR Reporting Limits (check one)       8270 CT List         Std (5-7 Days)       Std (5-7 Days)         Std (5-7 Days)       Std (5-7 Days)         RSR Reporting Limits (check one)       8270 CT List         Std (5-7 Days)       Std (5-7 Days)         Std (5-7 Days)       Std (5-7 Days)         RSR Reporting Limits (check one)       8270 CT List         Std (5-7 Days)       Std (5-7 Days)         Std (5-7 Da	Fax: (203) 377-9952     Sample Collection of the end of the	Stratford, CT 06615       e-mail: cetservices @ cetlabs.com         e-mail: bottleorders @ cetlabs.com         e-mail: bottleorders @ cetlabs.com         Sample ID/Sample Depths       Collection         (nclude Units for any sample depths provided)       Collection         RF - HA123 - MW       Cul21/2020         RF - HA105 - MW       Cul21/2020         PRESERVATIVE (CI-HOI, N-HNO3, S-H2SO, Na-NaOH, C-Cool       Contrainer         Contrainer TYPE (P-Plastic, G-Glass, V-Vial, O-Other)       Procerve         Soil VOCS Only       Mater F= biguilation       W-Water F= biguilation         NEUNOUSHED BY:       DATETIME       PROCERVE         HA Clay       Cul24 Clay       PROCERVE         HA Clay       Ald/n C/h       RECEIVE         NOT CONTAINER       N=CONTETIME       RECEIVE         NOT CONTAINER       N=CONTETIME       RECEIVE
COMPLETE ENVIRONMENTAL TESTING, INC. CHAIN OF CUSTODY CLET:	Metals	ō	<u>*</u>	
Volatile Soils Only:	CUSIODY Client		COMPLETE ENVIRONMENTAL	
	T OLICTORY Date and Time			
	Volatile Soils Only:			1060737
	Λ,			

start on the next business day. All samples picked up by courier service will be considered next business day receipt for TAT purposes.