MARYLAND DEPARTMENT OF THE ENVIRONMENT

Land Management Administration • Solid Waste Program
1800 Washington Boulevard • Suite 605 • Baltimore Maryland 21230-1719
410-537-3315 • 800-633-6101 x3315 • www.mde.maryland.gov

Groundwater Discharge Permit Application For Unlined Rubble Landfills

Authority: Title 9, Environment Article, Annotated Code of Maryland, and Code of Maryland Regulations (COMAR) 26.08.04

Application for: ☐ **New Permit** ☒ **Renewal Permit**

Existing Permit No. 2016 **-GWD-** 2297 **Issued Date:** 06 / 29 / 2016 **Expiration Date:** 06 / 28 / 2021

Applicant's Legal Name: Ritchie Land Reclamation, LLC

Applicant's Status: ☐ **Individual** ☒ **Corporation** ☐ **Government** ☒ **Other:** LLC

Corporation or Government Federal Tax Identification No.: 521435785

Maryland State Department of Assessments and Taxation (SDAT) ID No.: W12836391
Please note that a business/entity must be registered to do business in Maryland before a permit can be issued. The business or entity's information provided in this application must match the information in the SDAT register.

Proof of workers' compensation coverage is required under § 1-202 of the Environment Article. Please provide one of the following:
(1) A copy of a Certificate of Compliance issued by the Maryland Workers' Compensation Commission; or
(2) Workers' Compensation Insurance Policy/Binder Number: ZAWCI9389703

Applicant's Mailing Address: 24024 Frederick Rd. **City:** Clarksville **State:** MD **Zip Code:** 20871

Applicant's Telephone No.: (301) 428 - 0800 **Facsimile No.:** (301) 428 - 1736

Emergency Contact Name & Title: Michael Ensor, Sr. V.P. **Telephone No.:** (301) 428 - 0800

Facility/Site Name: Ritchie Rubble Landfill

Facility/Site Address: 2001 Ritchie Marlboro Rd. **City:** Upper Marlboro **State:** MD **Zip Code:** 20774

County: Prince George's **Maryland Grid Coordinates:** N433500 / E136000 -

County Zoning Map No.: 82/52 **Lot/Parcel No.:** 334 and 70 **Deed/Liber/Folio No.:** 6236@470; 13756@019

State Legislative District: 25 **Local Council/Election District:** 06

Bay Tributary Watershed Code: 02131103 **Latitude/Longitude (Deg/Min/Sec):** 38 - 51 - 31 / 76 - 49 - 44

Site Acreage: 288.28 **Landfill Acreage:** 43

Nature of Business (describe briefly): Rubble landfill activities, including land clearing, construction and building demolition rubble (concrete, rock, brick, lumber, brush, trees, etc.), mulching activities, along with recycling activities.

List Other Environmental Permits Held For the Site: (e.g., NPDES-surface water; PSD-air emissions; RCRA-hazardous waste, etc).

Refuse Disposal Permit No. 2016-WRF-0590A (MDE), Discharge Authorization Permit No. 08101 (WSSC), General Discharge Permit No. MD6499953 (MDE), 2015 GP Stormwater Construction Activity No. MDRCQ04Z4,

Wastewater (Leachate) Description:

Wastewater (leachate) that permeates through the top 2-foot cover layer enters the existing waste, then permeates through the waste until it reaches the cell floor. The leachate then flows through the existing cell floor compacted soil layer and through the strata below the cell floor.

Flow Calculations:

See attachment

Groundwater Characteristics

(Attach Latest Groundwater Sample Results)

Map Of The Facility

This application must be accompanied by a copy of a U.S. Geological Survey topographical map or road map with a scale of 1" = 2000 feet, showing the exact location of the facility.

By signing this form, I the applicant or duly authorized representative, do solemnly affirm under the penalties of perjury that the contents of this application are true to the best of my knowledge, information, and belief. I hereby authorize the representatives of the Department to have access to the site of the facility for inspection and to records relating to this application at any reasonable time. I acknowledge that depending on the type of facility applied for, other permits or approvals may be required.

Signature of Applicant

12/23/20

Date

Michael Ensor

Applicant's Name (Print)

Sr. V.P.

Title

This Notice is provided pursuant to §10-624 of the State Government Article of the Maryland Code. The personal information requested on this form is intended to be used in processing your application. Failure to provide the information requested may result in your application not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment ("MDE") is a public agency and subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not protected by Federal or State law.

Privacy Act Notice: This Notice is provided pursuant to the Federal Privacy Act of 1974, 5 U.S.C. §552.a. Disclosure of your Social Security Number or Federal Employer Identification Number on this application is mandatory pursuant to the provisions of §1-203 (2003), Environment Article, Annotated Code of Maryland, which requires the MDE to verify that an applicant for a permit has paid all undisputed taxes and unemployment insurance. Social Security or Federal Employer Identification Numbers will not be used for any purposes other than those described in this Notice.

Instructions for Completing the Groundwater Discharge Permit Application For Unlined Rubble Landfills

INTRODUCTION

Section 9-322 of the Environment Article, Annotated Code of Maryland, requires that a permit be obtained to discharge any pollutant into surface or ground waters of the State. "Discharge" means the addition, introduction, leaking, spilling, or emitting of any pollutant to State waters or the placing of any pollutant in a location where it is likely to pollute. Unlined rubble landfills are required by the Department to obtain a Groundwater Discharge Permit.

You are required to supply information concerning the quality of rainwater percolating through the rubble landfill cell floor. The Department will evaluate your completed application and notify you of any additional requirements if necessary.

WASTEWATER (LEACHATE) DESCRIPTION

Provide a description of the process(es) generating the wastewater (leachate) discharge through the landfill cell floor.

FLOW CALCULATIONS

Determine the daily average volume of wastewater (leachate) discharged through the landfill cell floor. The volume must be reported in gallons per day.

GROUNDWATER CHARACTERISTICS

Attach a list of the parameters being sampled in the groundwater, their Practical Quantitation Limits (PQL), and a copy of the latest laboratory analysis report for these parameters. Groundwater samples must be representative of the quality of the groundwater at the facility. Sample collection, transportation, storage and analysis shall be performed in accordance with a plan approved by the Department. The Department reserves the right to require additional groundwater sampling and analysis if necessary.

For questions regarding this application, please contact the Department at (410) 537-3315.

FLOW CALCULATIONS

DAILY AVERAGE VOLUME OF LEACHATE DISCHARGED
UNLINED AREA (45 Acres) OF RITCHIE RUBBLE LANDFILL

1. 35,573 Gallons per day ([GPD]; 1,735,719.50 cubic feet / year for 45 Acres)
2. 790 GPD / Acre

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**                                                                  **
**                                                                  **
**              HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE        **
**                HELP MODEL VERSION 3.07  (1 NOVEMBER 1997)        **
**                  DEVELOPED BY ENVIRONMENTAL LABORATORY           **
**                    USAE WATERWAYS EXPERIMENT STATION             **
**             FOR USEPA RISK REDUCTION ENGINEERING LABORATORY       **
**                                                                  **
**                                                                  **
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PRECIPITATION DATA FILE:    C:\QRLF-II\RITGW.D4
TEMPERATURE DATA FILE:      C:\QRLF-II\RITTEMP.D7
SOLAR RADIATION DATA FILE:  C:\QRLF-II\RITSOL.D13
EVAPOTRANSPIRATION DATA:    C:\QRLF-II\RITEVAP.D11
SOIL AND DESIGN DATA FILE:  C:\QRLF-II\RITSOIL.D10
OUTPUT DATA FILE:           C:\QRLF-II\SSDEC204.OUT



TIME:  16:27     DATE:  12/18/2020



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     TITLE:  RITCHIE RUBBLE LANDFILL  -  PHASE I - Unlined Portion

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     NOTE:  INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
               COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.



                                LAYER  1
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                    TYPE 1 - VERTICAL PERCOLATION LAYER
                        MATERIAL TEXTURE NUMBER  15
          THICKNESS                    =     24.00   INCHES
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  POROSITY                    =      0.4750 VOL/VOL
  FIELD CAPACITY              =      0.3780 VOL/VOL
  WILTING POINT               =      0.2650 VOL/VOL
  INITIAL SOIL WATER CONTENT  =      0.3708 VOL/VOL
  EFFECTIVE SAT. HYD. COND.   =  0.170000003000E-04 CM/SEC
NOTE:  SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY  1.80
         FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.



                        LAYER  2
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           TYPE 1 - VERTICAL PERCOLATION LAYER
               MATERIAL TEXTURE NUMBER  18
  THICKNESS                   =    900.00   INCHES
  POROSITY                    =      0.6710 VOL/VOL
  FIELD CAPACITY              =      0.2920 VOL/VOL
  WILTING POINT               =      0.0770 VOL/VOL
  INITIAL SOIL WATER CONTENT  =      0.2931 VOL/VOL
  EFFECTIVE SAT. HYD. COND.   =  0.100000005000E-02 CM/SEC



                        LAYER  3
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               TYPE 3 - BARRIER SOIL LINER
               MATERIAL TEXTURE NUMBER  15
  THICKNESS                   =     24.00   INCHES
  POROSITY                    =      0.4750 VOL/VOL
  FIELD CAPACITY              =      0.3780 VOL/VOL
  WILTING POINT               =      0.2650 VOL/VOL
  INITIAL SOIL WATER CONTENT  =      0.4750 VOL/VOL
  EFFECTIVE SAT. HYD. COND.   =  0.170000003000E-04 CM/SEC



          GENERAL DESIGN AND EVAPORATIVE ZONE DATA
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NOTE:  SCS RUNOFF CURVE NUMBER WAS COMPUTED FROM DEFAULT
         SOIL DATA BASE USING SOIL TEXTURE #15 WITH A
         FAIR STAND OF GRASS, A SURFACE SLOPE OF 33.%
         AND A SLOPE LENGTH OF  600. FEET.
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SCS RUNOFF CURVE NUMBER	=	90.30	
FRACTION OF AREA ALLOWING RUNOFF	=	99.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	45.000	ACRES
EVAPORATIVE ZONE DEPTH	=	9.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	2.929	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	4.275	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	2.385	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	284.131	INCHES
TOTAL INITIAL WATER	=	284.131	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
WASHINGTON DISTRICT OF COLUMB

STATION LATITUDE	=	38.90	DEGREES
MAXIMUM LEAF AREA INDEX	=	1.00	
START OF GROWING SEASON (JULIAN DATE)	=	104	
END OF GROWING SEASON (JULIAN DATE)	=	296	
EVAPORATIVE ZONE DEPTH	=	9.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	9.30	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	60.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	62.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	68.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	65.00	%

NOTE: PRECIPITATION DATA FOR LYNCHBURG VIRGINIA

WAS ENTERED FROM THE DEFAULT DATA FILE.

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR WASHINGTON DISTRICT OF COLUMBIA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
31.40	33.60	42.40	53.30	62.40	70.70
75.50	74.30	67.40	55.30	44.80	35.10

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR WASHINGTON DISTRICT OF COLUMBIA
AND STATION LATITUDE = 38.90 DEGREES

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1974

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	3.94	2.05	2.96	3.11	4.86	2.93
	2.84	6.00	5.55	0.38	1.74	3.68
RUNOFF	0.412	0.036	0.063	0.442	0.072	0.098
	0.554	0.267	1.743	0.000	0.012	0.263
EVAPOTRANSPIRATION	1.618	1.965	2.450	2.250	3.609	3.151
	1.761	4.500	2.513	0.289	1.116	1.285
PERCOLATION/LEAKAGE THROUGH	1.4220	1.3629	0.8305	0.8682	0.4894	0.1818
LAYER 3	0.1126	1.0821	1.2461	0.9543	0.0592	0.9326

MONTHLY SUMMARIES FOR DAILY HEADS (INCHES)

AVERAGE DAILY HEAD ON	0.015	0.015	0.009	0.009	0.005	0.002
TOP OF LAYER 3	0.001	0.011	0.014	0.010	0.001	0.009
STD. DEVIATION OF DAILY	0.012	0.012	0.011	0.008	0.003	0.001
HEAD ON TOP OF LAYER 3	0.002	0.006	0.013	0.013	0.001	0.010

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ANNUAL TOTALS FOR YEAR 1974

	INCHES	CU. FEET	PERCENT
PRECIPITATION	40.04	6540534.000	100.00
RUNOFF	3.962	647139.187	9.89
EVAPOTRANSPIRATION	26.507	4329959.500	66.20
PERC./LEAKAGE THROUGH LAYER 3	9.541645	1558627.750	23.83
AVG. HEAD ON TOP OF LAYER 3	0.0084		
CHANGE IN WATER STORAGE	0.029	4810.570	0.07
SOIL WATER AT START OF YEAR	284.131	46412816.000	
SOIL WATER AT END OF YEAR	284.161	46417628.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	- 2.648	0.00

MONTHLY TOTALS (IN INCHES) FOR YEAR 1975

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	3.82	2.66	9.24	2.31	6.54	4.78
	4.42	4.68	7.42	2.43	2.96	4.34
RUNOFF	0.000	3.901	5.107	0.001	0.867	0.620
	0.222	0.786	1.014	0.372	0.738	2.345
EVAPOTRANSPIRATION	1.060	0.378	1.767	2.750	3.497	4.025
	3.354	3.083	2.650	2.212	1.262	1.067
PERCOLATION/LEAKAGE THROUGH	1.3545	0.0016	0.2535	2.0760	0.8949	1.3486

LAYER 3	1.6863	1.0805	0.3258	2.0885	1.9089	0.2377

MONTHLY SUMMARIES FOR DAILY HEADS (INCHES)

AVERAGE DAILY HEAD ON	0.014	0.000	0.003	0.023	0.009	0.014
TOP OF LAYER 3	0.018	0.012	0.004	0.021	0.021	0.003
STD. DEVIATION OF DAILY	0.013	0.000	0.008	0.010	0.011	0.012
HEAD ON TOP OF LAYER 3	0.012	0.010	0.005	0.010	0.009	0.001

ANNUAL TOTALS FOR YEAR 1975

	INCHES	CU. FEET	PERCENT
PRECIPITATION	55.60	9082259.000	100.00
RUNOFF	15.975	2609534.000	28.73
EVAPOTRANSPIRATION	27.105	4427538.000	48.75
PERC./LEAKAGE THROUGH LAYER 3	13.256961	2165524.500	23.84
AVG. HEAD ON TOP OF LAYER 3	0.0119		
CHANGE IN WATER STORAGE	- 0.737	- 120339.023	- 1.32
SOIL WATER AT START OF YEAR	284.161	46417628.000	
SOIL WATER AT END OF YEAR	283.424	46297288.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	1.869	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1976

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	2.70	1.98	4.07	0.28	5.32	7.34
	1.29	1.07	5.06	11.40	1.38	2.83
RUNOFF	0.692	0.131	0.442	0.000	0.705	0.904
	0.002	0.001	0.871	3.741	0.000	1.042
EVAPOTRANSPIRATION	0.733	1.918	2.366	1.263	2.688	4.841
	1.882	1.108	1.936	2.766	1.394	0.702
PERCOLATION/LEAKAGE THROUGH	0.3445	1.3691	0.2961	0.4823	0.4046	0.8382
LAYER 3	1.7679	0.0255	0.1330	0.3817	2.5512	2.8317

MONTHLY SUMMARIES FOR DAILY HEADS (INCHES)

AVERAGE DAILY HEAD ON	0.003	0.015	0.003	0.005	0.004	0.009
TOP OF LAYER 3	0.019	0.000	0.001	0.005	0.027	0.030
STD. DEVIATION OF DAILY	0.004	0.012	0.001	0.002	0.001	0.009
HEAD ON TOP OF LAYER 3	0.012	0.001	0.002	0.009	0.010	0.004

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ANNUAL TOTALS FOR YEAR 1976

	INCHES	CU. FEET	PERCENT
PRECIPITATION	44.72	7305013.500	100.00
RUNOFF	8.531	1393567.870	19.08
EVAPOTRANSPIRATION	23.595	3854323.000	52.76

PERC./LEAKAGE THROUGH LAYER 3	11.425715	1866390.620	25.55
AVG. HEAD ON TOP OF LAYER 3	0.0101		
CHANGE IN WATER STORAGE	1.168	190732.859	2.61
SOIL WATER AT START OF YEAR	283.424	46297288.000	
SOIL WATER AT END OF YEAR	284.591	46488020.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.779	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1977

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	1.76	0.61	2.71	4.84	1.50	3.39
	1.15	5.73	2.25	5.77	5.22	3.72
RUNOFF	1.256	0.000	0.044	0.683	0.010	0.046
	0.000	0.637	0.054	1.038	0.744	0.193
EVAPOTRANSPIRATION	0.402	0.771	2.703	3.320	1.698	3.190
	1.045	3.999	2.142	1.904	1.851	1.100
PERCOLATION/LEAKAGE THROUGH	0.6903	0.8096	0.1921	0.7913	0.2109	0.0028
LAYER 3	0.0000	0.7553	0.6769	0.6171	0.9422	1.3319

MONTHLY SUMMARIES FOR DAILY HEADS (INCHES)

AVERAGE DAILY HEAD ON	0.008	0.009	0.002	0.008	0.002	0.000
TOP OF LAYER 3	0.000	0.008	0.008	0.006	0.009	0.013
STD. DEVIATION OF DAILY	0.012	0.009	0.001	0.005	0.001	0.000
HEAD ON TOP OF LAYER 3	0.000	0.008	0.008	0.007	0.010	0.011

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ANNUAL TOTALS FOR YEAR 1977

	INCHES	CU. FEET	PERCENT
PRECIPITATION	38.65	6313477.000	100.00
RUNOFF	4.704	768340.937	12.17
EVAPOTRANSPIRATION	24.126	3941009.500	62.42
PERC./LEAKAGE THROUGH LAYER 3	7.020357	1146775.250	18.16
AVG. HEAD ON TOP OF LAYER 3	0.0060		
CHANGE IN WATER STORAGE	2.800	457349.094	7.24
SOIL WATER AT START OF YEAR	284.591	46488020.000	
SOIL WATER AT END OF YEAR	287.252	46922580.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.140	22787.650	0.36
ANNUAL WATER BUDGET BALANCE	0.0000	2.415	0.00

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MONTHLY TOTALS (IN INCHES) FOR YEAR 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	8.02	0.42	3.94	5.32	6.72	3.36
	3.66	3.86	1.22	0.84	3.22	3.68
RUNOFF	5.328	0.047	0.520	2.372	1.189	0.016
	0.078	0.244	0.312	0.000	0.090	0.260
EVAPOTRANSPIRATION	0.993	0.321	2.708	1.508	4.207	3.742
	3.672	2.423	1.380	0.477	1.157	1.299
PERCOLATION/LEAKAGE THROUGH	1.7147	2.1072	2.3021	0.9075	1.0430	1.7868
LAYER 3	0.0137	0.0003	0.6286	0.0925	0.1902	1.0977

MONTHLY SUMMARIES FOR DAILY HEADS (INCHES)

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
AVERAGE DAILY HEAD ON	0.017	0.025	0.023	0.010	0.011	0.020
TOP OF LAYER 3	0.000	0.000	0.007	0.001	0.002	0.012
STD. DEVIATION OF DAILY	0.012	0.009	0.006	0.011	0.010	0.013
HEAD ON TOP OF LAYER 3	0.000	0.000	0.005	0.001	0.003	0.012

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ANNUAL TOTALS FOR YEAR 1978

	INCHES	CU. FEET	PERCENT
PRECIPITATION	44.26	7229870.500	100.00
RUNOFF	10.457	1708105.120	23.63
EVAPOTRANSPIRATION	23.886	3901842.000	53.97
PERC./LEAKAGE THROUGH LAYER 3	11.884171	1941279.370	26.85
AVG. HEAD ON TOP OF LAYER 3	0.0106		
CHANGE IN WATER STORAGE	- 1.967	- 321357.031	- 4.44
SOIL WATER AT START OF YEAR	287.252	46922580.000	

SOIL WATER AT END OF YEAR	285.424	46624012.000	
SNOW WATER AT START OF YEAR	0.140	22787.650	0.32
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	1.246	0.00

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AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1974 THROUGH 1978

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	4.05	1.54	4.58	3.17	4.99	4.36
	2.67	4.27	4.30	4.16	2.90	3.65
STD. DEVIATIONS	2.39	0.98	2.67	2.03	2.10	1.81
	1.44	1.98	2.53	4.56	1.51	0.54
RUNOFF						
TOTALS	1.538	0.823	1.235	0.700	0.569	0.337
	0.171	0.387	0.799	1.030	0.317	0.821
STD. DEVIATIONS	2.168	1.721	2.175	0.980	0.513	0.402
	0.232	0.319	0.658	1.574	0.389	0.921
EVAPOTRANSPIRATION						
TOTALS	0.961	1.071	2.399	2.218	3.140	3.790
	2.343	3.023	2.124	1.530	1.356	1.090
STD. DEVIATIONS	0.449	0.814	0.384	0.854	0.971	0.695
	1.120	1.338	0.504	1.093	0.297	0.241
PERCOLATION/LEAKAGE THROUGH LAYER 3						
TOTALS	1.1052	1.1301	0.7749	1.0251	0.6086	0.8316

	0.7161	0.5887	0.6021	0.8268	1.1303	1.2863
STD. DEVIATIONS	0.5668	0.7814	0.8911	0.6108	0.3481	0.7564
	0.9244	0.5423	0.4235	0.7729	1.0830	0.9553

AVERAGES OF MONTHLY AVERAGED DAILY HEADS (INCHES)

DAILY AVERAGE HEAD ON TOP OF LAYER 3

AVERAGES	0.0116	0.0128	0.0081	0.0109	0.0063	0.0090
	0.0075	0.0060	0.0068	0.0087	0.0117	0.0133
STD. DEVIATIONS	0.0058	0.0091	0.0089	0.0068	0.0036	0.0082
	0.0098	0.0056	0.0045	0.0079	0.0115	0.0100

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AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1974 THROUGH 1978

	INCHES		CU. FEET	PERCENT
PRECIPITATION	44.65	(6.658)	7294231.0	100.00
RUNOFF	8.726	(4.8596)	1425337.37	19.541
EVAPOTRANSPIRATION	25.044	(1.6331)	4090934.00	56.085
PERCOLATION/LEAKAGE THROUGH LAYER 3	10.62577	(2.41459)	1735719.500	23.79578
AVERAGE HEAD ON TOP OF LAYER 3	0.009	(0.002)		
CHANGE IN WATER STORAGE	0.259	(1.8222)	42239.30	0.579

****

****

PEAK DAILY VALUES FOR YEARS 1974 THROUGH 1978

	(INCHES)	(CU. FT.)
PRECIPITATION	3.67	599494.500
RUNOFF	3.555	580656.1870
PERCOLATION/LEAKAGE THROUGH LAYER 3	0.122368	19988.74800
AVERAGE HEAD ON TOP OF LAYER 3	0.035	
SNOW WATER	3.45	563481.1870

MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.4637
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.2650

****

****

FINAL WATER STORAGE AT END OF YEAR 1978

LAYER	(INCHES)	(VOL/VOL)
1	9.6591	0.4025
2	264.3649	0.2937
3	11.4000	0.4750
SNOW WATER	0.000	

****
****

GROUNDWATER CHARACTERISTICS

TABLE I
MONITORING PARAMETERS

VOLATILE ORGANIC COMPOUNDS	PQL (ppb)	VOLATILE ORGANIC COMPOUNDS	PQL (ppb)
Acetone	5.0	Cis-1,2-Dichloroethene	1.0
Acrylonitrile	5.0	Trans-1,2-Dichloroethene	1.0
Benzene	1.0	Methylene chloride	1.0
Bromochloromethane	1.0	1,2-Dichloropropane	1.0
Bromodichloromethane	1.0	Trans-1,3-Dichloropropene	1.0
Bromoform	1.0	Cis-1,3-Dichloropropene	1.0
Bromomethane	1.0	Ethylbenzene	1.0
2-Butanone	5.0	2-Hexanone	5.0
Carbon disulfide	1.0	Iodomethane	1.0
Carbon tetrachloride	1.0	4-Methyl-2-pentanone	5.0
Chlorobenzene	1.0	Methyl Tertiary Butyl Ether	2.0
Chloroethane	1.0	Styrene	1.0
Chloroform	1.0	1,1,1,2-Tetrachloroethane	1.0
Chloromethane	1.0	1,1,2,2-Tetrachloroethane	1.0
Dibromochloromethane	1.0	Tetrachloroethene	1.0
1,2 Dibromo-3-chloropropane	1.0	Toluene	1.0
1,2 – Dibromoethane (EDB)	1.0	1,1,1-Trichloroethane	1.0
Dibromomethane	1.0	1,1,2-Trichloroethane	1.0
1,2 – Dichlorobenzene	1.0	Trichloroethene	1.0
1,4 – Dichlorobenzene	1.0	Trichlorofluoromethane	1.0
Trans-1,4-dichloro-2-butene	5.0	1,2,3-Trichloropropane	1.0
1,1-Dichloroethane	1.0	Vinyl acetate	1.0
1,2-Dichloroethane	1.0	Vinyl chloride	1.0
1,1-Dichloroethene	1.0	Xylene	1.0

TABLE II
MONITORING PARAMETERS

ELEMENTS AND INDICATOR PARAMETERS	PQL (ppm)	ELEMENTS AND INDICATOR PARAMETERS	PQL (ppm)
Total Antimony	0.0020	Total Silver	0.0100
Total Arsenic	0.0020	Total Sodium	0.2
Total Barium	0.0100	Total Thallium	0.0020
Total Beryllium	0.0020	Total Vanadium	0.0100
Total Cadmium	0.0040	Total Zinc	0.0100
Total Chromium	0.0100	PH	0.1 (SU)
Total Calcium	0.08	Alkalinity	1
Total Cobalt	0.0100	Hardness	0.5
Total Copper	0.0100	Chloride	0.39
Total Iron	0.005	Specific conductance	1
Total Lead	0.0020	Nitrate	0.06
Total Nickel	0.0110	Chemical oxygen demand	10
Total Magnesium	0.004	Turbidity	0.11 (NTU)
Total Manganese	0.0100	Ammonia	1
Total Mercury	0.0002	Sulfate	0.38
Total Potassium	0.39	Total dissolved solids	10
Total Selenium	0.035		

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ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-107413-1
Client Project/Site: Ritchie Rubble LF

For:
Geosyntec Consultants, Inc.
10211 Wincopin Circle
4'th Floor
Columbia, Maryland 21044

Attn: Adam Gray

Roxanne Cisneros

Authorized for release by:
7/14/2020 10:56:53 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@Eurofinset.com

PA Lab ID: 02-00416

Table of Contents

Case Narrative

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-107413-1

Job ID: 180-107413-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-107413-1

Comments
No additional comments.

Receipt
The sample was received on 6/24/2020 8:30 AM; the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.0º C.

Receipt Exceptions
The Sampler name/Site Contact was not entered on the COC.

Sample preservation, as applicable, was not listed on the COC. Preservation was verified at login for each analysis/container.

GC Semi VOA
Method 300.0: The following sample was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: M-21 (180-107413-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Methods 6020A: The initial low level continuing calibration verification (ICVL) associated with batch 180-320376 recovered above the upper control limit for Tin. The samples associated with this ICVL were non-detects for the affected analytes; therefore, the data have been reported.

Method 6020A: The post digestion spike % recovery for multiple analytes associated with batch 180-320376 was outside of control limits. The associated sample is: M-21 (180-107413-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-107413-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc. Job ID: 180-107413-1
Project/Site: Ritchie Rubble LF

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-21
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-21
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-21
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-21
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	08-01-20
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	05-23-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-21
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-21
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-20

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-107413-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-107413-1	M-21	Water	06/22/20 14:05	06/24/20 08:30	

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-107413-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatgraphy	EPA	TAL PIT
EPA 6020A	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
EPA 180.1	Turbidity, Nephelometric	EPA	TAL PIT
EPA 350.1	Nitrogen, Ammonia	EPA	TAL PIT
EPA 410.4	COD	MCAWW	TAL PIT
EPA 9050A	Specific Conductance	SW846	TAL PIT
SM 2340C	Hardness, Total	SM	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
410.4	COD	MCAWW	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT
Distill/Ammonia	Distillation, Ammonia	None	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Client Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-107413-1

Client Sample ID: M-21

Date Collected: 06/22/20 14:05
Date Received: 06/24/20 08:30

Lab Sample ID: 180-107413-1

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.33	H	0.10	0.023	mg/L			07/02/20 22:35	1
Chloride	150		1.0	0.32	mg/L			07/06/20 14:33	1
Sulfate	89		1.0	0.38	mg/L			07/02/20 22:35	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.50	J	1.0	0.31	ug/L		06/26/20 08:47	07/01/20 22:25	1
Barium	61		10	1.6	ug/L		06/26/20 08:47	07/01/20 22:25	1
Beryllium	0.81	J	1.0	0.18	ug/L		06/26/20 08:47	07/01/20 22:25	1
Cadmium	4.9		1.0	0.22	ug/L		06/26/20 08:47	07/01/20 22:25	1
Calcium	29000		500	130	ug/L		06/26/20 08:47	07/01/20 22:25	1
Chromium	ND		2.0	1.5	ug/L		06/26/20 08:47	07/01/20 22:25	1
Cobalt	7.3		0.50	0.13	ug/L		06/26/20 08:47	07/01/20 22:25	1
Copper	3.2		2.0	0.63	ug/L		06/26/20 08:47	07/01/20 22:25	1
Iron	860	B	50	20	ug/L		06/26/20 08:47	07/01/20 22:25	1
Silver	ND		1.0	0.18	ug/L		06/26/20 08:47	07/01/20 22:25	1
Potassium	6000		500	160	ug/L		06/26/20 08:47	07/01/20 22:25	1
Magnesium	13000		500	83	ug/L		06/26/20 08:47	07/01/20 22:25	1
Manganese	55		5.0	0.87	ug/L		06/26/20 08:47	07/01/20 22:25	1
Sodium	81000		500	350	ug/L		06/26/20 08:47	07/01/20 22:25	1
Nickel	43		1.0	0.34	ug/L		06/26/20 08:47	07/01/20 22:25	1
Lead	2.3		1.0	0.13	ug/L		06/26/20 08:47	07/01/20 22:25	1
Antimony	ND		2.0	0.38	ug/L		06/26/20 08:47	07/01/20 22:25	1
Selenium	ND		5.0	1.5	ug/L		06/26/20 08:47	07/01/20 22:25	1
Thallium	0.15	J	1.0	0.15	ug/L		06/26/20 08:47	07/01/20 22:25	1
Tin	ND	^	5.0	0.96	ug/L		06/26/20 08:47	07/01/20 22:25	1
Vanadium	ND		1.0	0.99	ug/L		06/26/20 08:47	07/01/20 22:25	1
Zinc	90		5.0	3.2	ug/L		06/26/20 08:47	07/01/20 22:25	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		07/01/20 15:30	07/01/20 19:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	4.7		0.85	0.050	NTU			06/24/20 12:32	1
Ammonia, distilled	ND		0.10	0.088	mg/L		07/07/20 01:09	07/07/20 18:13	1
Chemical Oxygen Demand	29		10	9.1	mg/L		07/06/20 15:56	07/06/20 19:06	1
Specific Conductance	710		1.0	1.0	umhos/cm			07/03/20 17:12	1
Hardness as calcium carbonate	120		5.0	5.0	mg/L			07/02/20 09:47	1
Total Dissolved Solids	500		10	10	mg/L			06/25/20 09:25	1
Total Alkalinity as CaCO3 to pH 4.5	ND		5.0	5.0	mg/L			06/26/20 10:17	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			06/26/20 10:17	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			06/26/20 10:17	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			06/26/20 10:17	1

QC Association Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-107413-1

HPLC/IC

Analysis Batch: 320284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107413-1	M-21	Total/NA	Water	EPA 300.0 R2.1	
MB 180-320284/41	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-320284/38	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 320480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107413-1	M-21	Total/NA	Water	EPA 300.0 R2.1	
MB 180-320480/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-320480/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 319684

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107413-1	M-21	Total Recoverable	Water	3005A	
MB 180-319684/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-319684/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-107413-1 MS	M-21	Total Recoverable	Water	3005A	
180-107413-1 MSD	M-21	Total Recoverable	Water	3005A	

Prep Batch: 320255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107413-1	M-21	Total/NA	Water	7470A	
MB 180-320255/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-320255/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-107413-1 MS	M-21	Total/NA	Water	7470A	
180-107413-1 MSD	M-21	Total/NA	Water	7470A	

Analysis Batch: 320271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107413-1	M-21	Total/NA	Water	EPA 7470A	320255
MB 180-320255/1-A	Method Blank	Total/NA	Water	EPA 7470A	320255
LCS 180-320255/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	320255
180-107413-1 MS	M-21	Total/NA	Water	EPA 7470A	320255
180-107413-1 MSD	M-21	Total/NA	Water	EPA 7470A	320255

Analysis Batch: 320376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-107413-1	M-21	Total Recoverable	Water	EPA 6020A	319684
MB 180-319684/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	319684
MB 180-319684/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	319684
180-107413-1 MS	M-21	Total Recoverable	Water	EPA 6020A	319684
180-107413-1 MSD	M-21	Total Recoverable	Water	EPA 6020A	319684

Analysis Batch: 320456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-319684/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	319684

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ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-111238-1
Client Project/Site: Ritchie Rubble LF

For:
Geosyntec Consultants, Inc.
10211 Wincopin Circle
4'th Floor
Columbia, Maryland 21044

Attn: Adam Gray

Roxanne Cisneros

Authorized for release by:
10/19/2020 2:45:44 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@Eurofinset.com

PA Lab ID: 02-00416

Table of Contents

Job ID: 180-111238-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-111238-1

Comments
A Trip Blank was received and analyzed but was not listed on the COC.

Receipt
The samples were received on 9/22/2020 9:30 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.1º C, 2.6º C and 3.2º C.

GC/MS VOA
Method 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-331574 was outside the method criteria for the following surrogate: 1,2-Dichloroethane-d4. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-331574 was outside the method criteria for the following analytes: 2-Hexanone, 4-Methyl-2-pentanone, trans-1,4-Dichloro-2-butene, Acetone, Vinyl acetate and 2-Butanone. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Methods 8260C LL: Internal standard (ISTD) response for TBA-d9 for the following sample was outside acceptance criteria: STR-08 (180-111238-5). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

Methods 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-331748 was outside the method criteria for the following surrogate: 1,2-Dichloroethane-d4. All samples recovered this surrogate within QC criteria.

Methods 8260C LL: The laboratory control sample (LCS) for analytical batch 180-331748 recovered outside control limits for the following analytes: 1,1,1,2-Tetrachloroethane, 1,1,2-Trichloroethane, and trans-1,3-Dichloropropene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Methods 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-331748 was outside the method criteria for the following analytes: Bromoform. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Methods 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-331748 was outside the method criteria for the following analytes: trans-1,4-Dichloro-2-butene,, 2-Hexanone, 4-Methyl-2-pentanone and Vinyl acetate. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated.

Method 8260C LL: The laboratory control sample (LCS) for analytical batch 180-332065 recovered outside control limits for the following analytes: trans-1,4-Dichloro-2-butene, Trichloroethene, Ethylbenzene and Xylenes, Total. A low-level LCS (LLCS), spiked at the reporting limit (RL), was prepared with this batch. The affected target analytes recovered within acceptance limits; therefore, the LLCS demonstrates the analytical system had sufficient sensitivity to detect the compounds had they been present. Since the affected target compounds were not detected in the samples, the data have been reported and qualified.

Method 8260C LL: The laboratory control sample (LCSD) for analytical batch 180-332065 recovered outside control limits for the following analyte: trans-1,4-Dichloro-2-butene. A low-level LCS (LLCS), spiked at the reporting limit (RL), was prepared with this batch. The affected target analytes recovered within acceptance limits; therefore, the LLCS demonstrates the analytical system had sufficient sensitivity to detect the compounds had they been present. Since the affected target compounds were not detected in the samples, the data have been reported and qualified.

Method 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-332065 was outside the method criteria for the following analyte: Bromoform. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Job ID: 180-111238-1 (Continued)

Laboratory: Eurofins TestAmerica, Pittsburgh (Continued)

Method 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-332065 was outside the method criteria for the following analytes: trans-1,4-Dichloro-2-butene, 2-Hexanone, 4-Methyl-2-pentanone, Vinyl acetate and Toluene-d8. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method 8011: The continuing calibration verification (CCV) associated with batch 331676 recovered slightly above the upper control limit for 1,2-Dibromoethane, 1,1,1,2-Tetrachloroethane and 1,2-Dibromo-3-Chloropropane on RTX-50 column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCVRT 180-331667/1-A).

Method 300.0: The matrix spike/matrix spike duplicate (MS/MSD) recoveries for analytical batch 180-330691 were outside control limits for sulfate and nitrate. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 300.0: The matrix spike duplicate (MSD) recoveries for analytical batch 180-330867 was outside control limits for sulfate. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method 6020A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 180-332165 and analytical batch 180-333779 were outside control limits for calcium. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 6020A: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 180-332165 and analytical batch 180-333779 was outside control limits for calcium. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

Method 180.1: The following samples were diluted to bring the concentration of target analytes within the calibration range: UD-D1 (180-111238-2), SB-03 (180-111238-7), STR-06 (180-111238-10), STR-07 (180-111238-11), D2-UD (180-111238-12) and SW-DUP (180-111238-14). Elevated reporting limits (RLs) are provided.

Method SM 2340C: The following samples were diluted due to the nature of the sample matrix: STR-03 (180-111238-1) and UD-D1 (180-111238-2). Elevated reporting limits (RLs) are provided.

Method 350.1: The matrix spike (MS) recovery for analytical batch 180-332359 was high outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 350.1: The following samples were diluted to bring the concentration of target analytes within the calibration range: STR-04 (180-111238-8) and STR-06 (180-111238-10). Elevated reporting limits (RLs) are provided.

Method SM 2340C: The following samples were diluted due to the nature of the sample matrix: SB-13 (180-111238-4), SB-03 (180-111238-7), STR-04 (180-111238-8), STR-06 (180-111238-10), STR-07 (180-111238-11), ST-06 (180-111238-13) and SW-DUP (180-111238-14). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-21
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20 *
Florida	NELAP	E871008	06-30-21
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-21
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-21
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-21
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-21
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	04-30-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-21
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-21
Virginia	NELAP	10043	09-14-21
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc. Job ID: 180-111238-1
Project/Site: Ritchie Rubble LF

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-111238-1	STR-03	Water	09/21/20 08:23	09/22/20 09:30	
180-111238-2	UD-D1	Water	09/21/20 08:47	09/22/20 09:30	
180-111238-3	STR-02	Water	09/21/20 09:22	09/22/20 09:30	
180-111238-4	SB-13	Water	09/21/20 09:50	09/22/20 09:30	
180-111238-5	STR-08	Water	09/21/20 10:16	09/22/20 09:30	
180-111238-6	AB-UD	Water	09/21/20 11:00	09/22/20 09:30	
180-111238-7	SB-03	Water	09/21/20 11:35	09/22/20 09:30	
180-111238-8	STR-04	Water	09/21/20 12:05	09/22/20 09:30	
180-111238-9	STR-05	Water	09/21/20 12:20	09/22/20 09:30	
180-111238-10	STR-06	Water	09/21/20 13:20	09/22/20 09:30	
180-111238-11	STR-07	Water	09/21/20 13:45	09/22/20 09:30	
180-111238-12	D2-UD	Water	09/21/20 14:20	09/22/20 09:30	
180-111238-13	ST-06	Water	09/21/20 14:50	09/22/20 09:30	
180-111238-14	SW-DUP	Water	09/21/20 00:00	09/22/20 09:30	
180-111238-15	TRIP BLANK-01	Water	09/21/20 15:30	09/22/20 09:30	

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Method	Method Description	Protocol	Laboratory
EPA 8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT
EPA 8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL PIT
EPA 300.0 R2.1	Anions, Ion Chromatgraphy	EPA	TAL PIT
EPA 6020A	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
410.4-1993 R2.0	COD	MCAWW	TAL CAN
EPA 180.1	Turbidity, Nephelometric	EPA	TAL PIT
EPA 350.1	Nitrogen, Ammonia	EPA	TAL PIT
EPA 9050A	Specific Conductance	SW846	TAL PIT
SM 2340C	Hardness, Total	SM	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
5030C	Purge and Trap	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT
8011	Microextraction	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: STR-03

Date Collected: 09/21/20 08:23
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-1

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.50		0.10	0.023	mg/L			09/22/20 15:11	1
Chloride	40		1.0	0.32	mg/L			09/22/20 15:11	1
Sulfate	140		1.0	0.38	mg/L			09/22/20 15:11	1

Method: EPA 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:15	10/16/20 17:51	1
Arsenic	0.89	J	1.0	0.31	ug/L		10/02/20 15:15	10/16/20 17:51	1
Barium	38		10	1.6	ug/L		10/02/20 15:15	10/16/20 17:51	1
Beryllium	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 17:51	1
Cadmium	0.23	J	1.0	0.22	ug/L		10/02/20 15:15	10/16/20 17:51	1
Calcium	67000		500	130	ug/L		10/02/20 15:15	10/16/20 17:51	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:15	10/16/20 17:51	1
Cobalt	1.1		0.50	0.13	ug/L		10/02/20 15:15	10/16/20 17:51	1
Copper	0.82	J	2.0	0.63	ug/L		10/02/20 15:15	10/16/20 17:51	1
Iron	500		50	20	ug/L		10/02/20 15:15	10/16/20 17:51	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:15	10/16/20 17:51	1
Magnesium	20000		500	83	ug/L		10/02/20 15:15	10/16/20 17:51	1
Manganese	140		5.0	0.87	ug/L		10/02/20 15:15	10/16/20 17:51	1
Nickel	4.5		1.0	0.34	ug/L		10/02/20 15:15	10/16/20 17:51	1
Potassium	9200		500	160	ug/L		10/02/20 15:15	10/16/20 17:51	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:15	10/16/20 17:51	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 17:51	1
Sodium	38000		500	350	ug/L		10/02/20 15:15	10/16/20 17:51	1
Thallium	0.44	J	1.0	0.15	ug/L		10/02/20 15:15	10/16/20 17:51	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:15	10/16/20 17:51	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:15	10/16/20 17:51	1
Zinc	6.5	B	5.0	3.2	ug/L		10/02/20 15:15	10/16/20 17:51	1

Method: EPA 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:39	10/07/20 17:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	13		10	4.1	mg/L			09/29/20 08:57	1
Turbidity	14		0.85	0.050	NTU			09/22/20 14:19	1
Ammonia	0.099	J	0.10	0.088	mg/L			10/05/20 18:38	1
Specific Conductance	620		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	250		25	25	mg/L			10/06/20 08:15	1
Total Dissolved Solids	420		10	10	mg/L			09/23/20 09:38	1
Total Alkalinity as CaCO3 to pH 4.5	150		5.0	5.0	mg/L			09/24/20 10:16	1
Bicarbonate Alkalinity as CaCO3	150		5.0	5.0	mg/L			09/24/20 10:16	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 10:16	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 10:16	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: UD-D1

Date Collected: 09/21/20 08:47
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-2

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			09/29/20 17:32	1
Acrylonitrile	ND		20	7.8	ug/L			09/29/20 17:32	1
Benzene	ND		1.0	0.60	ug/L			09/29/20 17:32	1
Bromoform	ND		1.0	0.98	ug/L			09/29/20 17:32	1
Bromomethane	ND		1.0	0.89	ug/L			09/29/20 17:32	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/29/20 17:32	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/29/20 17:32	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/29/20 17:32	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/29/20 17:32	1
Chlorobromomethane	ND		1.0	0.63	ug/L			09/29/20 17:32	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			09/29/20 17:32	1
Chloroethane	ND		1.0	0.90	ug/L			09/29/20 17:32	1
Chloroform	ND		1.0	0.60	ug/L			09/29/20 17:32	1
Chloromethane	ND		1.0	0.90	ug/L			09/29/20 17:32	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			09/29/20 17:32	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/29/20 17:32	1
Dibromomethane	ND		1.0	0.33	ug/L			09/29/20 17:32	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			09/29/20 17:32	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			09/29/20 17:32	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			09/29/20 17:32	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			09/29/20 17:32	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/29/20 17:32	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/29/20 17:32	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/29/20 17:32	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/29/20 17:32	1
2-Hexanone	ND		5.0	3.3	ug/L			09/29/20 17:32	1
Iodomethane	ND		1.0	0.68	ug/L			09/29/20 17:32	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/29/20 17:32	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/29/20 17:32	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/29/20 17:32	1
Styrene	ND		1.0	0.47	ug/L			09/29/20 17:32	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/29/20 17:32	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/29/20 17:32	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/29/20 17:32	1
Toluene	ND		1.0	0.46	ug/L			09/29/20 17:32	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			09/29/20 17:32	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			09/29/20 17:32	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/29/20 17:32	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/29/20 17:32	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/29/20 17:32	1
Trichloroethene	ND		1.0	0.69	ug/L			09/29/20 17:32	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			09/29/20 17:32	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			09/29/20 17:32	1
Vinyl acetate	ND		1.0	0.81	ug/L			09/29/20 17:32	1
Vinyl chloride	ND		1.0	0.40	ug/L			09/29/20 17:32	1
Xylenes, Total	ND		2.0	0.89	ug/L			09/29/20 17:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*64 - 120*		*09/29/20 17:32*	*1*
Dibromofluoromethane (Surr)	*110*		*71 - 132*		*09/29/20 17:32*	*1*

Client Sample ID: UD-D1

Date Collected: 09/21/20 08:47
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-2

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*129*		*62 - 146*		*09/29/20 17:32*	*1*
Toluene-d8 (Surr)	*102*		*75 - 120*		*09/29/20 17:32*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		09/29/20 13:49	09/29/20 16:40	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		09/29/20 13:49	09/29/20 16:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*99*		*60 - 140*	*09/29/20 13:49*	*09/29/20 16:40*	*1*
1,1,1,2-Tetrachloroethane	*79*		*60 - 140*	*09/29/20 13:49*	*09/29/20 16:40*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/22/20 16:00	1
Chloride	**7.8**		1.0	0.32	mg/L			09/22/20 16:00	1
Sulfate	**99**		1.0	0.38	mg/L			09/22/20 16:00	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:15	10/16/20 17:53	1
Arsenic	**47**		1.0	0.31	ug/L		10/02/20 15:15	10/16/20 17:53	1
Barium	**32**		10	1.6	ug/L		10/02/20 15:15	10/16/20 17:53	1
Beryllium	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 17:53	1
Cadmium	ND		1.0	0.22	ug/L		10/02/20 15:15	10/16/20 17:53	1
Calcium	**15000**		500	130	ug/L		10/02/20 15:15	10/16/20 17:53	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:15	10/16/20 17:53	1
Cobalt	**1.4**		0.50	0.13	ug/L		10/02/20 15:15	10/16/20 17:53	1
Copper	ND		2.0	0.63	ug/L		10/02/20 15:15	10/16/20 17:53	1
Iron	**14000**		50	20	ug/L		10/02/20 15:15	10/16/20 17:53	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:15	10/16/20 17:53	1
Magnesium	**5900**		500	83	ug/L		10/02/20 15:15	10/16/20 17:53	1
Manganese	**64**		5.0	0.87	ug/L		10/02/20 15:15	10/16/20 17:53	1
Nickel	**6.6**		1.0	0.34	ug/L		10/02/20 15:15	10/16/20 17:53	1
Potassium	**8000**		500	160	ug/L		10/02/20 15:15	10/16/20 17:53	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:15	10/16/20 17:53	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 17:53	1
Sodium	**11000**		500	350	ug/L		10/02/20 15:15	10/16/20 17:53	1
Thallium	**0.47**	**J**	1.0	0.15	ug/L		10/02/20 15:15	10/16/20 17:53	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:15	10/16/20 17:53	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:15	10/16/20 17:53	1
Zinc	**33**	**B**	5.0	3.2	ug/L		10/02/20 15:15	10/16/20 17:53	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:39	10/07/20 17:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND	F1	10	4.1	mg/L			09/29/20 08:58	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: UD-D1
Date Collected: 09/21/20 08:47
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-2
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**57**		4.3	0.25	NTU			09/22/20 14:19	5
Ammonia	**0.094**	**J**	0.10	0.088	mg/L			10/05/20 18:40	1
Specific Conductance	**270**		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	**130**		25	25	mg/L			10/06/20 08:15	1
Total Dissolved Solids	**180**		10	10	mg/L			09/23/20 09:38	1
Total Alkalinity as CaCO3 to pH 4.5	ND		5.0	5.0	mg/L			09/24/20 10:27	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 10:27	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 10:27	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 10:27	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: STR-02

Date Collected: 09/21/20 09:22
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-3

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.68		0.10	0.023	mg/L			09/22/20 15:44	1
Chloride	22		1.0	0.32	mg/L			09/22/20 15:44	1
Sulfate	160		1.0	0.38	mg/L			09/22/20 15:44	1

Method: EPA 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:15	10/16/20 17:56	1
Arsenic	0.60	J	1.0	0.31	ug/L		10/02/20 15:15	10/16/20 17:56	1
Barium	34		10	1.6	ug/L		10/02/20 15:15	10/16/20 17:56	1
Beryllium	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 17:56	1
Cadmium	0.37	J	1.0	0.22	ug/L		10/02/20 15:15	10/16/20 17:56	1
Calcium	50000		500	130	ug/L		10/02/20 15:15	10/16/20 17:56	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:15	10/16/20 17:56	1
Cobalt	1.2		0.50	0.13	ug/L		10/02/20 15:15	10/16/20 17:56	1
Copper	0.70	J	2.0	0.63	ug/L		10/02/20 15:15	10/16/20 17:56	1
Iron	270		50	20	ug/L		10/02/20 15:15	10/16/20 17:56	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:15	10/16/20 17:56	1
Magnesium	17000		500	83	ug/L		10/02/20 15:15	10/16/20 17:56	1
Manganese	72		5.0	0.87	ug/L		10/02/20 15:15	10/16/20 17:56	1
Nickel	7.3		1.0	0.34	ug/L		10/02/20 15:15	10/16/20 17:56	1
Potassium	10000		500	160	ug/L		10/02/20 15:15	10/16/20 17:56	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:15	10/16/20 17:56	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 17:56	1
Sodium	34000		500	350	ug/L		10/02/20 15:15	10/16/20 17:56	1
Thallium	0.42	J	1.0	0.15	ug/L		10/02/20 15:15	10/16/20 17:56	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:15	10/16/20 17:56	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:15	10/16/20 17:56	1
Zinc	25	B	5.0	3.2	ug/L		10/02/20 15:15	10/16/20 17:56	1

Method: EPA 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:39	10/07/20 17:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	6.3	J	10	4.1	mg/L			09/29/20 09:01	1
Turbidity	5.3		0.85	0.050	NTU			09/22/20 14:19	1
Ammonia	ND		0.10	0.088	mg/L			10/05/20 18:42	1
Specific Conductance	540		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	200		5.0	5.0	mg/L			10/07/20 09:44	1
Total Dissolved Solids	380		10	10	mg/L			09/23/20 09:38	1
Total Alkalinity as CaCO3 to pH 4.5	81		5.0	5.0	mg/L			09/24/20 10:33	1
Bicarbonate Alkalinity as CaCO3	81		5.0	5.0	mg/L			09/24/20 10:33	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 10:33	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 10:33	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: SB-13

Date Collected: 09/21/20 09:50
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-4

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**4.4**	**J**	5.0	3.4	ug/L			09/29/20 17:59	1
Acrylonitrile	ND		20	7.8	ug/L			09/29/20 17:59	1
Benzene	ND		1.0	0.60	ug/L			09/29/20 17:59	1
Bromoform	ND		1.0	0.98	ug/L			09/29/20 17:59	1
Bromomethane	ND		1.0	0.89	ug/L			09/29/20 17:59	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/29/20 17:59	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/29/20 17:59	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/29/20 17:59	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/29/20 17:59	1
Chlorobromomethane	ND		1.0	0.63	ug/L			09/29/20 17:59	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			09/29/20 17:59	1
Chloroethane	ND		1.0	0.90	ug/L			09/29/20 17:59	1
Chloroform	ND		1.0	0.60	ug/L			09/29/20 17:59	1
Chloromethane	ND		1.0	0.90	ug/L			09/29/20 17:59	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			09/29/20 17:59	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/29/20 17:59	1
Dibromomethane	ND		1.0	0.33	ug/L			09/29/20 17:59	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			09/29/20 17:59	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			09/29/20 17:59	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			09/29/20 17:59	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			09/29/20 17:59	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/29/20 17:59	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/29/20 17:59	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/29/20 17:59	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/29/20 17:59	1
2-Hexanone	ND		5.0	3.3	ug/L			09/29/20 17:59	1
Iodomethane	ND		1.0	0.68	ug/L			09/29/20 17:59	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/29/20 17:59	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/29/20 17:59	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/29/20 17:59	1
Styrene	ND		1.0	0.47	ug/L			09/29/20 17:59	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/29/20 17:59	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/29/20 17:59	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/29/20 17:59	1
Toluene	ND		1.0	0.46	ug/L			09/29/20 17:59	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			09/29/20 17:59	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			09/29/20 17:59	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/29/20 17:59	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/29/20 17:59	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/29/20 17:59	1
Trichloroethene	ND		1.0	0.69	ug/L			09/29/20 17:59	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			09/29/20 17:59	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			09/29/20 17:59	1
Vinyl acetate	ND		1.0	0.81	ug/L			09/29/20 17:59	1
Vinyl chloride	ND		1.0	0.40	ug/L			09/29/20 17:59	1
Xylenes, Total	ND		2.0	0.89	ug/L			09/29/20 17:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*64 - 120*		*09/29/20 17:59*	*1*
Dibromofluoromethane (Surr)	*119*		*71 - 132*		*09/29/20 17:59*	*1*

Client Sample ID: SB-13

Date Collected: 09/21/20 09:50
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-4

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*134*		*62 - 146*		*09/29/20 17:59*	*1*
Toluene-d8 (Surr)	*106*		*75 - 120*		*09/29/20 17:59*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		09/29/20 13:49	09/29/20 17:05	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		09/29/20 13:49	09/29/20 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*92*		*60 - 140*	*09/29/20 13:49*	*09/29/20 17:05*	*1*
1,1,1,2-Tetrachloroethane	*76*		*60 - 140*	*09/29/20 13:49*	*09/29/20 17:05*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/22/20 16:49	1
Chloride	**33**		1.0	0.32	mg/L			09/22/20 16:49	1
Sulfate	**500**		5.0	1.9	mg/L			09/22/20 17:06	5

Method: EPA 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:15	10/16/20 17:58	1
Arsenic	**0.95**	**J**	1.0	0.31	ug/L		10/02/20 15:15	10/16/20 17:58	1
Barium	**49**		10	1.6	ug/L		10/02/20 15:15	10/16/20 17:58	1
Beryllium	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 17:58	1
Cadmium	**7.8**		1.0	0.22	ug/L		10/02/20 15:15	10/16/20 17:58	1
Calcium	**140000**		500	130	ug/L		10/02/20 15:15	10/16/20 17:58	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:15	10/16/20 17:58	1
Cobalt	**10**		0.50	0.13	ug/L		10/02/20 15:15	10/16/20 17:58	1
Copper	**1.9**	**J**	2.0	0.63	ug/L		10/02/20 15:15	10/16/20 17:58	1
Iron	**170**		50	20	ug/L		10/02/20 15:15	10/16/20 17:58	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:15	10/16/20 17:58	1
Magnesium	**25000**		500	83	ug/L		10/02/20 15:15	10/16/20 17:58	1
Manganese	**730**		5.0	0.87	ug/L		10/02/20 15:15	10/16/20 17:58	1
Nickel	**44**		1.0	0.34	ug/L		10/02/20 15:15	10/16/20 17:58	1
Potassium	**14000**		500	160	ug/L		10/02/20 15:15	10/16/20 17:58	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:15	10/16/20 17:58	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 17:58	1
Sodium	**37000**		500	350	ug/L		10/02/20 15:15	10/16/20 17:58	1
Thallium	**0.25**	**J**	1.0	0.15	ug/L		10/02/20 15:15	10/16/20 17:58	1
Tin	**1.0**	**J**	5.0	0.96	ug/L		10/02/20 15:15	10/16/20 17:58	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:15	10/16/20 17:58	1
Zinc	**110**	**B**	5.0	3.2	ug/L		10/02/20 15:15	10/16/20 17:58	1

Method: EPA 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:39	10/07/20 17:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**17**		10	4.1	mg/L			09/29/20 09:02	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: SB-13

Date Collected: 09/21/20 09:50
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-4

Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**11**		0.85	0.050	NTU			09/22/20 14:19	1
Ammonia	ND		0.10	0.088	mg/L			10/05/20 18:44	1
Specific Conductance	**970**		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	**500**		25	25	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**770**		10	10	mg/L			09/23/20 09:38	1
Total Alkalinity as CaCO3 to pH 4.5	**25**		5.0	5.0	mg/L			09/24/20 10:39	1
Bicarbonate Alkalinity as CaCO3	**25**		5.0	5.0	mg/L			09/24/20 10:39	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 10:39	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 10:39	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: STR-08

Date Collected: 09/21/20 10:16
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-5

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			09/30/20 13:58	1
Acrylonitrile	ND		20	7.8	ug/L			09/30/20 13:58	1
Benzene	ND		1.0	0.60	ug/L			09/30/20 13:58	1
Bromoform	ND		1.0	0.98	ug/L			09/30/20 13:58	1
Bromomethane	ND		1.0	0.89	ug/L			09/30/20 13:58	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/30/20 13:58	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/30/20 13:58	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/30/20 13:58	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/30/20 13:58	1
Chlorobromomethane	ND		1.0	0.63	ug/L			09/30/20 13:58	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			09/30/20 13:58	1
Chloroethane	ND		1.0	0.90	ug/L			09/30/20 13:58	1
Chloroform	ND		1.0	0.60	ug/L			09/30/20 13:58	1
Chloromethane	ND		1.0	0.90	ug/L			09/30/20 13:58	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			09/30/20 13:58	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/30/20 13:58	1
Dibromomethane	ND		1.0	0.33	ug/L			09/30/20 13:58	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			09/30/20 13:58	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			09/30/20 13:58	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			09/30/20 13:58	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			09/30/20 13:58	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/30/20 13:58	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/30/20 13:58	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/30/20 13:58	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/30/20 13:58	1
2-Hexanone	ND		5.0	3.3	ug/L			09/30/20 13:58	1
Iodomethane	ND		1.0	0.68	ug/L			09/30/20 13:58	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/30/20 13:58	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/30/20 13:58	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/30/20 13:58	1
Styrene	ND		1.0	0.47	ug/L			09/30/20 13:58	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/30/20 13:58	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/30/20 13:58	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/30/20 13:58	1
Toluene	ND		1.0	0.46	ug/L			09/30/20 13:58	1
trans-1,4-Dichloro-2-butene	ND	F1	1.0	0.83	ug/L			09/30/20 13:58	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			09/30/20 13:58	1
trans-1,3-Dichloropropene	ND	*	1.0	0.58	ug/L			09/30/20 13:58	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/30/20 13:58	1
1,1,2-Trichloroethane	ND	*	1.0	0.45	ug/L			09/30/20 13:58	1
Trichloroethene	ND		1.0	0.69	ug/L			09/30/20 13:58	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			09/30/20 13:58	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			09/30/20 13:58	1
Vinyl acetate	ND		1.0	0.81	ug/L			09/30/20 13:58	1
Vinyl chloride	ND		1.0	0.40	ug/L			09/30/20 13:58	1
Xylenes, Total	ND		2.0	0.89	ug/L			09/30/20 13:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*64 - 120*		*09/30/20 13:58*	*1*
Dibromofluoromethane (Surr)	*109*		*71 - 132*		*09/30/20 13:58*	*1*

Client Sample ID: STR-08

Date Collected: 09/21/20 10:16
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-5

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*121*		*62 - 146*		*09/30/20 13:58*	*1*
Toluene-d8 (Surr)	*94*		*75 - 120*		*09/30/20 13:58*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		09/29/20 13:49	09/29/20 17:30	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		09/29/20 13:49	09/29/20 17:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*89*		*60 - 140*	*09/29/20 13:49*	*09/29/20 17:30*	*1*
1,1,1,2-Tetrachloroethane	*73*		*60 - 140*	*09/29/20 13:49*	*09/29/20 17:30*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.66**		0.10	0.023	mg/L			09/22/20 14:06	1
Chloride	**43**		1.0	0.32	mg/L			09/22/20 14:06	1
Sulfate	**270**	**F1**	5.0	1.9	mg/L			09/22/20 14:22	5

Method: EPA 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:15	10/16/20 18:01	1
Arsenic	**0.79**	**J**	1.0	0.31	ug/L		10/02/20 15:15	10/16/20 18:01	1
Barium	**49**		10	1.6	ug/L		10/02/20 15:15	10/16/20 18:01	1
Beryllium	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:01	1
Cadmium	**2.0**		1.0	0.22	ug/L		10/02/20 15:15	10/16/20 18:01	1
Calcium	**77000**	**F1 F2**	500	130	ug/L		10/02/20 15:15	10/16/20 18:01	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:01	1
Cobalt	**3.1**		0.50	0.13	ug/L		10/02/20 15:15	10/16/20 18:01	1
Copper	**0.69**	**J**	2.0	0.63	ug/L		10/02/20 15:15	10/16/20 18:01	1
Iron	**310**		50	20	ug/L		10/02/20 15:15	10/16/20 18:01	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:15	10/16/20 18:01	1
Magnesium	**17000**		500	83	ug/L		10/02/20 15:15	10/16/20 18:01	1
Manganese	**260**		5.0	0.87	ug/L		10/02/20 15:15	10/16/20 18:01	1
Nickel	**13**		1.0	0.34	ug/L		10/02/20 15:15	10/16/20 18:01	1
Potassium	**7900**		500	160	ug/L		10/02/20 15:15	10/16/20 18:01	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:01	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:01	1
Sodium	**38000**		500	350	ug/L		10/02/20 15:15	10/16/20 18:01	1
Thallium	ND		1.0	0.15	ug/L		10/02/20 15:15	10/16/20 18:01	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:15	10/16/20 18:01	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:15	10/16/20 18:01	1
Zinc	**26**	**B**	5.0	3.2	ug/L		10/02/20 15:15	10/16/20 18:01	1

Method: EPA 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:39	10/07/20 17:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**11**		10	4.1	mg/L			09/29/20 09:03	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: STR-08
Date Collected: 09/21/20 10:16
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-5
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**6.6**		0.85	0.050	NTU			09/22/20 14:19	1
Ammonia	**0.14**		0.10	0.088	mg/L			10/05/20 18:32	1
Specific Conductance	**750**		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	**270**		5.0	5.0	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**490**		10	10	mg/L			09/23/20 09:38	1
Total Alkalinity as CaCO3 to pH 4.5	**83**		5.0	5.0	mg/L			09/24/20 10:45	1
Bicarbonate Alkalinity as CaCO3	**83**		5.0	5.0	mg/L			09/24/20 10:45	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 10:45	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 10:45	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: AB-UD

Date Collected: 09/21/20 11:00
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-6

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			09/29/20 18:26	1
Acrylonitrile	ND		20	7.8	ug/L			09/29/20 18:26	1
Benzene	ND		1.0	0.60	ug/L			09/29/20 18:26	1
Bromoform	ND		1.0	0.98	ug/L			09/29/20 18:26	1
Bromomethane	ND		1.0	0.89	ug/L			09/29/20 18:26	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/29/20 18:26	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/29/20 18:26	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/29/20 18:26	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/29/20 18:26	1
Chlorobromomethane	ND		1.0	0.63	ug/L			09/29/20 18:26	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			09/29/20 18:26	1
Chloroethane	ND		1.0	0.90	ug/L			09/29/20 18:26	1
Chloroform	ND		1.0	0.60	ug/L			09/29/20 18:26	1
Chloromethane	ND		1.0	0.90	ug/L			09/29/20 18:26	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			09/29/20 18:26	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/29/20 18:26	1
Dibromomethane	ND		1.0	0.33	ug/L			09/29/20 18:26	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			09/29/20 18:26	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			09/29/20 18:26	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			09/29/20 18:26	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			09/29/20 18:26	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/29/20 18:26	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/29/20 18:26	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/29/20 18:26	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/29/20 18:26	1
2-Hexanone	ND		5.0	3.3	ug/L			09/29/20 18:26	1
Iodomethane	ND		1.0	0.68	ug/L			09/29/20 18:26	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/29/20 18:26	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/29/20 18:26	1
Methyl tert-butyl ether	**2.0**		1.0	0.59	ug/L			09/29/20 18:26	1
Styrene	ND		1.0	0.47	ug/L			09/29/20 18:26	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/29/20 18:26	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/29/20 18:26	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/29/20 18:26	1
Toluene	ND		1.0	0.46	ug/L			09/29/20 18:26	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			09/29/20 18:26	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			09/29/20 18:26	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/29/20 18:26	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/29/20 18:26	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/29/20 18:26	1
Trichloroethene	ND		1.0	0.69	ug/L			09/29/20 18:26	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			09/29/20 18:26	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			09/29/20 18:26	1
Vinyl acetate	ND		1.0	0.81	ug/L			09/29/20 18:26	1
Vinyl chloride	ND		1.0	0.40	ug/L			09/29/20 18:26	1
Xylenes, Total	ND		2.0	0.89	ug/L			09/29/20 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*64 - 120*		*09/29/20 18:26*	*1*
Dibromofluoromethane (Surr)	*102*		*71 - 132*		*09/29/20 18:26*	*1*

Client Sample ID: AB-UD

Date Collected: 09/21/20 11:00
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-6

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*62 - 146*		*09/29/20 18:26*	*1*
Toluene-d8 (Surr)	*94*		*75 - 120*		*09/29/20 18:26*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		09/29/20 13:49	09/29/20 18:44	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		09/29/20 13:49	09/29/20 18:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*86*		*60 - 140*	*09/29/20 13:49*	*09/29/20 18:44*	*1*
1,1,1,2-Tetrachloroethane	*73*		*60 - 140*	*09/29/20 13:49*	*09/29/20 18:44*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.55**		0.10	0.023	mg/L			09/22/20 17:22	1
Chloride	**50**		1.0	0.32	mg/L			09/22/20 17:22	1
Sulfate	**230**		5.0	1.9	mg/L			09/22/20 17:38	5

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:15	10/16/20 18:18	1
Arsenic	**0.80**	**J**	1.0	0.31	ug/L		10/02/20 15:15	10/16/20 18:18	1
Barium	**30**		10	1.6	ug/L		10/02/20 15:15	10/16/20 18:18	1
Beryllium	**0.61**	**J**	1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:18	1
Cadmium	**24**		1.0	0.22	ug/L		10/02/20 15:15	10/16/20 18:18	1
Calcium	**46000**		500	130	ug/L		10/02/20 15:15	10/16/20 18:18	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:18	1
Cobalt	**8.4**		0.50	0.13	ug/L		10/02/20 15:15	10/16/20 18:18	1
Copper	**3.8**		2.0	0.63	ug/L		10/02/20 15:15	10/16/20 18:18	1
Iron	**170**		50	20	ug/L		10/02/20 15:15	10/16/20 18:18	1
Lead	**0.34**	**J**	1.0	0.13	ug/L		10/02/20 15:15	10/16/20 18:18	1
Magnesium	**11000**		500	83	ug/L		10/02/20 15:15	10/16/20 18:18	1
Manganese	**190**		5.0	0.87	ug/L		10/02/20 15:15	10/16/20 18:18	1
Nickel	**34**		1.0	0.34	ug/L		10/02/20 15:15	10/16/20 18:18	1
Potassium	**15000**		500	160	ug/L		10/02/20 15:15	10/16/20 18:18	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:18	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:18	1
Sodium	**43000**		500	350	ug/L		10/02/20 15:15	10/16/20 18:18	1
Thallium	**1.3**		1.0	0.15	ug/L		10/02/20 15:15	10/16/20 18:18	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:15	10/16/20 18:18	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:15	10/16/20 18:18	1
Zinc	**210**	**B**	5.0	3.2	ug/L		10/02/20 15:15	10/16/20 18:18	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:39	10/07/20 17:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	4.1	mg/L			09/29/20 09:04	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: AB-UD
Date Collected: 09/21/20 11:00
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-6
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**0.19**	**J**	0.85	0.050	NTU			09/22/20 14:19	1
Ammonia	**0.11**		0.10	0.088	mg/L			10/05/20 18:46	1
Specific Conductance	**610**		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	**160**		5.0	5.0	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**380**		10	10	mg/L			09/23/20 09:43	1
Total Alkalinity as CaCO3 to pH 4.5	ND		5.0	5.0	mg/L			09/24/20 10:51	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 10:51	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 10:51	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 10:51	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: SB-03

Date Collected: 09/21/20 11:35
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-7

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			09/29/20 18:54	1
Acrylonitrile	ND		20	7.8	ug/L			09/29/20 18:54	1
Benzene	ND		1.0	0.60	ug/L			09/29/20 18:54	1
Bromoform	ND		1.0	0.98	ug/L			09/29/20 18:54	1
Bromomethane	ND		1.0	0.89	ug/L			09/29/20 18:54	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/29/20 18:54	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/29/20 18:54	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/29/20 18:54	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/29/20 18:54	1
Chlorobromomethane	ND		1.0	0.63	ug/L			09/29/20 18:54	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			09/29/20 18:54	1
Chloroethane	ND		1.0	0.90	ug/L			09/29/20 18:54	1
Chloroform	ND		1.0	0.60	ug/L			09/29/20 18:54	1
Chloromethane	ND		1.0	0.90	ug/L			09/29/20 18:54	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			09/29/20 18:54	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/29/20 18:54	1
Dibromomethane	ND		1.0	0.33	ug/L			09/29/20 18:54	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			09/29/20 18:54	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			09/29/20 18:54	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			09/29/20 18:54	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			09/29/20 18:54	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/29/20 18:54	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/29/20 18:54	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/29/20 18:54	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/29/20 18:54	1
2-Hexanone	ND		5.0	3.3	ug/L			09/29/20 18:54	1
Iodomethane	ND		1.0	0.68	ug/L			09/29/20 18:54	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/29/20 18:54	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/29/20 18:54	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/29/20 18:54	1
Styrene	ND		1.0	0.47	ug/L			09/29/20 18:54	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/29/20 18:54	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/29/20 18:54	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/29/20 18:54	1
Toluene	ND		1.0	0.46	ug/L			09/29/20 18:54	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			09/29/20 18:54	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			09/29/20 18:54	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/29/20 18:54	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/29/20 18:54	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/29/20 18:54	1
Trichloroethene	ND		1.0	0.69	ug/L			09/29/20 18:54	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			09/29/20 18:54	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			09/29/20 18:54	1
Vinyl acetate	ND		1.0	0.81	ug/L			09/29/20 18:54	1
Vinyl chloride	ND		1.0	0.40	ug/L			09/29/20 18:54	1
Xylenes, Total	ND		2.0	0.89	ug/L			09/29/20 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*64 - 120*		*09/29/20 18:54*	*1*
Dibromofluoromethane (Surr)	*113*		*71 - 132*		*09/29/20 18:54*	*1*

Client Sample ID: SB-03

Date Collected: 09/21/20 11:35
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-7

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*130*		*62 - 146*		*09/29/20 18:54*	*1*
Toluene-d8 (Surr)	*102*		*75 - 120*		*09/29/20 18:54*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		09/29/20 13:49	09/29/20 19:10	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		09/29/20 13:49	09/29/20 19:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*98*		*60 - 140*	*09/29/20 13:49*	*09/29/20 19:10*	*1*
1,1,1,2-Tetrachloroethane	*80*		*60 - 140*	*09/29/20 13:49*	*09/29/20 19:10*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/22/20 17:55	1
Chloride	**12**		1.0	0.32	mg/L			09/22/20 17:55	1
Sulfate	**200**		1.0	0.38	mg/L			09/22/20 17:55	1

Method: EPA 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:15	10/16/20 18:21	1
Arsenic	**0.82**	**J**	1.0	0.31	ug/L		10/02/20 15:15	10/16/20 18:21	1
Barium	**32**		10	1.6	ug/L		10/02/20 15:15	10/16/20 18:21	1
Beryllium	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:21	1
Cadmium	ND		1.0	0.22	ug/L		10/02/20 15:15	10/16/20 18:21	1
Calcium	**95000**		500	130	ug/L		10/02/20 15:15	10/16/20 18:21	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:21	1
Cobalt	**0.30**	**J**	0.50	0.13	ug/L		10/02/20 15:15	10/16/20 18:21	1
Copper	ND		2.0	0.63	ug/L		10/02/20 15:15	10/16/20 18:21	1
Iron	**150**		50	20	ug/L		10/02/20 15:15	10/16/20 18:21	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:15	10/16/20 18:21	1
Magnesium	**17000**		500	83	ug/L		10/02/20 15:15	10/16/20 18:21	1
Manganese	**96**		5.0	0.87	ug/L		10/02/20 15:15	10/16/20 18:21	1
Nickel	**3.1**		1.0	0.34	ug/L		10/02/20 15:15	10/16/20 18:21	1
Potassium	**11000**		500	160	ug/L		10/02/20 15:15	10/16/20 18:21	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:21	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:21	1
Sodium	**12000**		500	350	ug/L		10/02/20 15:15	10/16/20 18:21	1
Thallium	ND		1.0	0.15	ug/L		10/02/20 15:15	10/16/20 18:21	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:15	10/16/20 18:21	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:15	10/16/20 18:21	1
Zinc	**13**	**B**	5.0	3.2	ug/L		10/02/20 15:15	10/16/20 18:21	1

Method: EPA 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:39	10/07/20 17:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**20**		10	4.1	mg/L			09/29/20 09:07	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: SB-03
Date Collected: 09/21/20 11:35
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-7
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**48**		4.3	0.25	NTU			09/22/20 14:19	5
Ammonia	ND		0.10	0.088	mg/L			10/05/20 18:54	1
Specific Conductance	**630**		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	**410**		25	25	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**440**		10	10	mg/L			09/23/20 09:43	1
Total Alkalinity as CaCO3 to pH 4.5	**130**		5.0	5.0	mg/L			09/24/20 10:57	1
Bicarbonate Alkalinity as CaCO3	**130**		5.0	5.0	mg/L			09/24/20 10:57	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 10:57	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 10:57	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: STR-04

Date Collected: 09/21/20 12:05
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-8

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			09/29/20 19:21	1
Acrylonitrile	ND		20	7.8	ug/L			09/29/20 19:21	1
Benzene	ND		1.0	0.60	ug/L			09/29/20 19:21	1
Bromoform	ND		1.0	0.98	ug/L			09/29/20 19:21	1
Bromomethane	ND		1.0	0.89	ug/L			09/29/20 19:21	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/29/20 19:21	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/29/20 19:21	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/29/20 19:21	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/29/20 19:21	1
Chlorobromomethane	ND		1.0	0.63	ug/L			09/29/20 19:21	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			09/29/20 19:21	1
Chloroethane	ND		1.0	0.90	ug/L			09/29/20 19:21	1
Chloroform	ND		1.0	0.60	ug/L			09/29/20 19:21	1
Chloromethane	ND		1.0	0.90	ug/L			09/29/20 19:21	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			09/29/20 19:21	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/29/20 19:21	1
Dibromomethane	ND		1.0	0.33	ug/L			09/29/20 19:21	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			09/29/20 19:21	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			09/29/20 19:21	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			09/29/20 19:21	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			09/29/20 19:21	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/29/20 19:21	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/29/20 19:21	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/29/20 19:21	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/29/20 19:21	1
2-Hexanone	ND		5.0	3.3	ug/L			09/29/20 19:21	1
Iodomethane	ND		1.0	0.68	ug/L			09/29/20 19:21	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/29/20 19:21	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/29/20 19:21	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/29/20 19:21	1
Styrene	ND		1.0	0.47	ug/L			09/29/20 19:21	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/29/20 19:21	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/29/20 19:21	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/29/20 19:21	1
Toluene	ND		1.0	0.46	ug/L			09/29/20 19:21	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			09/29/20 19:21	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			09/29/20 19:21	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/29/20 19:21	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/29/20 19:21	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/29/20 19:21	1
Trichloroethene	ND		1.0	0.69	ug/L			09/29/20 19:21	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			09/29/20 19:21	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			09/29/20 19:21	1
Vinyl acetate	ND		1.0	0.81	ug/L			09/29/20 19:21	1
Vinyl chloride	ND		1.0	0.40	ug/L			09/29/20 19:21	1
Xylenes, Total	ND		2.0	0.89	ug/L			09/29/20 19:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*64 - 120*		*09/29/20 19:21*	*1*
Dibromofluoromethane (Surr)	*105*		*71 - 132*		*09/29/20 19:21*	*1*

Client Sample ID: STR-04

Date Collected: 09/21/20 12:05
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-8

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*62 - 146*		*09/29/20 19:21*	*1*
Toluene-d8 (Surr)	*96*		*75 - 120*		*09/29/20 19:21*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		09/29/20 13:49	09/29/20 19:35	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		09/29/20 13:49	09/29/20 19:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*92*		*60 - 140*	*09/29/20 13:49*	*09/29/20 19:35*	*1*
1,1,1,2-Tetrachloroethane	*76*		*60 - 140*	*09/29/20 13:49*	*09/29/20 19:35*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**2.6**		0.10	0.023	mg/L			09/22/20 18:27	1
Chloride	**110**		1.0	0.32	mg/L			09/22/20 18:27	1
Sulfate	**72**		1.0	0.38	mg/L			09/22/20 18:27	1

Method: EPA 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:15	10/16/20 18:23	1
Arsenic	**2.0**		1.0	0.31	ug/L		10/02/20 15:15	10/16/20 18:23	1
Barium	**50**		10	1.6	ug/L		10/02/20 15:15	10/16/20 18:23	1
Beryllium	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:23	1
Cadmium	**0.32**	**J**	1.0	0.22	ug/L		10/02/20 15:15	10/16/20 18:23	1
Calcium	**100000**		500	130	ug/L		10/02/20 15:15	10/16/20 18:23	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:23	1
Cobalt	**3.2**		0.50	0.13	ug/L		10/02/20 15:15	10/16/20 18:23	1
Copper	ND		2.0	0.63	ug/L		10/02/20 15:15	10/16/20 18:23	1
Iron	**170**		50	20	ug/L		10/02/20 15:15	10/16/20 18:23	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:15	10/16/20 18:23	1
Magnesium	**53000**		500	83	ug/L		10/02/20 15:15	10/16/20 18:23	1
Manganese	**250**		5.0	0.87	ug/L		10/02/20 15:15	10/16/20 18:23	1
Nickel	**10**		1.0	0.34	ug/L		10/02/20 15:15	10/16/20 18:23	1
Potassium	**29000**		500	160	ug/L		10/02/20 15:15	10/16/20 18:23	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:23	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:23	1
Sodium	**120000**		500	350	ug/L		10/02/20 15:15	10/16/20 18:23	1
Thallium	ND		1.0	0.15	ug/L		10/02/20 15:15	10/16/20 18:23	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:15	10/16/20 18:23	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:15	10/16/20 18:23	1
Zinc	**15**	**B**	5.0	3.2	ug/L		10/02/20 15:15	10/16/20 18:23	1

Method: EPA 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:39	10/07/20 17:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**55**		10	4.1	mg/L			09/29/20 09:08	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: STR-04
Date Collected: 09/21/20 12:05
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-8
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**10**		0.85	0.050	NTU			09/22/20 14:19	1
Ammonia	**2.5**		0.50	0.44	mg/L			10/05/20 18:56	5
Specific Conductance	**1300**		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	**530**		25	25	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**740**		10	10	mg/L			09/23/20 09:43	1
Total Alkalinity as CaCO3 to pH 4.5	**500**		5.0	5.0	mg/L			09/24/20 11:18	1
Bicarbonate Alkalinity as CaCO3	**500**		5.0	5.0	mg/L			09/24/20 11:18	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 11:18	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 11:18	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: STR-05

Date Collected: 09/21/20 12:20
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-9

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			09/29/20 19:48	1
Acrylonitrile	ND		20	7.8	ug/L			09/29/20 19:48	1
Benzene	ND		1.0	0.60	ug/L			09/29/20 19:48	1
Bromoform	ND		1.0	0.98	ug/L			09/29/20 19:48	1
Bromomethane	ND		1.0	0.89	ug/L			09/29/20 19:48	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/29/20 19:48	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/29/20 19:48	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/29/20 19:48	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/29/20 19:48	1
Chlorobromomethane	ND		1.0	0.63	ug/L			09/29/20 19:48	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			09/29/20 19:48	1
Chloroethane	ND		1.0	0.90	ug/L			09/29/20 19:48	1
Chloroform	ND		1.0	0.60	ug/L			09/29/20 19:48	1
Chloromethane	ND		1.0	0.90	ug/L			09/29/20 19:48	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			09/29/20 19:48	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/29/20 19:48	1
Dibromomethane	ND		1.0	0.33	ug/L			09/29/20 19:48	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			09/29/20 19:48	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			09/29/20 19:48	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			09/29/20 19:48	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			09/29/20 19:48	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/29/20 19:48	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/29/20 19:48	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/29/20 19:48	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/29/20 19:48	1
2-Hexanone	ND		5.0	3.3	ug/L			09/29/20 19:48	1
Iodomethane	ND		1.0	0.68	ug/L			09/29/20 19:48	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/29/20 19:48	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/29/20 19:48	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/29/20 19:48	1
Styrene	ND		1.0	0.47	ug/L			09/29/20 19:48	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/29/20 19:48	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/29/20 19:48	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/29/20 19:48	1
Toluene	ND		1.0	0.46	ug/L			09/29/20 19:48	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			09/29/20 19:48	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			09/29/20 19:48	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/29/20 19:48	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/29/20 19:48	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/29/20 19:48	1
Trichloroethene	ND		1.0	0.69	ug/L			09/29/20 19:48	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			09/29/20 19:48	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			09/29/20 19:48	1
Vinyl acetate	ND		1.0	0.81	ug/L			09/29/20 19:48	1
Vinyl chloride	ND		1.0	0.40	ug/L			09/29/20 19:48	1
Xylenes, Total	ND		2.0	0.89	ug/L			09/29/20 19:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*64 - 120*		*09/29/20 19:48*	*1*
Dibromofluoromethane (Surr)	*113*		*71 - 132*		*09/29/20 19:48*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: STR-05

Date Collected: 09/21/20 12:20
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-9

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*121*		*62 - 146*		*09/29/20 19:48*	*1*
Toluene-d8 (Surr)	*91*		*75 - 120*		*09/29/20 19:48*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		09/29/20 13:49	09/29/20 20:00	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		09/29/20 13:49	09/29/20 20:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*88*		*60 - 140*	*09/29/20 13:49*	*09/29/20 20:00*	*1*
1,1,1,2-Tetrachloroethane	*72*		*60 - 140*	*09/29/20 13:49*	*09/29/20 20:00*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.32**		0.10	0.023	mg/L			09/23/20 09:23	1
Chloride	**57**		1.0	0.32	mg/L			09/23/20 09:23	1
Sulfate	**53**		1.0	0.38	mg/L			09/23/20 09:23	1

Method: EPA 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:15	10/16/20 18:26	1
Arsenic	**1.5**		1.0	0.31	ug/L		10/02/20 15:15	10/16/20 18:26	1
Barium	**37**		10	1.6	ug/L		10/02/20 15:15	10/16/20 18:26	1
Beryllium	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:26	1
Cadmium	**0.66**	**J**	1.0	0.22	ug/L		10/02/20 15:15	10/16/20 18:26	1
Calcium	**49000**		500	130	ug/L		10/02/20 15:15	10/16/20 18:26	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:26	1
Cobalt	**1.5**		0.50	0.13	ug/L		10/02/20 15:15	10/16/20 18:26	1
Copper	**1.4**	**J**	2.0	0.63	ug/L		10/02/20 15:15	10/16/20 18:26	1
Iron	**300**		50	20	ug/L		10/02/20 15:15	10/16/20 18:26	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:15	10/16/20 18:26	1
Magnesium	**15000**		500	83	ug/L		10/02/20 15:15	10/16/20 18:26	1
Manganese	**150**		5.0	0.87	ug/L		10/02/20 15:15	10/16/20 18:26	1
Nickel	**5.8**		1.0	0.34	ug/L		10/02/20 15:15	10/16/20 18:26	1
Potassium	**4800**		500	160	ug/L		10/02/20 15:15	10/16/20 18:26	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:26	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:26	1
Sodium	**47000**		500	350	ug/L		10/02/20 15:15	10/16/20 18:26	1
Thallium	ND		1.0	0.15	ug/L		10/02/20 15:15	10/16/20 18:26	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:15	10/16/20 18:26	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:15	10/16/20 18:26	1
Zinc	**17**	**B**	5.0	3.2	ug/L		10/02/20 15:15	10/16/20 18:26	1

Method: EPA 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:39	10/07/20 17:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**15**		10	4.1	mg/L			09/29/20 09:09	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: STR-05
Date Collected: 09/21/20 12:20
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-9
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**14**		0.85	0.050	NTU			09/22/20 14:19	1
Ammonia	**0.11**		0.10	0.088	mg/L			10/05/20 18:58	1
Specific Conductance	**550**		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	**180**		5.0	5.0	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**310**		10	10	mg/L			09/23/20 09:43	1
Total Alkalinity as CaCO3 to pH 4.5	**130**		5.0	5.0	mg/L			09/24/20 11:31	1
Bicarbonate Alkalinity as CaCO3	**130**		5.0	5.0	mg/L			09/24/20 11:31	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 11:31	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 11:31	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: STR-06

Date Collected: 09/21/20 13:20
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-10

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**10**		5.0	3.4	ug/L			10/02/20 16:06	1
Acrylonitrile	ND		20	7.8	ug/L			10/02/20 16:06	1
Benzene	ND		1.0	0.60	ug/L			10/02/20 16:06	1
Bromoform	ND		1.0	0.98	ug/L			10/02/20 16:06	1
Bromomethane	ND		1.0	0.89	ug/L			10/02/20 16:06	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			10/02/20 16:06	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/02/20 16:06	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/02/20 16:06	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/02/20 16:06	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/02/20 16:06	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/02/20 16:06	1
Chloroethane	ND		1.0	0.90	ug/L			10/02/20 16:06	1
Chloroform	ND		1.0	0.60	ug/L			10/02/20 16:06	1
Chloromethane	ND		1.0	0.90	ug/L			10/02/20 16:06	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/02/20 16:06	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/02/20 16:06	1
Dibromomethane	ND		1.0	0.33	ug/L			10/02/20 16:06	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/02/20 16:06	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/02/20 16:06	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/02/20 16:06	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/02/20 16:06	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/02/20 16:06	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/02/20 16:06	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/02/20 16:06	1
Ethylbenzene	ND	*	1.0	0.51	ug/L			10/02/20 16:06	1
2-Hexanone	ND		5.0	3.3	ug/L			10/02/20 16:06	1
Iodomethane	ND		1.0	0.68	ug/L			10/02/20 16:06	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/02/20 16:06	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/02/20 16:06	1
Methyl tert-butyl ether	**1.6**		1.0	0.59	ug/L			10/02/20 16:06	1
Styrene	ND		1.0	0.47	ug/L			10/02/20 16:06	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/02/20 16:06	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/02/20 16:06	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/02/20 16:06	1
Toluene	ND		1.0	0.46	ug/L			10/02/20 16:06	1
trans-1,4-Dichloro-2-butene	ND	*	1.0	0.83	ug/L			10/02/20 16:06	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/02/20 16:06	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/02/20 16:06	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/02/20 16:06	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/02/20 16:06	1
Trichloroethene	ND	*	1.0	0.69	ug/L			10/02/20 16:06	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/02/20 16:06	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/02/20 16:06	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/02/20 16:06	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/02/20 16:06	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			10/02/20 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*64 - 120*		*10/02/20 16:06*	*1*
Dibromofluoromethane (Surr)	*117*		*71 - 132*		*10/02/20 16:06*	*1*

Client Sample ID: STR-06

Date Collected: 09/21/20 13:20
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-10

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*129*		*62 - 146*		*10/02/20 16:06*	*1*
Toluene-d8 (Surr)	*84*		*75 - 120*		*10/02/20 16:06*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		09/29/20 13:49	09/29/20 20:25	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		09/29/20 13:49	09/29/20 20:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*91*		*60 - 140*	*09/29/20 13:49*	*09/29/20 20:25*	*1*
1,1,1,2-Tetrachloroethane	*76*		*60 - 140*	*09/29/20 13:49*	*09/29/20 20:25*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.036**	**J**	0.10	0.023	mg/L			09/23/20 08:21	1
Chloride	**100**		1.0	0.32	mg/L			09/23/20 08:21	1
Sulfate	**160**		1.0	0.38	mg/L			09/23/20 08:21	1

Method: EPA 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:15	10/16/20 18:28	1
Arsenic	**2.4**		1.0	0.31	ug/L		10/02/20 15:15	10/16/20 18:28	1
Barium	**27**		10	1.6	ug/L		10/02/20 15:15	10/16/20 18:28	1
Beryllium	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:28	1
Cadmium	ND		1.0	0.22	ug/L		10/02/20 15:15	10/16/20 18:28	1
Calcium	**120000**		500	130	ug/L		10/02/20 15:15	10/16/20 18:28	1
Chromium	**1.6**	**J**	2.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:28	1
Cobalt	**3.6**		0.50	0.13	ug/L		10/02/20 15:15	10/16/20 18:28	1
Copper	ND		2.0	0.63	ug/L		10/02/20 15:15	10/16/20 18:28	1
Iron	**6400**		50	20	ug/L		10/02/20 15:15	10/16/20 18:28	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:15	10/16/20 18:28	1
Magnesium	**56000**		500	83	ug/L		10/02/20 15:15	10/16/20 18:28	1
Manganese	**630**		5.0	0.87	ug/L		10/02/20 15:15	10/16/20 18:28	1
Nickel	**9.1**		1.0	0.34	ug/L		10/02/20 15:15	10/16/20 18:28	1
Potassium	**23000**		500	160	ug/L		10/02/20 15:15	10/16/20 18:28	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:28	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:28	1
Sodium	**180000**		500	350	ug/L		10/02/20 15:15	10/16/20 18:28	1
Thallium	ND		1.0	0.15	ug/L		10/02/20 15:15	10/16/20 18:28	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:15	10/16/20 18:28	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:15	10/16/20 18:28	1
Zinc	**5.9**	**B**	5.0	3.2	ug/L		10/02/20 15:15	10/16/20 18:28	1

Method: EPA 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:39	10/07/20 17:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**86**		20	8.3	mg/L			09/29/20 09:10	2

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: STR-06
Date Collected: 09/21/20 13:20
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-10
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**130**		4.3	0.25	NTU			09/22/20 14:19	5
Ammonia	**6.8**		1.0	0.88	mg/L			10/05/20 20:32	10
Specific Conductance	**1600**		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	**680**		25	25	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**1000**		10	10	mg/L			09/23/20 09:43	1
Total Alkalinity as CaCO3 to pH 4.5	**580**		5.0	5.0	mg/L			09/24/20 11:39	1
Bicarbonate Alkalinity as CaCO3	**580**		5.0	5.0	mg/L			09/24/20 11:39	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 11:39	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 11:39	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: STR-07
Date Collected: 09/21/20 13:45
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-11
Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			09/30/20 18:03	1
Acrylonitrile	ND		20	7.8	ug/L			09/30/20 18:03	1
Benzene	ND		1.0	0.60	ug/L			09/30/20 18:03	1
Bromoform	ND		1.0	0.98	ug/L			09/30/20 18:03	1
Bromomethane	ND		1.0	0.89	ug/L			09/30/20 18:03	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/30/20 18:03	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/30/20 18:03	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/30/20 18:03	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/30/20 18:03	1
Chlorobromomethane	ND		1.0	0.63	ug/L			09/30/20 18:03	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			09/30/20 18:03	1
Chloroethane	ND		1.0	0.90	ug/L			09/30/20 18:03	1
Chloroform	ND		1.0	0.60	ug/L			09/30/20 18:03	1
Chloromethane	ND		1.0	0.90	ug/L			09/30/20 18:03	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			09/30/20 18:03	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/30/20 18:03	1
Dibromomethane	ND		1.0	0.33	ug/L			09/30/20 18:03	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			09/30/20 18:03	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			09/30/20 18:03	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			09/30/20 18:03	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			09/30/20 18:03	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/30/20 18:03	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/30/20 18:03	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/30/20 18:03	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/30/20 18:03	1
2-Hexanone	ND		5.0	3.3	ug/L			09/30/20 18:03	1
Iodomethane	ND		1.0	0.68	ug/L			09/30/20 18:03	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/30/20 18:03	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/30/20 18:03	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/30/20 18:03	1
Styrene	ND		1.0	0.47	ug/L			09/30/20 18:03	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/30/20 18:03	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/30/20 18:03	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/30/20 18:03	1
Toluene	ND		1.0	0.46	ug/L			09/30/20 18:03	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			09/30/20 18:03	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			09/30/20 18:03	1
trans-1,3-Dichloropropene	ND	*	1.0	0.58	ug/L			09/30/20 18:03	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/30/20 18:03	1
1,1,2-Trichloroethane	ND	*	1.0	0.45	ug/L			09/30/20 18:03	1
Trichloroethene	ND		1.0	0.69	ug/L			09/30/20 18:03	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			09/30/20 18:03	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			09/30/20 18:03	1
Vinyl acetate	ND		1.0	0.81	ug/L			09/30/20 18:03	1
Vinyl chloride	ND		1.0	0.40	ug/L			09/30/20 18:03	1
Xylenes, Total	ND		2.0	0.89	ug/L			09/30/20 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*64 - 120*		*09/30/20 18:03*	*1*
Dibromofluoromethane (Surr)	*115*		*71 - 132*		*09/30/20 18:03*	*1*

Client Sample ID: STR-07

Date Collected: 09/21/20 13:45
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-11

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*125*		*62 - 146*		*09/30/20 18:03*	*1*
Toluene-d8 (Surr)	*89*		*75 - 120*		*09/30/20 18:03*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		09/29/20 13:49	09/29/20 20:50	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		09/29/20 13:49	09/29/20 20:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*101*		*60 - 140*	*09/29/20 13:49*	*09/29/20 20:50*	*1*
1,1,1,2-Tetrachloroethane	*81*		*60 - 140*	*09/29/20 13:49*	*09/29/20 20:50*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.82**		0.10	0.023	mg/L			09/22/20 19:00	1
Chloride	**56**		1.0	0.32	mg/L			09/22/20 19:00	1
Sulfate	**500**		5.0	1.9	mg/L			09/22/20 19:16	5

Method: EPA 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:15	10/16/20 18:31	1
Arsenic	**1.2**		1.0	0.31	ug/L		10/02/20 15:15	10/16/20 18:31	1
Barium	**39**		10	1.6	ug/L		10/02/20 15:15	10/16/20 18:31	1
Beryllium	**0.62**	**J**	1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:31	1
Cadmium	**2.3**		1.0	0.22	ug/L		10/02/20 15:15	10/16/20 18:31	1
Calcium	**120000**		500	130	ug/L		10/02/20 15:15	10/16/20 18:31	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:31	1
Cobalt	**14**		0.50	0.13	ug/L		10/02/20 15:15	10/16/20 18:31	1
Copper	ND		2.0	0.63	ug/L		10/02/20 15:15	10/16/20 18:31	1
Iron	**4200**		50	20	ug/L		10/02/20 15:15	10/16/20 18:31	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:15	10/16/20 18:31	1
Magnesium	**29000**		500	83	ug/L		10/02/20 15:15	10/16/20 18:31	1
Manganese	**910**		5.0	0.87	ug/L		10/02/20 15:15	10/16/20 18:31	1
Nickel	**45**		1.0	0.34	ug/L		10/02/20 15:15	10/16/20 18:31	1
Potassium	**18000**		500	160	ug/L		10/02/20 15:15	10/16/20 18:31	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:31	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:31	1
Sodium	**76000**		500	350	ug/L		10/02/20 15:15	10/16/20 18:31	1
Thallium	**0.20**	**J**	1.0	0.15	ug/L		10/02/20 15:15	10/16/20 18:31	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:15	10/16/20 18:31	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:15	10/16/20 18:31	1
Zinc	**88**	**B**	5.0	3.2	ug/L		10/02/20 15:15	10/16/20 18:31	1

Method: EPA 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:39	10/07/20 17:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	4.1	mg/L			09/29/20 09:11	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: STR-07
Date Collected: 09/21/20 13:45
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-11
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**98**		4.3	0.25	NTU			09/22/20 14:19	5
Ammonia	ND	F1	0.10	0.088	mg/L			10/05/20 19:02	1
Specific Conductance	**1100**		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	**500**		25	25	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**820**		10	10	mg/L			09/23/20 09:43	1
Total Alkalinity as CaCO3 to pH 4.5	**6.1**		5.0	5.0	mg/L			09/24/20 11:45	1
Bicarbonate Alkalinity as CaCO3	**6.1**		5.0	5.0	mg/L			09/24/20 11:45	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 11:45	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 11:45	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: D2-UD

Date Collected: 09/21/20 14:20
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-12

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			09/30/20 17:35	1
Acrylonitrile	ND		20	7.8	ug/L			09/30/20 17:35	1
Benzene	ND		1.0	0.60	ug/L			09/30/20 17:35	1
Bromoform	ND		1.0	0.98	ug/L			09/30/20 17:35	1
Bromomethane	ND		1.0	0.89	ug/L			09/30/20 17:35	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/30/20 17:35	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/30/20 17:35	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/30/20 17:35	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/30/20 17:35	1
Chlorobromomethane	ND		1.0	0.63	ug/L			09/30/20 17:35	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			09/30/20 17:35	1
Chloroethane	ND		1.0	0.90	ug/L			09/30/20 17:35	1
Chloroform	ND		1.0	0.60	ug/L			09/30/20 17:35	1
Chloromethane	ND		1.0	0.90	ug/L			09/30/20 17:35	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			09/30/20 17:35	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/30/20 17:35	1
Dibromomethane	ND		1.0	0.33	ug/L			09/30/20 17:35	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			09/30/20 17:35	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			09/30/20 17:35	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			09/30/20 17:35	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			09/30/20 17:35	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/30/20 17:35	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/30/20 17:35	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/30/20 17:35	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/30/20 17:35	1
2-Hexanone	ND		5.0	3.3	ug/L			09/30/20 17:35	1
Iodomethane	ND		1.0	0.68	ug/L			09/30/20 17:35	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/30/20 17:35	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/30/20 17:35	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/30/20 17:35	1
Styrene	ND		1.0	0.47	ug/L			09/30/20 17:35	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/30/20 17:35	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/30/20 17:35	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/30/20 17:35	1
Toluene	ND		1.0	0.46	ug/L			09/30/20 17:35	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			09/30/20 17:35	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			09/30/20 17:35	1
trans-1,3-Dichloropropene	ND	*	1.0	0.58	ug/L			09/30/20 17:35	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/30/20 17:35	1
1,1,2-Trichloroethane	ND	*	1.0	0.45	ug/L			09/30/20 17:35	1
Trichloroethene	ND		1.0	0.69	ug/L			09/30/20 17:35	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			09/30/20 17:35	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			09/30/20 17:35	1
Vinyl acetate	ND		1.0	0.81	ug/L			09/30/20 17:35	1
Vinyl chloride	ND		1.0	0.40	ug/L			09/30/20 17:35	1
Xylenes, Total	ND		2.0	0.89	ug/L			09/30/20 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*64 - 120*		*09/30/20 17:35*	*1*
Dibromofluoromethane (Surr)	*131*		*71 - 132*		*09/30/20 17:35*	*1*

Client Sample ID: D2-UD

Date Collected: 09/21/20 14:20
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-12

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*144*		*62 - 146*		*09/30/20 17:35*	*1*
Toluene-d8 (Surr)	*98*		*75 - 120*		*09/30/20 17:35*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		09/29/20 13:49	09/29/20 21:15	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		09/29/20 13:49	09/29/20 21:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*98*		*60 - 140*	*09/29/20 13:49*	*09/29/20 21:15*	*1*
1,1,1,2-Tetrachloroethane	*79*		*60 - 140*	*09/29/20 13:49*	*09/29/20 21:15*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/23/20 07:18	1
Chloride	**31**		1.0	0.32	mg/L			09/23/20 07:18	1
Sulfate	**96**	**F1**	1.0	0.38	mg/L			09/23/20 07:18	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.52**	**J**	2.0	0.38	ug/L		10/02/20 15:15	10/16/20 18:33	1
Arsenic	**3.7**		1.0	0.31	ug/L		10/02/20 15:15	10/16/20 18:33	1
Barium	**60**		10	1.6	ug/L		10/02/20 15:15	10/16/20 18:33	1
Beryllium	**0.39**	**J**	1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:33	1
Cadmium	**0.60**	**J**	1.0	0.22	ug/L		10/02/20 15:15	10/16/20 18:33	1
Calcium	**67000**		500	130	ug/L		10/02/20 15:15	10/16/20 18:33	1
Chromium	**17**		2.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:33	1
Cobalt	**3.4**		0.50	0.13	ug/L		10/02/20 15:15	10/16/20 18:33	1
Copper	**10**		2.0	0.63	ug/L		10/02/20 15:15	10/16/20 18:33	1
Iron	**11000**		50	20	ug/L		10/02/20 15:15	10/16/20 18:33	1
Lead	**7.5**		1.0	0.13	ug/L		10/02/20 15:15	10/16/20 18:33	1
Magnesium	**12000**		500	83	ug/L		10/02/20 15:15	10/16/20 18:33	1
Manganese	**260**		5.0	0.87	ug/L		10/02/20 15:15	10/16/20 18:33	1
Nickel	**12**		1.0	0.34	ug/L		10/02/20 15:15	10/16/20 18:33	1
Potassium	**4000**		500	160	ug/L		10/02/20 15:15	10/16/20 18:33	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:33	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:33	1
Sodium	**28000**		500	350	ug/L		10/02/20 15:15	10/16/20 18:33	1
Thallium	**0.16**	**J**	1.0	0.15	ug/L		10/02/20 15:15	10/16/20 18:33	1
Tin	**1.1**	**J**	5.0	0.96	ug/L		10/02/20 15:15	10/16/20 18:33	1
Vanadium	**24**		1.0	0.99	ug/L		10/02/20 15:15	10/16/20 18:33	1
Zinc	**52**	**B**	5.0	3.2	ug/L		10/02/20 15:15	10/16/20 18:33	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:39	10/07/20 17:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**14**		10	4.1	mg/L			10/01/20 09:01	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: D2-UD
Date Collected: 09/21/20 14:20
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-12
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**79**		4.3	0.25	NTU			09/22/20 14:19	5
Ammonia	ND		0.10	0.088	mg/L			10/05/20 19:08	1
Specific Conductance	**520**		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	**220**		5.0	5.0	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**310**		10	10	mg/L			09/23/20 09:43	1
Total Alkalinity as CaCO3 to pH 4.5	**110**		5.0	5.0	mg/L			09/24/20 11:52	1
Bicarbonate Alkalinity as CaCO3	**110**		5.0	5.0	mg/L			09/24/20 11:52	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 11:52	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 11:52	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: ST-06

Date Collected: 09/21/20 14:50
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-13

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			09/30/20 17:08	1
Acrylonitrile	ND		20	7.8	ug/L			09/30/20 17:08	1
Benzene	ND		1.0	0.60	ug/L			09/30/20 17:08	1
Bromoform	ND		1.0	0.98	ug/L			09/30/20 17:08	1
Bromomethane	ND		1.0	0.89	ug/L			09/30/20 17:08	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/30/20 17:08	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/30/20 17:08	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/30/20 17:08	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/30/20 17:08	1
Chlorobromomethane	ND		1.0	0.63	ug/L			09/30/20 17:08	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			09/30/20 17:08	1
Chloroethane	ND		1.0	0.90	ug/L			09/30/20 17:08	1
Chloroform	ND		1.0	0.60	ug/L			09/30/20 17:08	1
Chloromethane	ND		1.0	0.90	ug/L			09/30/20 17:08	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			09/30/20 17:08	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/30/20 17:08	1
Dibromomethane	ND		1.0	0.33	ug/L			09/30/20 17:08	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			09/30/20 17:08	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			09/30/20 17:08	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			09/30/20 17:08	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			09/30/20 17:08	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/30/20 17:08	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/30/20 17:08	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/30/20 17:08	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/30/20 17:08	1
2-Hexanone	ND		5.0	3.3	ug/L			09/30/20 17:08	1
Iodomethane	ND		1.0	0.68	ug/L			09/30/20 17:08	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/30/20 17:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/30/20 17:08	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/30/20 17:08	1
Styrene	ND		1.0	0.47	ug/L			09/30/20 17:08	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/30/20 17:08	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/30/20 17:08	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/30/20 17:08	1
Toluene	ND		1.0	0.46	ug/L			09/30/20 17:08	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			09/30/20 17:08	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			09/30/20 17:08	1
trans-1,3-Dichloropropene	ND	*	1.0	0.58	ug/L			09/30/20 17:08	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/30/20 17:08	1
1,1,2-Trichloroethane	ND	*	1.0	0.45	ug/L			09/30/20 17:08	1
Trichloroethene	ND		1.0	0.69	ug/L			09/30/20 17:08	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			09/30/20 17:08	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			09/30/20 17:08	1
Vinyl acetate	ND		1.0	0.81	ug/L			09/30/20 17:08	1
Vinyl chloride	ND		1.0	0.40	ug/L			09/30/20 17:08	1
Xylenes, Total	ND		2.0	0.89	ug/L			09/30/20 17:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*64 - 120*		*09/30/20 17:08*	*1*
Dibromofluoromethane (Surr)	*112*		*71 - 132*		*09/30/20 17:08*	*1*

Client Sample ID: ST-06
Date Collected: 09/21/20 14:50
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-13
Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*125*		*62 - 146*		*09/30/20 17:08*	*1*
Toluene-d8 (Surr)	*90*		*75 - 120*		*09/30/20 17:08*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		09/29/20 13:49	09/29/20 21:40	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		09/29/20 13:49	09/29/20 21:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*105*		*60 - 140*	*09/29/20 13:49*	*09/29/20 21:40*	*1*
1,1,1,2-Tetrachloroethane	*84*		*60 - 140*	*09/29/20 13:49*	*09/29/20 21:40*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/23/20 08:42	1
Chloride	**22**		1.0	0.32	mg/L			09/23/20 08:42	1
Sulfate	**190**		1.0	0.38	mg/L			09/23/20 08:42	1

Method: EPA 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.72**	**J**	2.0	0.38	ug/L		10/02/20 15:15	10/16/20 18:36	1
Arsenic	**1.6**		1.0	0.31	ug/L		10/02/20 15:15	10/16/20 18:36	1
Barium	**45**		10	1.6	ug/L		10/02/20 15:15	10/16/20 18:36	1
Beryllium	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:36	1
Cadmium	ND		1.0	0.22	ug/L		10/02/20 15:15	10/16/20 18:36	1
Calcium	**83000**		500	130	ug/L		10/02/20 15:15	10/16/20 18:36	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:36	1
Cobalt	**0.55**		0.50	0.13	ug/L		10/02/20 15:15	10/16/20 18:36	1
Copper	**2.2**		2.0	0.63	ug/L		10/02/20 15:15	10/16/20 18:36	1
Iron	**26**	**J**	50	20	ug/L		10/02/20 15:15	10/16/20 18:36	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:15	10/16/20 18:36	1
Magnesium	**21000**		500	83	ug/L		10/02/20 15:15	10/16/20 18:36	1
Manganese	**1.8**	**J**	5.0	0.87	ug/L		10/02/20 15:15	10/16/20 18:36	1
Nickel	**2.7**		1.0	0.34	ug/L		10/02/20 15:15	10/16/20 18:36	1
Potassium	**12000**		500	160	ug/L		10/02/20 15:15	10/16/20 18:36	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:36	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:36	1
Sodium	**31000**		500	350	ug/L		10/02/20 15:15	10/16/20 18:36	1
Thallium	**0.20**	**J**	1.0	0.15	ug/L		10/02/20 15:15	10/16/20 18:36	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:15	10/16/20 18:36	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:15	10/16/20 18:36	1
Zinc	ND		5.0	3.2	ug/L		10/02/20 15:15	10/16/20 18:36	1

Method: EPA 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:39	10/07/20 17:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**56**		10	4.1	mg/L			10/01/20 09:02	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: ST-06
Date Collected: 09/21/20 14:50
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-13
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**21**		0.85	0.050	NTU			09/22/20 14:19	1
Ammonia	**0.15**		0.10	0.088	mg/L			10/05/20 19:10	1
Specific Conductance	**690**		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	**410**		25	25	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**450**		10	10	mg/L			09/23/20 09:43	1
Total Alkalinity as CaCO3 to pH 4.5	**120**		5.0	5.0	mg/L			09/24/20 11:59	1
Bicarbonate Alkalinity as CaCO3	**120**		5.0	5.0	mg/L			09/24/20 11:59	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 11:59	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 11:59	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: SW-DUP

Date Collected: 09/21/20 00:00
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-14

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			09/30/20 16:41	1
Acrylonitrile	ND		20	7.8	ug/L			09/30/20 16:41	1
Benzene	ND		1.0	0.60	ug/L			09/30/20 16:41	1
Bromoform	ND		1.0	0.98	ug/L			09/30/20 16:41	1
Bromomethane	ND		1.0	0.89	ug/L			09/30/20 16:41	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/30/20 16:41	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/30/20 16:41	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/30/20 16:41	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/30/20 16:41	1
Chlorobromomethane	ND		1.0	0.63	ug/L			09/30/20 16:41	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			09/30/20 16:41	1
Chloroethane	ND		1.0	0.90	ug/L			09/30/20 16:41	1
Chloroform	ND		1.0	0.60	ug/L			09/30/20 16:41	1
Chloromethane	ND		1.0	0.90	ug/L			09/30/20 16:41	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			09/30/20 16:41	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/30/20 16:41	1
Dibromomethane	ND		1.0	0.33	ug/L			09/30/20 16:41	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			09/30/20 16:41	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			09/30/20 16:41	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			09/30/20 16:41	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			09/30/20 16:41	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/30/20 16:41	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/30/20 16:41	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/30/20 16:41	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/30/20 16:41	1
2-Hexanone	ND		5.0	3.3	ug/L			09/30/20 16:41	1
Iodomethane	ND		1.0	0.68	ug/L			09/30/20 16:41	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/30/20 16:41	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/30/20 16:41	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/30/20 16:41	1
Styrene	ND		1.0	0.47	ug/L			09/30/20 16:41	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/30/20 16:41	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/30/20 16:41	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/30/20 16:41	1
Toluene	ND		1.0	0.46	ug/L			09/30/20 16:41	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			09/30/20 16:41	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			09/30/20 16:41	1
trans-1,3-Dichloropropene	ND	*	1.0	0.58	ug/L			09/30/20 16:41	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/30/20 16:41	1
1,1,2-Trichloroethane	ND	*	1.0	0.45	ug/L			09/30/20 16:41	1
Trichloroethene	ND		1.0	0.69	ug/L			09/30/20 16:41	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			09/30/20 16:41	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			09/30/20 16:41	1
Vinyl acetate	ND		1.0	0.81	ug/L			09/30/20 16:41	1
Vinyl chloride	ND		1.0	0.40	ug/L			09/30/20 16:41	1
Xylenes, Total	ND		2.0	0.89	ug/L			09/30/20 16:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*64 - 120*		*09/30/20 16:41*	*1*
Dibromofluoromethane (Surr)	*97*		*71 - 132*		*09/30/20 16:41*	*1*

Client Sample ID: SW-DUP

Date Collected: 09/21/20 00:00
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-14

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*62 - 146*		*09/30/20 16:41*	*1*
Toluene-d8 (Surr)	*76*		*75 - 120*		*09/30/20 16:41*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		09/29/20 13:49	09/29/20 22:05	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		09/29/20 13:49	09/29/20 22:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*97*		*60 - 140*	*09/29/20 13:49*	*09/29/20 22:05*	*1*
1,1,1,2-Tetrachloroethane	*80*		*60 - 140*	*09/29/20 13:49*	*09/29/20 22:05*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.95**		0.10	0.023	mg/L			09/22/20 13:33	1
Chloride	**58**		1.0	0.32	mg/L			09/22/20 13:33	1
Sulfate	**520**		5.0	1.9	mg/L			09/22/20 13:50	5

Method: EPA 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:15	10/16/20 18:39	1
Arsenic	**1.1**		1.0	0.31	ug/L		10/02/20 15:15	10/16/20 18:39	1
Barium	**39**		10	1.6	ug/L		10/02/20 15:15	10/16/20 18:39	1
Beryllium	**0.65**	**J**	1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:39	1
Cadmium	**2.1**		1.0	0.22	ug/L		10/02/20 15:15	10/16/20 18:39	1
Calcium	**120000**		500	130	ug/L		10/02/20 15:15	10/16/20 18:39	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:39	1
Cobalt	**14**		0.50	0.13	ug/L		10/02/20 15:15	10/16/20 18:39	1
Copper	**0.81**	**J**	2.0	0.63	ug/L		10/02/20 15:15	10/16/20 18:39	1
Iron	**4200**		50	20	ug/L		10/02/20 15:15	10/16/20 18:39	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:15	10/16/20 18:39	1
Magnesium	**28000**		500	83	ug/L		10/02/20 15:15	10/16/20 18:39	1
Manganese	**920**		5.0	0.87	ug/L		10/02/20 15:15	10/16/20 18:39	1
Nickel	**46**		1.0	0.34	ug/L		10/02/20 15:15	10/16/20 18:39	1
Potassium	**18000**		500	160	ug/L		10/02/20 15:15	10/16/20 18:39	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:15	10/16/20 18:39	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:15	10/16/20 18:39	1
Sodium	**77000**		500	350	ug/L		10/02/20 15:15	10/16/20 18:39	1
Thallium	**0.17**	**J**	1.0	0.15	ug/L		10/02/20 15:15	10/16/20 18:39	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:15	10/16/20 18:39	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:15	10/16/20 18:39	1
Zinc	**91**	**B**	5.0	3.2	ug/L		10/02/20 15:15	10/16/20 18:39	1

Method: EPA 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:39	10/07/20 17:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**14**		10	4.1	mg/L			10/01/20 09:03	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: SW-DUP
Date Collected: 09/21/20 00:00
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-14
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**56**		4.3	0.25	NTU			09/22/20 14:19	5
Ammonia	ND		0.10	0.088	mg/L			10/05/20 19:18	1
Specific Conductance	**1100**		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	**400**		25	25	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**780**		10	10	mg/L			09/23/20 09:43	1
Total Alkalinity as CaCO3 to pH 4.5	**6.8**		5.0	5.0	mg/L			09/24/20 12:05	1
Bicarbonate Alkalinity as CaCO3	**6.8**		5.0	5.0	mg/L			09/24/20 12:05	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 12:05	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 12:05	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: TRIP BLANK-01

Date Collected: 09/21/20 15:30
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-15

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			09/29/20 17:05	1
Acrylonitrile	ND		20	7.8	ug/L			09/29/20 17:05	1
Benzene	ND		1.0	0.60	ug/L			09/29/20 17:05	1
Bromoform	ND		1.0	0.98	ug/L			09/29/20 17:05	1
Bromomethane	ND		1.0	0.89	ug/L			09/29/20 17:05	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/29/20 17:05	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/29/20 17:05	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/29/20 17:05	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/29/20 17:05	1
Chlorobromomethane	ND		1.0	0.63	ug/L			09/29/20 17:05	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			09/29/20 17:05	1
Chloroethane	ND		1.0	0.90	ug/L			09/29/20 17:05	1
Chloroform	ND		1.0	0.60	ug/L			09/29/20 17:05	1
Chloromethane	ND		1.0	0.90	ug/L			09/29/20 17:05	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			09/29/20 17:05	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/29/20 17:05	1
Dibromomethane	ND		1.0	0.33	ug/L			09/29/20 17:05	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			09/29/20 17:05	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			09/29/20 17:05	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			09/29/20 17:05	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			09/29/20 17:05	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/29/20 17:05	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/29/20 17:05	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/29/20 17:05	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/29/20 17:05	1
2-Hexanone	ND		5.0	3.3	ug/L			09/29/20 17:05	1
Iodomethane	ND		1.0	0.68	ug/L			09/29/20 17:05	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/29/20 17:05	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/29/20 17:05	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/29/20 17:05	1
Styrene	ND		1.0	0.47	ug/L			09/29/20 17:05	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/29/20 17:05	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/29/20 17:05	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/29/20 17:05	1
Toluene	ND		1.0	0.46	ug/L			09/29/20 17:05	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			09/29/20 17:05	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			09/29/20 17:05	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/29/20 17:05	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/29/20 17:05	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/29/20 17:05	1
Trichloroethene	ND		1.0	0.69	ug/L			09/29/20 17:05	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			09/29/20 17:05	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			09/29/20 17:05	1
Vinyl acetate	ND		1.0	0.81	ug/L			09/29/20 17:05	1
Vinyl chloride	ND		1.0	0.40	ug/L			09/29/20 17:05	1
Xylenes, Total	ND		2.0	0.89	ug/L			09/29/20 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*64 - 120*		*09/29/20 17:05*	*1*
Dibromofluoromethane (Surr)	*110*		*71 - 132*		*09/29/20 17:05*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111238-1

Client Sample ID: TRIP BLANK-01

Date Collected: 09/21/20 15:30
Date Received: 09/22/20 09:30

Lab Sample ID: 180-111238-15

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*123*		*62 - 146*		*09/29/20 17:05*	*1*
Toluene-d8 (Surr)	*92*		*75 - 120*		*09/29/20 17:05*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		09/29/20 13:49	09/29/20 22:30	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		09/29/20 13:49	09/29/20 22:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*105*		*60 - 140*	*09/29/20 13:49*	*09/29/20 22:30*	*1*
1,1,1,2-Tetrachloroethane	*85*		*60 - 140*	*09/29/20 13:49*	*09/29/20 22:30*	*1*

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ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-111295-1
Client Project/Site: Ritchie Rubble LF

For:
Geosyntec Consultants, Inc.
10211 Wincopin Circle
4'th Floor
Columbia, Maryland 21044

Attn: Yovanna Cortes

Roxanne Cisneros

Authorized for release by:
10/9/2020 9:05:23 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@Eurofinset.com

PA Lab ID: 02-00416

Table of Contents

Job ID: 180-111295-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-111295-1

Comments
No additional comments.

Receipt
The samples were received on 9/23/2020 9:30 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.2º C and 2.4º C.

GC/MS VOA
Method 8260C LL: Internal standard (ISTD) response for TBA-d9 for the following samples were outside acceptance criteria: M-20 (180-111295-7) and (MB 180-332070/6). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

Method 8260C LL: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 180-332070 recovered outside control limits for the following analytes: 2-Butanone, Acetone, Chloromethane and Chloroethane.

Method 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-332070 was outside the method criteria for the following analyte(s): Bromomethane and Carbon disulfide. (HIGH). As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-332070 was outside the method criteria for the following analyte(s): Methyl tert-butyl ether, Trichlorofluoromethane, Vinyl acetate and 2-Hexanone. (LOW). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 180.1: The following sample was diluted to bring the concentration of target analytes within the calibration range: M-17 (180-111295-4). Elevated reporting limits (RLs) are provided.

Method SM 2340C: The following samples were diluted due to the nature of the sample matrix: M-17 (180-111295-4), M-18 (180-111295-5) and M-20 (180-111295-7). Elevated reporting limits (RLs) are provided.

Method 350.1: The following sample was diluted to bring the concentration of target analytes within the calibration range: M-20 (180-111295-7). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111295-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111295-1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-21
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20 *
Florida	NELAP	E871008	06-30-21
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-21
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-21
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-21
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-21
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	04-30-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-21
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-21
Virginia	NELAP	10043	09-14-21
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111295-1

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111295-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-111295-1	STR-01	Water	09/21/20 16:00	09/23/20 09:30	
180-111295-2	M-01A	Water	09/22/20 09:35	09/23/20 09:30	
180-111295-3	GW-DUP	Water	09/22/20 00:00	09/23/20 09:30	
180-111295-4	M-17	Water	09/22/20 09:05	09/23/20 09:30	
180-111295-5	M-18	Water	09/22/20 10:45	09/23/20 09:30	
180-111295-6	M-19	Water	09/22/20 12:20	09/23/20 09:30	
180-111295-7	M-20	Water	09/22/20 14:30	09/23/20 09:30	
180-111295-8	M-18A	Water	09/22/20 11:20	09/23/20 09:30	
180-111295-9	M-19A	Water	09/22/20 12:25	09/23/20 09:30	
180-111295-10	M-21	Water	09/22/20 13:25	09/23/20 09:30	
180-111295-11	TRIP BLANK-02	Water	09/22/20 15:00	09/23/20 09:30	

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111295-1

Method	Method Description	Protocol	Laboratory
EPA 8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT
EPA 8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL PIT
EPA 300.0 R2.1	Anions, Ion Chromatgraphy	EPA	TAL PIT
EPA 6020A	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
410.4-1993 R2.0	COD	MCAWW	TAL CAN
EPA 180.1	Turbidity, Nephelometric	EPA	TAL PIT
EPA 350.1	Nitrogen, Ammonia	EPA	TAL PIT
EPA 9050A	Specific Conductance	SW846	TAL PIT
SM 2340C	Hardness, Total	SM	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
5030C	Purge and Trap	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT
8011	Microextraction	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111295-1

Client Sample ID: STR-01

Date Collected: 09/21/20 16:00
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-1

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.79		0.10	0.023	mg/L			09/23/20 13:55	1
Chloride	80		1.0	0.32	mg/L			09/23/20 13:55	1
Sulfate	52		1.0	0.38	mg/L			09/23/20 13:55	1

Method: EPA 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:17	10/03/20 15:24	1
Arsenic	ND		1.0	0.31	ug/L		10/02/20 15:17	10/03/20 15:24	1
Barium	76		10	1.6	ug/L		10/02/20 15:17	10/03/20 15:24	1
Beryllium	ND		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:24	1
Cadmium	ND		1.0	0.22	ug/L		10/02/20 15:17	10/03/20 15:24	1
Calcium	65000		500	130	ug/L		10/02/20 15:17	10/03/20 15:24	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:24	1
Cobalt	1.4		0.50	0.13	ug/L		10/02/20 15:17	10/03/20 15:24	1
Copper	0.64	J	2.0	0.63	ug/L		10/02/20 15:17	10/03/20 15:24	1
Iron	160		50	20	ug/L		10/02/20 15:17	10/03/20 15:24	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:17	10/03/20 15:24	1
Magnesium	16000		500	83	ug/L		10/02/20 15:17	10/03/20 15:24	1
Manganese	89		5.0	0.87	ug/L		10/02/20 15:17	10/03/20 15:24	1
Nickel	2.6		1.0	0.34	ug/L		10/02/20 15:17	10/03/20 15:24	1
Potassium	4900		500	160	ug/L		10/02/20 15:17	10/03/20 15:24	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:24	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:24	1
Sodium	52000		500	350	ug/L		10/02/20 15:17	10/03/20 15:24	1
Thallium	0.15	J	1.0	0.15	ug/L		10/02/20 15:17	10/03/20 15:24	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:17	10/03/20 15:24	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:17	10/03/20 15:24	1
Zinc	5.1		5.0	3.2	ug/L		10/02/20 15:17	10/03/20 15:24	1

Method: EPA 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:39	10/07/20 17:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	12		10	4.1	mg/L			10/01/20 09:20	1
Turbidity	6.4		0.85	0.050	NTU			09/23/20 14:34	1
Ammonia	ND		0.10	0.088	mg/L			10/06/20 18:32	1
Specific Conductance	670		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	220		5.0	5.0	mg/L			10/07/20 09:44	1
Total Dissolved Solids	380		10	10	mg/L			09/23/20 20:30	1
Total Alkalinity as CaCO3 to pH 4.5	150		5.0	5.0	mg/L			09/24/20 14:13	1
Bicarbonate Alkalinity as CaCO3	150		5.0	5.0	mg/L			09/24/20 14:13	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 14:13	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 14:13	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111295-1

Client Sample ID: M-01A
Date Collected: 09/22/20 09:35
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-2
Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*1	5.0	3.4	ug/L			10/02/20 12:54	1
Acrylonitrile	ND		20	7.8	ug/L			10/02/20 12:54	1
Benzene	ND		1.0	0.60	ug/L			10/02/20 12:54	1
Bromoform	ND		1.0	0.98	ug/L			10/02/20 12:54	1
Bromomethane	ND		1.0	0.89	ug/L			10/02/20 12:54	1
2-Butanone (MEK)	ND	*1	5.0	2.6	ug/L			10/02/20 12:54	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/02/20 12:54	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/02/20 12:54	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/02/20 12:54	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/02/20 12:54	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/02/20 12:54	1
Chloroethane	ND	*1	1.0	0.90	ug/L			10/02/20 12:54	1
Chloroform	ND		1.0	0.60	ug/L			10/02/20 12:54	1
Chloromethane	ND	*1	1.0	0.90	ug/L			10/02/20 12:54	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/02/20 12:54	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/02/20 12:54	1
Dibromomethane	ND		1.0	0.33	ug/L			10/02/20 12:54	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/02/20 12:54	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/02/20 12:54	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/02/20 12:54	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/02/20 12:54	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/02/20 12:54	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/02/20 12:54	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/02/20 12:54	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/02/20 12:54	1
2-Hexanone	ND		5.0	3.3	ug/L			10/02/20 12:54	1
Iodomethane	ND		1.0	0.68	ug/L			10/02/20 12:54	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/02/20 12:54	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/02/20 12:54	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/02/20 12:54	1
Styrene	ND		1.0	0.47	ug/L			10/02/20 12:54	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/02/20 12:54	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/02/20 12:54	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/02/20 12:54	1
Toluene	ND		1.0	0.46	ug/L			10/02/20 12:54	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/02/20 12:54	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/02/20 12:54	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/02/20 12:54	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/02/20 12:54	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/02/20 12:54	1
Trichloroethene	ND		1.0	0.69	ug/L			10/02/20 12:54	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/02/20 12:54	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/02/20 12:54	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/02/20 12:54	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/02/20 12:54	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/02/20 12:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*64 - 120*		*10/02/20 12:54*	*1*
Dibromofluoromethane (Surr)	*101*		*71 - 132*		*10/02/20 12:54*	*1*

Client Sample ID: M-01A

Date Collected: 09/22/20 09:35
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-2

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*76*		*62 - 146*		*10/02/20 12:54*	*1*
Toluene-d8 (Surr)	*120*		*75 - 120*		*10/02/20 12:54*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 09:57	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 09:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*95*		*60 - 140*	*10/05/20 12:12*	*10/06/20 09:57*	*1*
1,1,1,2-Tetrachloroethane	*102*		*60 - 140*	*10/05/20 12:12*	*10/06/20 09:57*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/23/20 19:03	1
Chloride	**28**		1.0	0.32	mg/L			09/23/20 19:03	1
Sulfate	**9.7**		1.0	0.38	mg/L			09/23/20 19:03	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:17	10/03/20 15:28	1
Arsenic	**0.32**	**J**	1.0	0.31	ug/L		10/02/20 15:17	10/03/20 15:28	1
Barium	**18**		10	1.6	ug/L		10/02/20 15:17	10/03/20 15:28	1
Beryllium	ND		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:28	1
Cadmium	**1.3**		1.0	0.22	ug/L		10/02/20 15:17	10/03/20 15:28	1
Calcium	**16000**		500	130	ug/L		10/02/20 15:17	10/03/20 15:28	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:28	1
Cobalt	**1.7**		0.50	0.13	ug/L		10/02/20 15:17	10/03/20 15:28	1
Copper	**0.69**	**J**	2.0	0.63	ug/L		10/02/20 15:17	10/03/20 15:28	1
Iron	**3400**		50	20	ug/L		10/02/20 15:17	10/03/20 15:28	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:17	10/03/20 15:28	1
Magnesium	**1900**		500	83	ug/L		10/02/20 15:17	10/03/20 15:28	1
Manganese	**130**		5.0	0.87	ug/L		10/02/20 15:17	10/03/20 15:28	1
Nickel	**13**		1.0	0.34	ug/L		10/02/20 15:17	10/03/20 15:28	1
Potassium	**3200**		500	160	ug/L		10/02/20 15:17	10/03/20 15:28	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:28	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:28	1
Sodium	**3500**		500	350	ug/L		10/02/20 15:17	10/03/20 15:28	1
Thallium	ND		1.0	0.15	ug/L		10/02/20 15:17	10/03/20 15:28	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:17	10/03/20 15:28	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:17	10/03/20 15:28	1
Zinc	**78**		5.0	3.2	ug/L		10/02/20 15:17	10/03/20 15:28	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:35	10/07/20 16:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	4.1	mg/L			10/01/20 09:21	1

Client Sample ID: M-01A

Lab Sample ID: 180-111295-2

Date Collected: 09/22/20 09:35

Matrix: Water

Date Received: 09/23/20 09:30

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**7.1**		0.85	0.050	NTU			09/23/20 14:34	1
Ammonia	ND		0.10	0.088	mg/L			10/06/20 18:34	1
Specific Conductance	**140**		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	**56**		5.0	5.0	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**130**		10	10	mg/L			09/23/20 20:30	1
Total Alkalinity as CaCO3 to pH 4.5	**10**		5.0	5.0	mg/L			09/24/20 14:18	1
Bicarbonate Alkalinity as CaCO3	**10**		5.0	5.0	mg/L			09/24/20 14:18	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 14:18	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 14:18	1

Client Sample ID: GW-DUP

Lab Sample ID: 180-111295-3

Date Collected: 09/22/20 00:00

Matrix: Water

Date Received: 09/23/20 09:30

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*1	5.0	3.4	ug/L			10/02/20 13:24	1
Acrylonitrile	ND		20	7.8	ug/L			10/02/20 13:24	1
Benzene	ND		1.0	0.60	ug/L			10/02/20 13:24	1
Bromoform	ND		1.0	0.98	ug/L			10/02/20 13:24	1
Bromomethane	ND		1.0	0.89	ug/L			10/02/20 13:24	1
2-Butanone (MEK)	ND	*1	5.0	2.6	ug/L			10/02/20 13:24	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/02/20 13:24	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/02/20 13:24	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/02/20 13:24	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/02/20 13:24	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/02/20 13:24	1
Chloroethane	ND	*1	1.0	0.90	ug/L			10/02/20 13:24	1
Chloroform	ND		1.0	0.60	ug/L			10/02/20 13:24	1
Chloromethane	ND	*1	1.0	0.90	ug/L			10/02/20 13:24	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/02/20 13:24	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/02/20 13:24	1
Dibromomethane	ND		1.0	0.33	ug/L			10/02/20 13:24	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/02/20 13:24	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/02/20 13:24	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/02/20 13:24	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/02/20 13:24	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/02/20 13:24	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/02/20 13:24	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/02/20 13:24	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/02/20 13:24	1
2-Hexanone	ND		5.0	3.3	ug/L			10/02/20 13:24	1
Iodomethane	ND		1.0	0.68	ug/L			10/02/20 13:24	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/02/20 13:24	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/02/20 13:24	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/02/20 13:24	1
Styrene	ND		1.0	0.47	ug/L			10/02/20 13:24	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/02/20 13:24	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/02/20 13:24	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/02/20 13:24	1

Client Sample ID: GW-DUP

Date Collected: 09/22/20 00:00
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-3

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0	0.46	ug/L			10/02/20 13:24	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/02/20 13:24	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/02/20 13:24	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/02/20 13:24	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/02/20 13:24	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/02/20 13:24	1
Trichloroethene	ND		1.0	0.69	ug/L			10/02/20 13:24	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/02/20 13:24	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/02/20 13:24	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/02/20 13:24	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/02/20 13:24	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/02/20 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*66*		*64 - 120*		*10/02/20 13:24*	*1*
Dibromofluoromethane (Surr)	*89*		*71 - 132*		*10/02/20 13:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*72*		*62 - 146*		*10/02/20 13:24*	*1*
Toluene-d8 (Surr)	*90*		*75 - 120*		*10/02/20 13:24*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 10:21	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 10:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*92*		*60 - 140*	*10/05/20 12:12*	*10/06/20 10:21*	*1*
1,1,1,2-Tetrachloroethane	*100*		*60 - 140*	*10/05/20 12:12*	*10/06/20 10:21*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/23/20 14:58	1
Chloride	**29**		1.0	0.32	mg/L			09/23/20 14:58	1
Sulfate	**9.6**		1.0	0.38	mg/L			09/23/20 14:58	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:17	10/03/20 15:32	1
Arsenic	**0.49**	**J**	1.0	0.31	ug/L		10/02/20 15:17	10/03/20 15:32	1
Barium	**17**		10	1.6	ug/L		10/02/20 15:17	10/03/20 15:32	1
Beryllium	ND		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:32	1
Cadmium	**1.1**		1.0	0.22	ug/L		10/02/20 15:17	10/03/20 15:32	1
Calcium	**16000**		500	130	ug/L		10/02/20 15:17	10/03/20 15:32	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:32	1
Cobalt	**1.6**		0.50	0.13	ug/L		10/02/20 15:17	10/03/20 15:32	1
Copper	ND		2.0	0.63	ug/L		10/02/20 15:17	10/03/20 15:32	1
Iron	**3900**		50	20	ug/L		10/02/20 15:17	10/03/20 15:32	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:17	10/03/20 15:32	1
Magnesium	**1900**		500	83	ug/L		10/02/20 15:17	10/03/20 15:32	1
Manganese	**130**		5.0	0.87	ug/L		10/02/20 15:17	10/03/20 15:32	1
Nickel	**13**		1.0	0.34	ug/L		10/02/20 15:17	10/03/20 15:32	1
Potassium	**3100**		500	160	ug/L		10/02/20 15:17	10/03/20 15:32	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111295-1

Client Sample ID: GW-DUP

Date Collected: 09/22/20 00:00
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-3

Matrix: Water

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:32	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:32	1
Sodium	**3400**		500	350	ug/L		10/02/20 15:17	10/03/20 15:32	1
Thallium	ND		1.0	0.15	ug/L		10/02/20 15:17	10/03/20 15:32	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:17	10/03/20 15:32	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:17	10/03/20 15:32	1
Zinc	**75**		5.0	3.2	ug/L		10/02/20 15:17	10/03/20 15:32	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:35	10/07/20 16:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	4.1	mg/L			10/01/20 09:22	1
Turbidity	**5.0**		0.85	0.050	NTU			09/23/20 14:34	1
Ammonia	ND		0.10	0.088	mg/L			10/06/20 18:36	1
Specific Conductance	**140**		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	**54**		5.0	5.0	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**120**		10	10	mg/L			09/23/20 20:30	1
Total Alkalinity as CaCO3 to pH 4.5	**9.9**		5.0	5.0	mg/L			09/24/20 14:25	1
Bicarbonate Alkalinity as CaCO3	**9.9**		5.0	5.0	mg/L			09/24/20 14:25	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 14:25	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 14:25	1

Client Sample ID: M-17

Date Collected: 09/22/20 09:05
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-4

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*1	5.0	3.4	ug/L			10/02/20 13:54	1
Acrylonitrile	ND		20	7.8	ug/L			10/02/20 13:54	1
Benzene	ND		1.0	0.60	ug/L			10/02/20 13:54	1
Bromoform	ND		1.0	0.98	ug/L			10/02/20 13:54	1
Bromomethane	ND		1.0	0.89	ug/L			10/02/20 13:54	1
2-Butanone (MEK)	ND	*1	5.0	2.6	ug/L			10/02/20 13:54	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/02/20 13:54	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/02/20 13:54	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/02/20 13:54	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/02/20 13:54	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/02/20 13:54	1
Chloroethane	ND	*1	1.0	0.90	ug/L			10/02/20 13:54	1
Chloroform	ND		1.0	0.60	ug/L			10/02/20 13:54	1
Chloromethane	ND	*1	1.0	0.90	ug/L			10/02/20 13:54	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/02/20 13:54	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/02/20 13:54	1
Dibromomethane	ND		1.0	0.33	ug/L			10/02/20 13:54	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/02/20 13:54	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/02/20 13:54	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111295-1

Client Sample ID: M-17

Date Collected: 09/22/20 09:05
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-4

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/02/20 13:54	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/02/20 13:54	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/02/20 13:54	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/02/20 13:54	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/02/20 13:54	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/02/20 13:54	1
2-Hexanone	ND		5.0	3.3	ug/L			10/02/20 13:54	1
Iodomethane	ND		1.0	0.68	ug/L			10/02/20 13:54	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/02/20 13:54	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/02/20 13:54	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/02/20 13:54	1
Styrene	ND		1.0	0.47	ug/L			10/02/20 13:54	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/02/20 13:54	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/02/20 13:54	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/02/20 13:54	1
Toluene	ND		1.0	0.46	ug/L			10/02/20 13:54	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/02/20 13:54	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/02/20 13:54	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/02/20 13:54	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/02/20 13:54	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/02/20 13:54	1
Trichloroethene	ND		1.0	0.69	ug/L			10/02/20 13:54	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/02/20 13:54	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/02/20 13:54	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/02/20 13:54	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/02/20 13:54	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/02/20 13:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*64 - 120*		*10/02/20 13:54*	*1*
Dibromofluoromethane (Surr)	*92*		*71 - 132*		*10/02/20 13:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*78*		*62 - 146*		*10/02/20 13:54*	*1*
Toluene-d8 (Surr)	*93*		*75 - 120*		*10/02/20 13:54*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 10:57	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 10:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*111*		*60 - 140*	*10/05/20 12:12*	*10/06/20 10:57*	*1*
1,1,1,2-Tetrachloroethane	*103*		*60 - 140*	*10/05/20 12:12*	*10/06/20 10:57*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/23/20 19:51	1
Chloride	**9.7**		1.0	0.32	mg/L			09/23/20 19:51	1
Sulfate	**130**		1.0	0.38	mg/L			09/23/20 19:51	1

Client Sample ID: M-17

Date Collected: 09/22/20 09:05
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-4
Matrix: Water

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:17	10/03/20 15:35	1
Arsenic	**6.9**		1.0	0.31	ug/L		10/02/20 15:17	10/03/20 15:35	1
Barium	**90**		10	1.6	ug/L		10/02/20 15:17	10/03/20 15:35	1
Beryllium	ND		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:35	1
Cadmium	ND		1.0	0.22	ug/L		10/02/20 15:17	10/03/20 15:35	1
Calcium	**88000**		500	130	ug/L		10/02/20 15:17	10/03/20 15:35	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:35	1
Cobalt	**2.5**		0.50	0.13	ug/L		10/02/20 15:17	10/03/20 15:35	1
Copper	ND		2.0	0.63	ug/L		10/02/20 15:17	10/03/20 15:35	1
Iron	**56000**		50	20	ug/L		10/02/20 15:17	10/03/20 15:35	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:17	10/03/20 15:35	1
Magnesium	**10000**		500	83	ug/L		10/02/20 15:17	10/03/20 15:35	1
Manganese	**830**		5.0	0.87	ug/L		10/02/20 15:17	10/03/20 15:35	1
Nickel	**6.6**		1.0	0.34	ug/L		10/02/20 15:17	10/03/20 15:35	1
Potassium	**4400**		500	160	ug/L		10/02/20 15:17	10/03/20 15:35	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:35	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:35	1
Sodium	**5000**		500	350	ug/L		10/02/20 15:17	10/03/20 15:35	1
Thallium	ND		1.0	0.15	ug/L		10/02/20 15:17	10/03/20 15:35	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:17	10/03/20 15:35	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:17	10/03/20 15:35	1
Zinc	**37**		5.0	3.2	ug/L		10/02/20 15:17	10/03/20 15:35	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:35	10/07/20 16:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**10**		10	4.1	mg/L			10/01/20 09:23	1
Turbidity	**71**		4.3	0.25	NTU			09/23/20 14:34	5
Ammonia	**0.11**		0.10	0.088	mg/L			10/06/20 20:26	1
Specific Conductance	**580**		1.0	1.0	umhos/cm			10/02/20 11:34	1
Hardness as calcium carbonate	**270**		25	25	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**480**		10	10	mg/L			09/23/20 20:30	1
Total Alkalinity as CaCO3 to pH 4.5	**160**		5.0	5.0	mg/L			09/24/20 14:31	1
Bicarbonate Alkalinity as CaCO3	**160**		5.0	5.0	mg/L			09/24/20 14:31	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 14:31	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 14:31	1

Client Sample ID: M-18

Date Collected: 09/22/20 10:45
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-5
Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*1	5.0	3.4	ug/L			10/02/20 14:25	1
Acrylonitrile	ND		20	7.8	ug/L			10/02/20 14:25	1
Benzene	ND		1.0	0.60	ug/L			10/02/20 14:25	1
Bromoform	ND		1.0	0.98	ug/L			10/02/20 14:25	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111295-1

Client Sample ID: M-18
Date Collected: 09/22/20 10:45
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-5
Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		1.0	0.89	ug/L			10/02/20 14:25	1
2-Butanone (MEK)	ND	*1	5.0	2.6	ug/L			10/02/20 14:25	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/02/20 14:25	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/02/20 14:25	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/02/20 14:25	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/02/20 14:25	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/02/20 14:25	1
Chloroethane	ND	*1	1.0	0.90	ug/L			10/02/20 14:25	1
Chloroform	ND		1.0	0.60	ug/L			10/02/20 14:25	1
Chloromethane	ND	*1	1.0	0.90	ug/L			10/02/20 14:25	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/02/20 14:25	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/02/20 14:25	1
Dibromomethane	ND		1.0	0.33	ug/L			10/02/20 14:25	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/02/20 14:25	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/02/20 14:25	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/02/20 14:25	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/02/20 14:25	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/02/20 14:25	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/02/20 14:25	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/02/20 14:25	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/02/20 14:25	1
2-Hexanone	ND		5.0	3.3	ug/L			10/02/20 14:25	1
Iodomethane	ND		1.0	0.68	ug/L			10/02/20 14:25	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/02/20 14:25	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/02/20 14:25	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/02/20 14:25	1
Styrene	ND		1.0	0.47	ug/L			10/02/20 14:25	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/02/20 14:25	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/02/20 14:25	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/02/20 14:25	1
Toluene	ND		1.0	0.46	ug/L			10/02/20 14:25	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/02/20 14:25	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/02/20 14:25	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/02/20 14:25	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/02/20 14:25	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/02/20 14:25	1
Trichloroethene	ND		1.0	0.69	ug/L			10/02/20 14:25	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/02/20 14:25	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/02/20 14:25	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/02/20 14:25	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/02/20 14:25	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/02/20 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*64 - 120*		*10/02/20 14:25*	*1*
Dibromofluoromethane (Surr)	*94*		*71 - 132*		*10/02/20 14:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*76*		*62 - 146*		*10/02/20 14:25*	*1*
Toluene-d8 (Surr)	*96*		*75 - 120*		*10/02/20 14:25*	*1*

Client Sample ID: M-18

Date Collected: 09/22/20 10:45
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-5

Matrix: Water

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 11:22	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 11:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*112*		*60 - 140*	*10/05/20 12:12*	*10/06/20 11:22*	*1*
1,1,1,2-Tetrachloroethane	*112*		*60 - 140*	*10/05/20 12:12*	*10/06/20 11:22*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.25	0.058	mg/L			09/23/20 20:54	2.5
Chloride	**5.1**		2.5	0.80	mg/L			09/23/20 20:54	2.5
Sulfate	**1600**		25	9.5	mg/L			09/23/20 21:10	25

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:17	10/03/20 15:39	1
Arsenic	**5.7**		1.0	0.31	ug/L		10/02/20 15:17	10/03/20 15:39	1
Barium	**20**		10	1.6	ug/L		10/02/20 15:17	10/03/20 15:39	1
Beryllium	**2.3**		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:39	1
Cadmium	**240**		1.0	0.22	ug/L		10/02/20 15:17	10/03/20 15:39	1
Calcium	**340000**		500	130	ug/L		10/02/20 15:17	10/03/20 15:39	1
Chromium	**2.8**		2.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:39	1
Cobalt	**58**		0.50	0.13	ug/L		10/02/20 15:17	10/03/20 15:39	1
Copper	**15**		2.0	0.63	ug/L		10/02/20 15:17	10/03/20 15:39	1
Iron	**160000**		50	20	ug/L		10/02/20 15:17	10/03/20 15:39	1
Lead	**0.22**	**J**	1.0	0.13	ug/L		10/02/20 15:17	10/03/20 15:39	1
Magnesium	**82000**		500	83	ug/L		10/02/20 15:17	10/03/20 15:39	1
Manganese	**2100**		5.0	0.87	ug/L		10/02/20 15:17	10/03/20 15:39	1
Nickel	**320**		1.0	0.34	ug/L		10/02/20 15:17	10/03/20 15:39	1
Potassium	**8100**		500	160	ug/L		10/02/20 15:17	10/03/20 15:39	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:39	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:39	1
Sodium	**9300**		500	350	ug/L		10/02/20 15:17	10/03/20 15:39	1
Thallium	**0.45**	**J**	1.0	0.15	ug/L		10/02/20 15:17	10/03/20 15:39	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:17	10/03/20 15:39	1
Vanadium	**8.8**		1.0	0.99	ug/L		10/02/20 15:17	10/03/20 15:39	1
Zinc	**1500**		5.0	3.2	ug/L		10/02/20 15:17	10/03/20 15:39	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:35	10/07/20 16:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**24**		10	4.1	mg/L			10/01/20 09:28	1
Turbidity	**0.35**	**J**	0.85	0.050	NTU			09/23/20 14:34	1
Ammonia	**0.67**		0.10	0.088	mg/L			10/06/20 20:28	1
Specific Conductance	**2300**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**1300**		25	25	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**2000**		10	10	mg/L			09/23/20 20:30	1
Total Alkalinity as CaCO3 to pH 4.5	ND		5.0	5.0	mg/L			09/24/20 14:34	1

Client Sample ID: M-18

Date Collected: 09/22/20 10:45
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-5
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 14:34	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 14:34	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 14:34	1

Client Sample ID: M-19

Date Collected: 09/22/20 12:20
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-6
Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*1	5.0	3.4	ug/L			10/02/20 14:55	1
Acrylonitrile	ND		20	7.8	ug/L			10/02/20 14:55	1
Benzene	ND		1.0	0.60	ug/L			10/02/20 14:55	1
Bromoform	ND		1.0	0.98	ug/L			10/02/20 14:55	1
Bromomethane	ND		1.0	0.89	ug/L			10/02/20 14:55	1
2-Butanone (MEK)	ND	*1	5.0	2.6	ug/L			10/02/20 14:55	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/02/20 14:55	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/02/20 14:55	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/02/20 14:55	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/02/20 14:55	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/02/20 14:55	1
Chloroethane	ND	*1	1.0	0.90	ug/L			10/02/20 14:55	1
Chloroform	ND		1.0	0.60	ug/L			10/02/20 14:55	1
Chloromethane	ND	*1	1.0	0.90	ug/L			10/02/20 14:55	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/02/20 14:55	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/02/20 14:55	1
Dibromomethane	ND		1.0	0.33	ug/L			10/02/20 14:55	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/02/20 14:55	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/02/20 14:55	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/02/20 14:55	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/02/20 14:55	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/02/20 14:55	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/02/20 14:55	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/02/20 14:55	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/02/20 14:55	1
2-Hexanone	ND		5.0	3.3	ug/L			10/02/20 14:55	1
Iodomethane	ND		1.0	0.68	ug/L			10/02/20 14:55	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/02/20 14:55	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/02/20 14:55	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/02/20 14:55	1
Styrene	ND		1.0	0.47	ug/L			10/02/20 14:55	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/02/20 14:55	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/02/20 14:55	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/02/20 14:55	1
Toluene	ND		1.0	0.46	ug/L			10/02/20 14:55	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/02/20 14:55	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/02/20 14:55	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/02/20 14:55	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/02/20 14:55	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/02/20 14:55	1

Client Sample ID: M-19

Date Collected: 09/22/20 12:20
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-6

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		1.0	0.69	ug/L			10/02/20 14:55	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/02/20 14:55	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/02/20 14:55	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/02/20 14:55	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/02/20 14:55	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/02/20 14:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*64 - 120*		*10/02/20 14:55*	*1*
Dibromofluoromethane (Surr)	*93*		*71 - 132*		*10/02/20 14:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*75*		*62 - 146*		*10/02/20 14:55*	*1*
Toluene-d8 (Surr)	*93*		*75 - 120*		*10/02/20 14:55*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 11:47	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 11:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*115*		*60 - 140*	*10/05/20 12:12*	*10/06/20 11:47*	*1*
1,1,1,2-Tetrachloroethane	*110*		*60 - 140*	*10/05/20 12:12*	*10/06/20 11:47*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/23/20 20:07	1
Chloride	**10**		1.0	0.32	mg/L			09/23/20 20:07	1
Sulfate	**170**		1.0	0.38	mg/L			09/23/20 20:07	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:17	10/03/20 15:42	1
Arsenic	**1.2**		1.0	0.31	ug/L		10/02/20 15:17	10/03/20 15:42	1
Barium	**49**		10	1.6	ug/L		10/02/20 15:17	10/03/20 15:42	1
Beryllium	ND		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:42	1
Cadmium	**30**		1.0	0.22	ug/L		10/02/20 15:17	10/03/20 15:42	1
Calcium	**71000**		500	130	ug/L		10/02/20 15:17	10/03/20 15:42	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:42	1
Cobalt	**5.9**		0.50	0.13	ug/L		10/02/20 15:17	10/03/20 15:42	1
Copper	ND		2.0	0.63	ug/L		10/02/20 15:17	10/03/20 15:42	1
Iron	**5800**		50	20	ug/L		10/02/20 15:17	10/03/20 15:42	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:17	10/03/20 15:42	1
Magnesium	**13000**		500	83	ug/L		10/02/20 15:17	10/03/20 15:42	1
Manganese	**140**		5.0	0.87	ug/L		10/02/20 15:17	10/03/20 15:42	1
Nickel	**23**		1.0	0.34	ug/L		10/02/20 15:17	10/03/20 15:42	1
Potassium	**5700**		500	160	ug/L		10/02/20 15:17	10/03/20 15:42	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:42	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:42	1
Sodium	**7500**		500	350	ug/L		10/02/20 15:17	10/03/20 15:42	1
Thallium	ND		1.0	0.15	ug/L		10/02/20 15:17	10/03/20 15:42	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:17	10/03/20 15:42	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:17	10/03/20 15:42	1

Client Sample ID: M-19

Lab Sample ID: 180-111295-6

Date Collected: 09/22/20 12:20

Matrix: Water

Date Received: 09/23/20 09:30

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	**97**		5.0	3.2	ug/L		10/02/20 15:17	10/03/20 15:42	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:35	10/07/20 17:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**8.2**	**J**	10	4.1	mg/L			10/01/20 09:32	1
Turbidity	**2.7**		0.85	0.050	NTU			09/23/20 14:34	1
Ammonia	ND		0.10	0.088	mg/L			10/06/20 18:48	1
Specific Conductance	**500**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**250**		5.0	5.0	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**390**		10	10	mg/L			09/23/20 20:30	1
Total Alkalinity as CaCO3 to pH 4.5	**87**		5.0	5.0	mg/L			09/24/20 14:41	1
Bicarbonate Alkalinity as CaCO3	**87**		5.0	5.0	mg/L			09/24/20 14:41	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 14:41	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 14:41	1

Client Sample ID: M-20

Lab Sample ID: 180-111295-7

Date Collected: 09/22/20 14:30

Matrix: Water

Date Received: 09/23/20 09:30

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*1	5.0	3.4	ug/L			10/02/20 15:25	1
Acrylonitrile	ND		20	7.8	ug/L			10/02/20 15:25	1
Benzene	ND		1.0	0.60	ug/L			10/02/20 15:25	1
Bromoform	ND		1.0	0.98	ug/L			10/02/20 15:25	1
Bromomethane	ND		1.0	0.89	ug/L			10/02/20 15:25	1
2-Butanone (MEK)	ND	*1	5.0	2.6	ug/L			10/02/20 15:25	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/02/20 15:25	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/02/20 15:25	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/02/20 15:25	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/02/20 15:25	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/02/20 15:25	1
Chloroethane	ND	*1	1.0	0.90	ug/L			10/02/20 15:25	1
Chloroform	ND		1.0	0.60	ug/L			10/02/20 15:25	1
Chloromethane	ND	*1	1.0	0.90	ug/L			10/02/20 15:25	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/02/20 15:25	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/02/20 15:25	1
Dibromomethane	ND		1.0	0.33	ug/L			10/02/20 15:25	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/02/20 15:25	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/02/20 15:25	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/02/20 15:25	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/02/20 15:25	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/02/20 15:25	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/02/20 15:25	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/02/20 15:25	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/02/20 15:25	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111295-1

Client Sample ID: M-20

Date Collected: 09/22/20 14:30
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-7

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	ND		5.0	3.3	ug/L			10/02/20 15:25	1
Iodomethane	ND		1.0	0.68	ug/L			10/02/20 15:25	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/02/20 15:25	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/02/20 15:25	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/02/20 15:25	1
Styrene	ND		1.0	0.47	ug/L			10/02/20 15:25	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/02/20 15:25	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/02/20 15:25	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/02/20 15:25	1
Toluene	ND		1.0	0.46	ug/L			10/02/20 15:25	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/02/20 15:25	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/02/20 15:25	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/02/20 15:25	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/02/20 15:25	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/02/20 15:25	1
Trichloroethene	ND		1.0	0.69	ug/L			10/02/20 15:25	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/02/20 15:25	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/02/20 15:25	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/02/20 15:25	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/02/20 15:25	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/02/20 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*64 - 120*		*10/02/20 15:25*	*1*
Dibromofluoromethane (Surr)	*91*		*71 - 132*		*10/02/20 15:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*76*		*62 - 146*		*10/02/20 15:25*	*1*
Toluene-d8 (Surr)	*93*		*75 - 120*		*10/02/20 15:25*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 12:12	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 12:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*115*		*60 - 140*	*10/05/20 12:12*	*10/06/20 12:12*	*1*
1,1,1,2-Tetrachloroethane	*110*		*60 - 140*	*10/05/20 12:12*	*10/06/20 12:12*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/23/20 21:26	1
Chloride	**26**		1.0	0.32	mg/L			09/23/20 21:26	1
Sulfate	**810**		10	3.8	mg/L			09/23/20 21:42	10

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:17	10/03/20 15:46	1
Arsenic	**1.9**		1.0	0.31	ug/L		10/02/20 15:17	10/03/20 15:46	1
Barium	**33**		10	1.6	ug/L		10/02/20 15:17	10/03/20 15:46	1
Beryllium	**0.84**	**J**	1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:46	1
Cadmium	**0.25**	**J**	1.0	0.22	ug/L		10/02/20 15:17	10/03/20 15:46	1
Calcium	**270000**		500	130	ug/L		10/02/20 15:17	10/03/20 15:46	1

Client Sample ID: M-20

Date Collected: 09/22/20 14:30
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-7
Matrix: Water

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:46	1
Cobalt	**16**		0.50	0.13	ug/L		10/02/20 15:17	10/03/20 15:46	1
Copper	ND		2.0	0.63	ug/L		10/02/20 15:17	10/03/20 15:46	1
Iron	**110000**		50	20	ug/L		10/02/20 15:17	10/03/20 15:46	1
Lead	ND		1.0	0.13	ug/L		10/02/20 15:17	10/03/20 15:46	1
Magnesium	**36000**		500	83	ug/L		10/02/20 15:17	10/03/20 15:46	1
Manganese	**4000**		5.0	0.87	ug/L		10/02/20 15:17	10/03/20 15:46	1
Nickel	**23**		1.0	0.34	ug/L		10/02/20 15:17	10/03/20 15:46	1
Potassium	**9100**		500	160	ug/L		10/02/20 15:17	10/03/20 15:46	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:46	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:46	1
Sodium	**13000**		500	350	ug/L		10/02/20 15:17	10/03/20 15:46	1
Thallium	ND		1.0	0.15	ug/L		10/02/20 15:17	10/03/20 15:46	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:17	10/03/20 15:46	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:17	10/03/20 15:46	1
Zinc	**270**		5.0	3.2	ug/L		10/02/20 15:17	10/03/20 15:46	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:35	10/07/20 17:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**22**		10	4.1	mg/L			10/01/20 09:33	1
Turbidity	**2.2**		0.85	0.050	NTU			09/23/20 14:34	1
Ammonia	**1.2**		0.20	0.18	mg/L			10/06/20 20:30	2
Specific Conductance	**1600**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**1100**		25	25	mg/L			10/07/20 09:44	1
Total Dissolved Solids	**1400**		10	10	mg/L			09/23/20 20:30	1
Total Alkalinity as CaCO3 to pH 4.5	**140**		5.0	5.0	mg/L			09/24/20 14:47	1
Bicarbonate Alkalinity as CaCO3	**140**		5.0	5.0	mg/L			09/24/20 14:47	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 14:47	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 14:47	1

Client Sample ID: M-18A

Date Collected: 09/22/20 11:20
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-8
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.25**		0.10	0.023	mg/L			09/23/20 21:57	1
Chloride	**69**		1.0	0.32	mg/L			09/23/20 21:57	1
Sulfate	**500**		10	3.8	mg/L			09/23/20 22:13	10

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:17	10/03/20 15:50	1
Arsenic	**0.80**	**J**	1.0	0.31	ug/L		10/02/20 15:17	10/03/20 15:50	1
Barium	**25**		10	1.6	ug/L		10/02/20 15:17	10/03/20 15:50	1
Beryllium	**0.92**	**J**	1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:50	1
Cadmium	**4.3**		1.0	0.22	ug/L		10/02/20 15:17	10/03/20 15:50	1

Client Sample ID: M-18A

Date Collected: 09/22/20 11:20
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-8

Matrix: Water

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	31000		500	130	ug/L		10/02/20 15:17	10/03/20 15:50	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:50	1
Cobalt	6.5		0.50	0.13	ug/L		10/02/20 15:17	10/03/20 15:50	1
Copper	3.8		2.0	0.63	ug/L		10/02/20 15:17	10/03/20 15:50	1
Iron	360		50	20	ug/L		10/02/20 15:17	10/03/20 15:50	1
Lead	0.30	J	1.0	0.13	ug/L		10/02/20 15:17	10/03/20 15:50	1
Magnesium	12000		500	83	ug/L		10/02/20 15:17	10/03/20 15:50	1
Manganese	51		5.0	0.87	ug/L		10/02/20 15:17	10/03/20 15:50	1
Nickel	26		1.0	0.34	ug/L		10/02/20 15:17	10/03/20 15:50	1
Potassium	3400		500	160	ug/L		10/02/20 15:17	10/03/20 15:50	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:17	10/03/20 15:50	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 15:50	1
Sodium	240000		500	350	ug/L		10/02/20 15:17	10/03/20 15:50	1
Thallium	ND		1.0	0.15	ug/L		10/02/20 15:17	10/03/20 15:50	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:17	10/03/20 15:50	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:17	10/03/20 15:50	1
Zinc	61		5.0	3.2	ug/L		10/02/20 15:17	10/03/20 15:50	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:35	10/07/20 17:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	8.2	J	10	4.1	mg/L			10/01/20 09:34	1
Turbidity	0.37	J	0.85	0.050	NTU			09/23/20 14:34	1
Ammonia	ND		0.10	0.088	mg/L			10/06/20 18:52	1
Specific Conductance	1400		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	130		5.0	5.0	mg/L			10/07/20 09:44	1
Total Dissolved Solids	900		10	10	mg/L			09/23/20 20:30	1
Total Alkalinity as CaCO3 to pH 4.5	ND		5.0	5.0	mg/L			09/24/20 14:51	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 14:51	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 14:51	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 14:51	1

Client Sample ID: M-19A

Date Collected: 09/22/20 12:25
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-9

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.11		0.10	0.023	mg/L			09/23/20 22:29	1
Chloride	220		5.0	1.6	mg/L			09/23/20 22:45	5
Sulfate	71		1.0	0.38	mg/L			09/23/20 22:29	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:17	10/03/20 16:01	1
Arsenic	0.50	J	1.0	0.31	ug/L		10/02/20 15:17	10/03/20 16:01	1
Barium	87		10	1.6	ug/L		10/02/20 15:17	10/03/20 16:01	1
Beryllium	0.53	J	1.0	0.18	ug/L		10/02/20 15:17	10/03/20 16:01	1

Client Sample ID: M-19A

Date Collected: 09/22/20 12:25
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-9

Matrix: Water

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	**37**		1.0	0.22	ug/L		10/02/20 15:17	10/03/20 16:01	1
Calcium	**27000**		500	130	ug/L		10/02/20 15:17	10/03/20 16:01	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:17	10/03/20 16:01	1
Cobalt	**7.4**		0.50	0.13	ug/L		10/02/20 15:17	10/03/20 16:01	1
Copper	ND		2.0	0.63	ug/L		10/02/20 15:17	10/03/20 16:01	1
Iron	**2400**		50	20	ug/L		10/02/20 15:17	10/03/20 16:01	1
Lead	**0.37**	**J**	1.0	0.13	ug/L		10/02/20 15:17	10/03/20 16:01	1
Magnesium	**14000**		500	83	ug/L		10/02/20 15:17	10/03/20 16:01	1
Manganese	**71**		5.0	0.87	ug/L		10/02/20 15:17	10/03/20 16:01	1
Nickel	**38**		1.0	0.34	ug/L		10/02/20 15:17	10/03/20 16:01	1
Potassium	**7700**		500	160	ug/L		10/02/20 15:17	10/03/20 16:01	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:17	10/03/20 16:01	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 16:01	1
Sodium	**120000**		500	350	ug/L		10/02/20 15:17	10/03/20 16:01	1
Thallium	**0.20**	**J**	1.0	0.15	ug/L		10/02/20 15:17	10/03/20 16:01	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:17	10/03/20 16:01	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:17	10/03/20 16:01	1
Zinc	**170**		5.0	3.2	ug/L		10/02/20 15:17	10/03/20 16:01	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:35	10/07/20 17:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**7.6**	**J**	10	4.1	mg/L			10/01/20 09:35	1
Turbidity	**0.60**	**J**	0.85	0.050	NTU			09/23/20 14:34	1
Ammonia	ND		0.10	0.088	mg/L			10/06/20 18:54	1
Specific Conductance	**980**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**140**		5.0	5.0	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**500**		10	10	mg/L			09/23/20 20:30	1
Total Alkalinity as CaCO3 to pH 4.5	ND		5.0	5.0	mg/L			09/24/20 15:22	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 15:22	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 15:22	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 15:22	1

Client Sample ID: M-21

Date Collected: 09/22/20 13:25
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-10

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.42**		0.10	0.023	mg/L			09/23/20 23:01	1
Chloride	**150**		1.0	0.32	mg/L			09/23/20 23:01	1
Sulfate	**64**		1.0	0.38	mg/L			09/23/20 23:01	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/02/20 15:17	10/03/20 16:04	1
Arsenic	ND		1.0	0.31	ug/L		10/02/20 15:17	10/03/20 16:04	1
Barium	**85**		10	1.6	ug/L		10/02/20 15:17	10/03/20 16:04	1

Client Sample ID: M-21

Lab Sample ID: 180-111295-10

Date Collected: 09/22/20 13:25

Matrix: Water

Date Received: 09/23/20 09:30

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	**1.7**		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 16:04	1
Cadmium	**7.4**		1.0	0.22	ug/L		10/02/20 15:17	10/03/20 16:04	1
Calcium	**34000**		500	130	ug/L		10/02/20 15:17	10/03/20 16:04	1
Chromium	ND		2.0	1.5	ug/L		10/02/20 15:17	10/03/20 16:04	1
Cobalt	**9.2**		0.50	0.13	ug/L		10/02/20 15:17	10/03/20 16:04	1
Copper	**0.97**	**J**	2.0	0.63	ug/L		10/02/20 15:17	10/03/20 16:04	1
Iron	**5300**		50	20	ug/L		10/02/20 15:17	10/03/20 16:04	1
Lead	**2.1**		1.0	0.13	ug/L		10/02/20 15:17	10/03/20 16:04	1
Magnesium	**14000**		500	83	ug/L		10/02/20 15:17	10/03/20 16:04	1
Manganese	**100**		5.0	0.87	ug/L		10/02/20 15:17	10/03/20 16:04	1
Nickel	**58**		1.0	0.34	ug/L		10/02/20 15:17	10/03/20 16:04	1
Potassium	**8600**		500	160	ug/L		10/02/20 15:17	10/03/20 16:04	1
Selenium	ND		5.0	1.5	ug/L		10/02/20 15:17	10/03/20 16:04	1
Silver	ND		1.0	0.18	ug/L		10/02/20 15:17	10/03/20 16:04	1
Sodium	**78000**		500	350	ug/L		10/02/20 15:17	10/03/20 16:04	1
Thallium	ND		1.0	0.15	ug/L		10/02/20 15:17	10/03/20 16:04	1
Tin	ND		5.0	0.96	ug/L		10/02/20 15:17	10/03/20 16:04	1
Vanadium	ND		1.0	0.99	ug/L		10/02/20 15:17	10/03/20 16:04	1
Zinc	**150**		5.0	3.2	ug/L		10/02/20 15:17	10/03/20 16:04	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/05/20 18:35	10/07/20 17:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**11**		10	4.1	mg/L			10/01/20 09:36	1
Turbidity	**0.72**	**J**	0.85	0.050	NTU			09/23/20 14:34	1
Ammonia	ND		0.10	0.088	mg/L			10/06/20 19:00	1
Specific Conductance	**770**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**170**		5.0	5.0	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**410**		10	10	mg/L			09/23/20 20:30	1
Total Alkalinity as CaCO3 to pH 4.5	ND		5.0	5.0	mg/L			09/24/20 15:32	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 15:32	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/24/20 15:32	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/24/20 15:32	1

Client Sample ID: TRIP BLANK-02

Lab Sample ID: 180-111295-11

Date Collected: 09/22/20 15:00

Matrix: Water

Date Received: 09/23/20 09:30

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*1	5.0	3.4	ug/L			10/02/20 15:55	1
Acrylonitrile	ND		20	7.8	ug/L			10/02/20 15:55	1
Benzene	ND		1.0	0.60	ug/L			10/02/20 15:55	1
Bromoform	ND		1.0	0.98	ug/L			10/02/20 15:55	1
Bromomethane	ND		1.0	0.89	ug/L			10/02/20 15:55	1
2-Butanone (MEK)	ND	*1	5.0	2.6	ug/L			10/02/20 15:55	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/02/20 15:55	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111295-1

Client Sample ID: TRIP BLANK-02
Date Collected: 09/22/20 15:00
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-11
Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/02/20 15:55	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/02/20 15:55	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/02/20 15:55	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/02/20 15:55	1
Chloroethane	ND	*1	1.0	0.90	ug/L			10/02/20 15:55	1
Chloroform	ND		1.0	0.60	ug/L			10/02/20 15:55	1
Chloromethane	ND	*1	1.0	0.90	ug/L			10/02/20 15:55	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/02/20 15:55	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/02/20 15:55	1
Dibromomethane	ND		1.0	0.33	ug/L			10/02/20 15:55	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/02/20 15:55	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/02/20 15:55	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/02/20 15:55	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/02/20 15:55	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/02/20 15:55	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/02/20 15:55	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/02/20 15:55	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/02/20 15:55	1
2-Hexanone	ND		5.0	3.3	ug/L			10/02/20 15:55	1
Iodomethane	ND		1.0	0.68	ug/L			10/02/20 15:55	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/02/20 15:55	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/02/20 15:55	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/02/20 15:55	1
Styrene	ND		1.0	0.47	ug/L			10/02/20 15:55	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/02/20 15:55	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/02/20 15:55	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/02/20 15:55	1
Toluene	ND		1.0	0.46	ug/L			10/02/20 15:55	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/02/20 15:55	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/02/20 15:55	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/02/20 15:55	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/02/20 15:55	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/02/20 15:55	1
Trichloroethene	ND		1.0	0.69	ug/L			10/02/20 15:55	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/02/20 15:55	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/02/20 15:55	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/02/20 15:55	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/02/20 15:55	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/02/20 15:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*64 - 120*		*10/02/20 15:55*	*1*
Dibromofluoromethane (Surr)	*99*		*71 - 132*		*10/02/20 15:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*78*		*62 - 146*		*10/02/20 15:55*	*1*
Toluene-d8 (Surr)	*109*		*75 - 120*		*10/02/20 15:55*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 12:37	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 12:37	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111295-1

Client Sample ID: TRIP BLANK-02
Date Collected: 09/22/20 15:00
Date Received: 09/23/20 09:30

Lab Sample ID: 180-111295-11
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	113		60 - 140	10/05/20 12:12	10/06/20 12:37	1
1,1,1,2-Tetrachloroethane	109		60 - 140	10/05/20 12:12	10/06/20 12:37	1

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ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-111349-1
Client Project/Site: Ritchie Rubble LF

For:
Geosyntec Consultants, Inc.
10211 Wincopin Circle
4'th Floor
Columbia, Maryland 21044

Attn: Yovanna Cortes

Roxanne Cisneros

Authorized for release by:
10/21/2020 2:10:38 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@Eurofinset.com

PA Lab ID: 02-00416

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Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

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Comments
No additional comments.

Receipt
The samples were received on 9/24/2020 9:15 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.4º C and 2.9º C.

GC/MS VOA
Method 8260C LL: Internal standard (ISTD) response for TBA-d9 for the following samples were outside acceptance criteria: M-13 (180-111349-1), M-08 (180-111349-4), M-08A (180-111349-5), M-06 (180-111349-7) and (MB 180-332070/6). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

Method 8260C LL: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 180-332070 recovered outside control limits for the following analytes: 2-Butanone, Acetone, Chloromethane and Chloroethane.

Method 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-332070 was outside the method criteria for the following analytes: Bromomethane and Carbon disulfide. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated.

Method 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-332070 was outside the method criteria for the following analytes: Methyl tert-butyl ether, Trichlorofluoromethane, Vinyl acetate and 2-Hexanone. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated.

Methods 8260C LL: The laboratory control sample (LCS) for analytical batch 180-332279 recovered outside control limits for the following analyte: Methyl tert-butyl ether. A low-level LCS (LLCS), spiked at the reporting limit (RL), was prepared with this batch. The affected target analytes recovered within acceptance limits; therefore, the LLCS demonstrates the analytical system had sufficient sensitivity to detect the compound had it been present. Since the affected target compound was not detected in the samples, the data have been reported and qualified.

Methods 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-332279 was outside the method criteria for the following analytes: trans-1,4-Dichloro-2-butene, Chloroethane, Trichlorofluoromethane and Methyl tert-butyl ether. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated.

Method 8260C LL: For batch 332279 the MSD was not reported because of cracked vial. The MS is being reported and the MSD will be re-analyzed and linked to parent sample and MS.

Method 8260C LL: Internal standard (ISTD) response for TBA-d9 for the following sample was outside acceptance criteria: M-07 (180-111349-8). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

Methods 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-332541 was outside the method criteria for the following analytes: Acetone, 2-Butanone and Vinyl acetate. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Methods 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-332541 was outside the method criteria for the following analytes: Chloroethane. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8260C LL: The matrix spike duplicate (MSD) recoveries for analytical batch 180-332541 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within

Job ID: 180-111349-1 (Continued)

Laboratory: Eurofins TestAmerica, Pittsburgh (Continued)

acceptance limits.

Method 8260C LL: The matrix spike duplicate (MSD) precision for analytical batch 180-332541 was outside control limits. Sample matrix interference is suspected.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 300.0: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with analytical batch 180-331038 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Chloride and Sulfate in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method 6020A: The low level continuing calibration verification (CCVL) associated with batch 180-333648 recovered above the upper control limit for manganese. The samples associated with this CCVL were at least 10X the RL for the affected analyte; therefore, the data have been reported.

Method 6020A: The post digestion spike % recovery for antimony and zinc associated with batch 180-333648 was outside of control limits. The associated sample is: M-13 (180-111349-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method 180.1: The following sample was diluted to bring the concentration of target analytes within the calibration range: M-13 (180-111349-1). Elevated reporting limits (RLs) are provided.

Method SM 2340C: The following samples were diluted due to the nature of the sample matrix: M-05A (180-111349-2), M-16 (180-111349-3), M-08 (180-111349-4), M-08A (180-111349-5), M-06 (180-111349-7) and M-07 (180-111349-8). Elevated reporting limits (RLs) are provided.

Method 350.1: The following samples were diluted to bring the concentration of target analytes within the calibration range: M-08 (180-111349-4) and M-08A (180-111349-5). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits

HPLC/IC

Qualifier	Qualifier Description
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-21
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20 *
Florida	NELAP	E871008	06-30-21
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-21
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-21
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-21
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-21
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	04-30-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-21
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-21
Virginia	NELAP	10043	09-14-21
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-111349-1	M-13	Water	09/23/20 09:20	09/24/20 09:15	
180-111349-2	M-05A	Water	09/23/20 11:00	09/24/20 09:15	
180-111349-3	M-16	Water	09/23/20 09:30	09/24/20 09:15	
180-111349-4	M-08	Water	09/23/20 11:15	09/24/20 09:15	
180-111349-5	M-08A	Water	09/23/20 12:40	09/24/20 09:15	
180-111349-6	M-15	Water	09/23/20 14:05	09/24/20 09:15	
180-111349-7	M-06	Water	09/23/20 12:25	09/24/20 09:15	
180-111349-8	M-07	Water	09/23/20 13:40	09/24/20 09:15	
180-111349-9	TRIP BLANK-03	Water	09/23/20 15:00	09/24/20 09:15	

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Method	Method Description	Protocol	Laboratory
EPA 8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT
EPA 8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL PIT
EPA 300.0 R2.1	Anions, Ion Chromatgraphy	EPA	TAL PIT
EPA 6020A	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
410.4-1993 R2.0	COD	MCAWW	TAL CAN
EPA 180.1	Turbidity, Nephelometric	EPA	TAL PIT
EPA 350.1	Nitrogen, Ammonia	EPA	TAL PIT
EPA 9050A	Specific Conductance	SW846	TAL PIT
SM 2340C	Hardness, Total	SM	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
5030C	Purge and Trap	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT
8011	Microextraction	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-13

Date Collected: 09/23/20 09:20
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-1

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*1	5.0	3.4	ug/L			10/02/20 16:25	1
Acrylonitrile	ND		20	7.8	ug/L			10/02/20 16:25	1
Benzene	ND		1.0	0.60	ug/L			10/02/20 16:25	1
Bromoform	ND		1.0	0.98	ug/L			10/02/20 16:25	1
Bromomethane	ND		1.0	0.89	ug/L			10/02/20 16:25	1
2-Butanone (MEK)	ND	*1	5.0	2.6	ug/L			10/02/20 16:25	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/02/20 16:25	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/02/20 16:25	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/02/20 16:25	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/02/20 16:25	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/02/20 16:25	1
Chloroethane	ND	*1	1.0	0.90	ug/L			10/02/20 16:25	1
Chloroform	ND		1.0	0.60	ug/L			10/02/20 16:25	1
Chloromethane	ND	*1	1.0	0.90	ug/L			10/02/20 16:25	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/02/20 16:25	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/02/20 16:25	1
Dibromomethane	ND		1.0	0.33	ug/L			10/02/20 16:25	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/02/20 16:25	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/02/20 16:25	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/02/20 16:25	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/02/20 16:25	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/02/20 16:25	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/02/20 16:25	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/02/20 16:25	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/02/20 16:25	1
2-Hexanone	ND		5.0	3.3	ug/L			10/02/20 16:25	1
Iodomethane	ND		1.0	0.68	ug/L			10/02/20 16:25	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/02/20 16:25	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/02/20 16:25	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/02/20 16:25	1
Styrene	ND		1.0	0.47	ug/L			10/02/20 16:25	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/02/20 16:25	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/02/20 16:25	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/02/20 16:25	1
Toluene	ND		1.0	0.46	ug/L			10/02/20 16:25	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/02/20 16:25	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/02/20 16:25	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/02/20 16:25	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/02/20 16:25	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/02/20 16:25	1
Trichloroethene	ND		1.0	0.69	ug/L			10/02/20 16:25	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/02/20 16:25	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/02/20 16:25	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/02/20 16:25	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/02/20 16:25	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/02/20 16:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*64 - 120*		*10/02/20 16:25*	*1*
Dibromofluoromethane (Surr)	*110*		*71 - 132*		*10/02/20 16:25*	*1*

Client Sample ID: M-13

Date Collected: 09/23/20 09:20
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-1

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*62 - 146*		*10/02/20 16:25*	*1*
Toluene-d8 (Surr)	*106*		*75 - 120*		*10/02/20 16:25*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 13:02	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 13:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*111*		*60 - 140*	*10/05/20 12:12*	*10/06/20 13:02*	*1*
1,1,1,2-Tetrachloroethane	*107*		*60 - 140*	*10/05/20 12:12*	*10/06/20 13:02*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/24/20 20:15	1
Chloride	**8.4**		1.0	0.32	mg/L			09/24/20 20:15	1
Sulfate	**75**		1.0	0.38	mg/L			09/24/20 20:15	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 16:29	1
Arsenic	**1.8**		1.0	0.31	ug/L		10/06/20 13:50	10/15/20 16:29	1
Barium	**120**		10	1.6	ug/L		10/06/20 13:50	10/15/20 16:29	1
Beryllium	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 16:29	1
Cadmium	ND		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 16:29	1
Calcium	**79000**		500	130	ug/L		10/06/20 13:50	10/15/20 16:29	1
Chromium	ND		2.0	1.5	ug/L		10/06/20 13:50	10/15/20 16:29	1
Cobalt	**0.42**	**J**	0.50	0.13	ug/L		10/06/20 13:50	10/15/20 16:29	1
Copper	**1.6**	**J B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 16:29	1
Iron	**14000**		50	20	ug/L		10/06/20 13:50	10/15/20 16:29	1
Lead	**0.14**	**J**	1.0	0.13	ug/L		10/06/20 13:50	10/15/20 16:29	1
Magnesium	**2900**		500	83	ug/L		10/06/20 13:50	10/15/20 16:29	1
Manganese	**110**	**^ B**	5.0	0.87	ug/L		10/06/20 13:50	10/15/20 16:29	1
Nickel	**2.6**		1.0	0.34	ug/L		10/06/20 13:50	10/15/20 16:29	1
Potassium	**4800**		500	160	ug/L		10/06/20 13:50	10/15/20 16:29	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 16:29	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 16:29	1
Sodium	**3200**		500	350	ug/L		10/06/20 13:50	10/15/20 16:29	1
Thallium	**0.27**	**J**	1.0	0.15	ug/L		10/06/20 13:50	10/15/20 16:29	1
Tin	ND		5.0	0.96	ug/L		10/06/20 13:50	10/15/20 16:29	1
Vanadium	ND		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 16:29	1
Zinc	**3.4**	**J**	5.0	3.2	ug/L		10/06/20 13:50	10/15/20 16:29	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/07/20 18:43	10/08/20 19:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	4.1	mg/L			10/05/20 09:27	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-13

Date Collected: 09/23/20 09:20
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-1

Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**120**		43	2.5	NTU			09/24/20 13:52	50
Ammonia	ND		0.10	0.088	mg/L			10/06/20 19:40	1
Specific Conductance	**420**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**230**		5.0	5.0	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**300**		10	10	mg/L			09/25/20 06:45	1
Total Alkalinity as CaCO3 to pH 4.5	**130**		5.0	5.0	mg/L			09/29/20 10:57	1
Bicarbonate Alkalinity as CaCO3	**130**		5.0	5.0	mg/L			09/29/20 10:57	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 10:57	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 10:57	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-05A
Date Collected: 09/23/20 11:00
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-2
Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			10/05/20 13:14	1
Acrylonitrile	ND		20	7.8	ug/L			10/05/20 13:14	1
Benzene	ND		1.0	0.60	ug/L			10/05/20 13:14	1
Bromoform	ND		1.0	0.98	ug/L			10/05/20 13:14	1
Bromomethane	ND		1.0	0.89	ug/L			10/05/20 13:14	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			10/05/20 13:14	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/05/20 13:14	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/05/20 13:14	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/05/20 13:14	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/05/20 13:14	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/05/20 13:14	1
Chloroethane	ND		1.0	0.90	ug/L			10/05/20 13:14	1
Chloroform	ND		1.0	0.60	ug/L			10/05/20 13:14	1
Chloromethane	ND		1.0	0.90	ug/L			10/05/20 13:14	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/05/20 13:14	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/05/20 13:14	1
Dibromomethane	ND		1.0	0.33	ug/L			10/05/20 13:14	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/05/20 13:14	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/05/20 13:14	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/05/20 13:14	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/05/20 13:14	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/05/20 13:14	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/05/20 13:14	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/05/20 13:14	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/05/20 13:14	1
2-Hexanone	ND		5.0	3.3	ug/L			10/05/20 13:14	1
Iodomethane	ND		1.0	0.68	ug/L			10/05/20 13:14	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/05/20 13:14	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/05/20 13:14	1
Methyl tert-butyl ether	ND	*	1.0	0.59	ug/L			10/05/20 13:14	1
Styrene	ND		1.0	0.47	ug/L			10/05/20 13:14	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/05/20 13:14	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/05/20 13:14	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/05/20 13:14	1
Toluene	ND		1.0	0.46	ug/L			10/05/20 13:14	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/05/20 13:14	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/05/20 13:14	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/05/20 13:14	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/05/20 13:14	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/05/20 13:14	1
Trichloroethene	ND		1.0	0.69	ug/L			10/05/20 13:14	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/05/20 13:14	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/05/20 13:14	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/05/20 13:14	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/05/20 13:14	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/05/20 13:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*64 - 120*		*10/05/20 13:14*	*1*
Dibromofluoromethane (Surr)	*87*		*71 - 132*		*10/05/20 13:14*	*1*

Client Sample ID: M-05A
Date Collected: 09/23/20 11:00
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-2
Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*75*		*62 - 146*		*10/05/20 13:14*	*1*
Toluene-d8 (Surr)	*90*		*75 - 120*		*10/05/20 13:14*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 13:28	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 13:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*110*		*60 - 140*	*10/05/20 12:12*	*10/06/20 13:28*	*1*
1,1,1,2-Tetrachloroethane	*106*		*60 - 140*	*10/05/20 12:12*	*10/06/20 13:28*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/24/20 16:26	1
Chloride	**34**		1.0	0.32	mg/L			09/24/20 16:26	1
Sulfate	**360**	**F1**	5.0	1.9	mg/L			09/24/20 16:42	5

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 16:33	1
Arsenic	**0.46**	**J**	1.0	0.31	ug/L		10/06/20 13:50	10/15/20 16:33	1
Barium	**22**		10	1.6	ug/L		10/06/20 13:50	10/15/20 16:33	1
Beryllium	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 16:33	1
Cadmium	**4.2**		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 16:33	1
Calcium	**120000**		500	130	ug/L		10/06/20 13:50	10/15/20 16:33	1
Chromium	ND		2.0	1.5	ug/L		10/06/20 13:50	10/15/20 16:33	1
Cobalt	**2.8**		0.50	0.13	ug/L		10/06/20 13:50	10/15/20 16:33	1
Copper	**2.3**	**B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 16:33	1
Iron	**120**		50	20	ug/L		10/06/20 13:50	10/15/20 16:33	1
Lead	**0.16**	**J**	1.0	0.13	ug/L		10/06/20 13:50	10/15/20 16:33	1
Magnesium	**20000**		500	83	ug/L		10/06/20 13:50	10/15/20 16:33	1
Manganese	**180**	**^ B**	5.0	0.87	ug/L		10/06/20 13:50	10/15/20 16:33	1
Nickel	**6.3**		1.0	0.34	ug/L		10/06/20 13:50	10/15/20 16:33	1
Potassium	**8500**		500	160	ug/L		10/06/20 13:50	10/15/20 16:33	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 16:33	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 16:33	1
Sodium	**35000**		500	350	ug/L		10/06/20 13:50	10/15/20 16:33	1
Thallium	**0.25**	**J**	1.0	0.15	ug/L		10/06/20 13:50	10/15/20 16:33	1
Tin	ND		5.0	0.96	ug/L		10/06/20 13:50	10/15/20 16:33	1
Vanadium	ND		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 16:33	1
Zinc	**23**		5.0	3.2	ug/L		10/06/20 13:50	10/15/20 16:33	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/07/20 18:43	10/08/20 18:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**5.9**	**J**	10	4.1	mg/L			10/05/20 09:30	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-05A
Date Collected: 09/23/20 11:00
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-2
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**0.69**	**J**	0.85	0.050	NTU			09/24/20 13:54	1
Ammonia	ND		0.10	0.088	mg/L			10/06/20 19:34	1
Specific Conductance	**870**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**410**		25	25	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**610**		10	10	mg/L			09/25/20 06:45	1
Total Alkalinity as CaCO3 to pH 4.5	**20**		5.0	5.0	mg/L			09/29/20 11:09	1
Bicarbonate Alkalinity as CaCO3	**20**		5.0	5.0	mg/L			09/29/20 11:09	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 11:09	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 11:09	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-16

Date Collected: 09/23/20 09:30
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-3

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*1	5.0	3.4	ug/L			10/02/20 16:56	1
Acrylonitrile	ND		20	7.8	ug/L			10/02/20 16:56	1
Benzene	ND		1.0	0.60	ug/L			10/02/20 16:56	1
Bromoform	ND		1.0	0.98	ug/L			10/02/20 16:56	1
Bromomethane	ND		1.0	0.89	ug/L			10/02/20 16:56	1
2-Butanone (MEK)	ND	*1	5.0	2.6	ug/L			10/02/20 16:56	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/02/20 16:56	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/02/20 16:56	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/02/20 16:56	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/02/20 16:56	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/02/20 16:56	1
Chloroethane	ND	*1	1.0	0.90	ug/L			10/02/20 16:56	1
Chloroform	ND		1.0	0.60	ug/L			10/02/20 16:56	1
Chloromethane	ND	*1	1.0	0.90	ug/L			10/02/20 16:56	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/02/20 16:56	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/02/20 16:56	1
Dibromomethane	ND		1.0	0.33	ug/L			10/02/20 16:56	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/02/20 16:56	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/02/20 16:56	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/02/20 16:56	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/02/20 16:56	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/02/20 16:56	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/02/20 16:56	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/02/20 16:56	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/02/20 16:56	1
2-Hexanone	ND		5.0	3.3	ug/L			10/02/20 16:56	1
Iodomethane	ND		1.0	0.68	ug/L			10/02/20 16:56	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/02/20 16:56	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/02/20 16:56	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/02/20 16:56	1
Styrene	ND		1.0	0.47	ug/L			10/02/20 16:56	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/02/20 16:56	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/02/20 16:56	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/02/20 16:56	1
Toluene	ND		1.0	0.46	ug/L			10/02/20 16:56	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/02/20 16:56	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/02/20 16:56	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/02/20 16:56	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/02/20 16:56	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/02/20 16:56	1
Trichloroethene	ND		1.0	0.69	ug/L			10/02/20 16:56	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/02/20 16:56	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/02/20 16:56	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/02/20 16:56	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/02/20 16:56	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/02/20 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*64 - 120*		*10/02/20 16:56*	*1*
Dibromofluoromethane (Surr)	*101*		*71 - 132*		*10/02/20 16:56*	*1*

Client Sample ID: M-16

Date Collected: 09/23/20 09:30
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-3

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*62 - 146*		*10/02/20 16:56*	*1*
Toluene-d8 (Surr)	*109*		*75 - 120*		*10/02/20 16:56*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 14:44	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 14:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*113*		*60 - 140*	*10/05/20 12:12*	*10/06/20 14:44*	*1*
1,1,1,2-Tetrachloroethane	*107*		*60 - 140*	*10/05/20 12:12*	*10/06/20 14:44*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/24/20 20:31	1
Chloride	**6.7**		1.0	0.32	mg/L			09/24/20 20:31	1
Sulfate	**46**		1.0	0.38	mg/L			09/24/20 20:31	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 16:51	1
Arsenic	**1.5**		1.0	0.31	ug/L		10/06/20 13:50	10/15/20 16:51	1
Barium	**14**		10	1.6	ug/L		10/06/20 13:50	10/15/20 16:51	1
Beryllium	**0.25**	**J**	1.0	0.18	ug/L		10/06/20 13:50	10/15/20 16:51	1
Cadmium	**1.6**		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 16:51	1
Calcium	**26000**		500	130	ug/L		10/06/20 13:50	10/15/20 16:51	1
Chromium	ND		2.0	1.5	ug/L		10/06/20 13:50	10/15/20 16:51	1
Cobalt	**1.4**		0.50	0.13	ug/L		10/06/20 13:50	10/15/20 16:51	1
Copper	**1.8**	**J B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 16:51	1
Iron	**13000**		50	20	ug/L		10/06/20 13:50	10/15/20 16:51	1
Lead	**0.21**	**J**	1.0	0.13	ug/L		10/06/20 13:50	10/15/20 16:51	1
Magnesium	**3600**		500	83	ug/L		10/06/20 13:50	10/15/20 16:51	1
Manganese	**110**	**^ B**	5.0	0.87	ug/L		10/06/20 13:50	10/15/20 16:51	1
Nickel	**4.7**		1.0	0.34	ug/L		10/06/20 13:50	10/15/20 16:51	1
Potassium	**3300**		500	160	ug/L		10/06/20 13:50	10/15/20 16:51	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 16:51	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 16:51	1
Sodium	**3100**		500	350	ug/L		10/06/20 13:50	10/15/20 16:51	1
Thallium	**0.44**	**J**	1.0	0.15	ug/L		10/06/20 13:50	10/15/20 16:51	1
Tin	**1.1**	**J**	5.0	0.96	ug/L		10/06/20 13:50	10/15/20 16:51	1
Vanadium	ND		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 16:51	1
Zinc	**34**		5.0	3.2	ug/L		10/06/20 13:50	10/15/20 16:51	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/07/20 18:43	10/08/20 19:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	4.1	mg/L			10/05/20 09:30	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-16

Date Collected: 09/23/20 09:30
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-3

Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**6.1**		0.85	0.050	NTU			09/24/20 13:47	1
Ammonia	ND		0.10	0.088	mg/L			10/06/20 19:42	1
Specific Conductance	**230**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**120**		25	25	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**190**		10	10	mg/L			09/25/20 06:45	1
Total Alkalinity as CaCO3 to pH 4.5	**57**		5.0	5.0	mg/L			09/29/20 11:15	1
Bicarbonate Alkalinity as CaCO3	**57**		5.0	5.0	mg/L			09/29/20 11:15	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 11:15	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 11:15	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-08

Date Collected: 09/23/20 11:15
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-4

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*1	5.0	3.4	ug/L			10/02/20 17:26	1
Acrylonitrile	ND		20	7.8	ug/L			10/02/20 17:26	1
Benzene	ND		1.0	0.60	ug/L			10/02/20 17:26	1
Bromoform	ND		1.0	0.98	ug/L			10/02/20 17:26	1
Bromomethane	ND		1.0	0.89	ug/L			10/02/20 17:26	1
2-Butanone (MEK)	ND	*1	5.0	2.6	ug/L			10/02/20 17:26	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/02/20 17:26	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/02/20 17:26	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/02/20 17:26	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/02/20 17:26	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/02/20 17:26	1
Chloroethane	ND	*1	1.0	0.90	ug/L			10/02/20 17:26	1
Chloroform	ND		1.0	0.60	ug/L			10/02/20 17:26	1
Chloromethane	ND	*1	1.0	0.90	ug/L			10/02/20 17:26	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/02/20 17:26	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/02/20 17:26	1
Dibromomethane	ND		1.0	0.33	ug/L			10/02/20 17:26	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/02/20 17:26	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/02/20 17:26	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/02/20 17:26	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/02/20 17:26	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/02/20 17:26	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/02/20 17:26	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/02/20 17:26	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/02/20 17:26	1
2-Hexanone	ND		5.0	3.3	ug/L			10/02/20 17:26	1
Iodomethane	ND		1.0	0.68	ug/L			10/02/20 17:26	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/02/20 17:26	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/02/20 17:26	1
Methyl tert-butyl ether	**2.5**		1.0	0.59	ug/L			10/02/20 17:26	1
Styrene	ND		1.0	0.47	ug/L			10/02/20 17:26	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/02/20 17:26	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/02/20 17:26	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/02/20 17:26	1
Toluene	ND		1.0	0.46	ug/L			10/02/20 17:26	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/02/20 17:26	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/02/20 17:26	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/02/20 17:26	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/02/20 17:26	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/02/20 17:26	1
Trichloroethene	ND		1.0	0.69	ug/L			10/02/20 17:26	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/02/20 17:26	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/02/20 17:26	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/02/20 17:26	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/02/20 17:26	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/02/20 17:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*64 - 120*		*10/02/20 17:26*	*1*
Dibromofluoromethane (Surr)	*98*		*71 - 132*		*10/02/20 17:26*	*1*

Client Sample ID: M-08

Date Collected: 09/23/20 11:15
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-4

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*81*		*62 - 146*		*10/02/20 17:26*	*1*
Toluene-d8 (Surr)	*101*		*75 - 120*		*10/02/20 17:26*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 15:09	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 15:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*110*		*60 - 140*	*10/05/20 12:12*	*10/06/20 15:09*	*1*
1,1,1,2-Tetrachloroethane	*104*		*60 - 140*	*10/05/20 12:12*	*10/06/20 15:09*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/24/20 13:43	1
Chloride	**110**		1.0	0.32	mg/L			09/24/20 13:43	1
Sulfate	**190**		1.0	0.38	mg/L			09/24/20 13:43	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 16:54	1
Arsenic	**45**		1.0	0.31	ug/L		10/06/20 13:50	10/15/20 16:54	1
Barium	**21**		10	1.6	ug/L		10/06/20 13:50	10/15/20 16:54	1
Beryllium	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 16:54	1
Cadmium	**1.5**		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 16:54	1
Calcium	**56000**		500	130	ug/L		10/06/20 13:50	10/15/20 16:54	1
Chromium	ND		2.0	1.5	ug/L		10/06/20 13:50	10/15/20 16:54	1
Cobalt	**12**		0.50	0.13	ug/L		10/06/20 13:50	10/15/20 16:54	1
Copper	**1.6**	**J B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 16:54	1
Iron	**68000**		50	20	ug/L		10/06/20 13:50	10/15/20 16:54	1
Lead	**0.13**	**J**	1.0	0.13	ug/L		10/06/20 13:50	10/15/20 16:54	1
Magnesium	**19000**		500	83	ug/L		10/06/20 13:50	10/15/20 16:54	1
Manganese	**550**	**^ B**	5.0	0.87	ug/L		10/06/20 13:50	10/15/20 16:54	1
Nickel	**46**		1.0	0.34	ug/L		10/06/20 13:50	10/15/20 16:54	1
Potassium	**4400**		500	160	ug/L		10/06/20 13:50	10/15/20 16:54	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 16:54	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 16:54	1
Sodium	**45000**		500	350	ug/L		10/06/20 13:50	10/15/20 16:54	1
Thallium	**0.97**	**J**	1.0	0.15	ug/L		10/06/20 13:50	10/15/20 16:54	1
Tin	ND		5.0	0.96	ug/L		10/06/20 13:50	10/15/20 16:54	1
Vanadium	ND		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 16:54	1
Zinc	**220**		5.0	3.2	ug/L		10/06/20 13:50	10/15/20 16:54	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/07/20 18:43	10/08/20 19:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**33**		10	4.1	mg/L			10/05/20 09:37	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-08
Date Collected: 09/23/20 11:15
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-4
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**8.5**		0.85	0.050	NTU			09/24/20 13:50	1
Ammonia	**1.0**		0.50	0.44	mg/L			10/06/20 19:44	5
Specific Conductance	**830**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**280**		25	25	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**610**		10	10	mg/L			09/25/20 18:00	1
Total Alkalinity as CaCO3 to pH 4.5	**72**		5.0	5.0	mg/L			09/29/20 11:20	1
Bicarbonate Alkalinity as CaCO3	**72**		5.0	5.0	mg/L			09/29/20 11:20	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 11:20	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 11:20	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-08A
Date Collected: 09/23/20 12:40
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-5
Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*1	5.0	3.4	ug/L			10/02/20 17:56	1
Acrylonitrile	ND		20	7.8	ug/L			10/02/20 17:56	1
Benzene	ND		1.0	0.60	ug/L			10/02/20 17:56	1
Bromoform	ND		1.0	0.98	ug/L			10/02/20 17:56	1
Bromomethane	ND		1.0	0.89	ug/L			10/02/20 17:56	1
2-Butanone (MEK)	ND	*1	5.0	2.6	ug/L			10/02/20 17:56	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/02/20 17:56	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/02/20 17:56	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/02/20 17:56	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/02/20 17:56	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/02/20 17:56	1
Chloroethane	ND	*1	1.0	0.90	ug/L			10/02/20 17:56	1
Chloroform	ND		1.0	0.60	ug/L			10/02/20 17:56	1
Chloromethane	ND	*1	1.0	0.90	ug/L			10/02/20 17:56	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/02/20 17:56	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/02/20 17:56	1
Dibromomethane	ND		1.0	0.33	ug/L			10/02/20 17:56	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/02/20 17:56	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/02/20 17:56	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/02/20 17:56	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/02/20 17:56	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/02/20 17:56	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/02/20 17:56	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/02/20 17:56	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/02/20 17:56	1
2-Hexanone	ND		5.0	3.3	ug/L			10/02/20 17:56	1
Iodomethane	ND		1.0	0.68	ug/L			10/02/20 17:56	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/02/20 17:56	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/02/20 17:56	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/02/20 17:56	1
Styrene	ND		1.0	0.47	ug/L			10/02/20 17:56	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/02/20 17:56	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/02/20 17:56	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/02/20 17:56	1
Toluene	ND		1.0	0.46	ug/L			10/02/20 17:56	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/02/20 17:56	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/02/20 17:56	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/02/20 17:56	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/02/20 17:56	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/02/20 17:56	1
Trichloroethene	ND		1.0	0.69	ug/L			10/02/20 17:56	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/02/20 17:56	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/02/20 17:56	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/02/20 17:56	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/02/20 17:56	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/02/20 17:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*64 - 120*		*10/02/20 17:56*	*1*
Dibromofluoromethane (Surr)	*93*		*71 - 132*		*10/02/20 17:56*	*1*

Client Sample ID: M-08A

Date Collected: 09/23/20 12:40
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-5

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*80*		*62 - 146*		*10/02/20 17:56*	*1*
Toluene-d8 (Surr)	*90*		*75 - 120*		*10/02/20 17:56*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 15:35	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 15:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*109*		*60 - 140*	*10/05/20 12:12*	*10/06/20 15:35*	*1*
1,1,1,2-Tetrachloroethane	*102*		*60 - 140*	*10/05/20 12:12*	*10/06/20 15:35*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/24/20 15:21	1
Chloride	**90**		1.0	0.32	mg/L			09/24/20 15:21	1
Sulfate	**72**		1.0	0.38	mg/L			09/24/20 15:21	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 16:58	1
Arsenic	**9.7**		1.0	0.31	ug/L		10/06/20 13:50	10/15/20 16:58	1
Barium	**19**		10	1.6	ug/L		10/06/20 13:50	10/15/20 16:58	1
Beryllium	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 16:58	1
Cadmium	ND		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 16:58	1
Calcium	**70000**		500	130	ug/L		10/06/20 13:50	10/15/20 16:58	1
Chromium	ND		2.0	1.5	ug/L		10/06/20 13:50	10/15/20 16:58	1
Cobalt	**1.9**		0.50	0.13	ug/L		10/06/20 13:50	10/15/20 16:58	1
Copper	**1.7**	**J B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 16:58	1
Iron	**9000**		50	20	ug/L		10/06/20 13:50	10/15/20 16:58	1
Lead	**0.14**	**J**	1.0	0.13	ug/L		10/06/20 13:50	10/15/20 16:58	1
Magnesium	**35000**		500	83	ug/L		10/06/20 13:50	10/15/20 16:58	1
Manganese	**260**	**^ B**	5.0	0.87	ug/L		10/06/20 13:50	10/15/20 16:58	1
Nickel	**7.2**		1.0	0.34	ug/L		10/06/20 13:50	10/15/20 16:58	1
Potassium	**27000**		500	160	ug/L		10/06/20 13:50	10/15/20 16:58	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 16:58	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 16:58	1
Sodium	**110000**		500	350	ug/L		10/06/20 13:50	10/15/20 16:58	1
Thallium	**0.38**	**J**	1.0	0.15	ug/L		10/06/20 13:50	10/15/20 16:58	1
Tin	ND		5.0	0.96	ug/L		10/06/20 13:50	10/15/20 16:58	1
Vanadium	ND		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 16:58	1
Zinc	**4.7**	**J**	5.0	3.2	ug/L		10/06/20 13:50	10/15/20 16:58	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/07/20 18:43	10/08/20 19:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**46**		10	4.1	mg/L			10/05/20 09:32	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-08A
Date Collected: 09/23/20 12:40
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-5
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**29**		0.85	0.050	NTU			09/24/20 13:28	1
Ammonia	**2.1**		0.50	0.44	mg/L			10/06/20 19:46	5
Specific Conductance	**1100**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**340**		25	25	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**690**		10	10	mg/L			09/25/20 18:00	1
Total Alkalinity as CaCO3 to pH 4.5	**380**		5.0	5.0	mg/L			09/29/20 11:27	1
Bicarbonate Alkalinity as CaCO3	**380**		5.0	5.0	mg/L			09/29/20 11:27	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 11:27	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 11:27	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-15

Date Collected: 09/23/20 14:05
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-6

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*1	5.0	3.4	ug/L			10/02/20 18:27	1
Acrylonitrile	ND		20	7.8	ug/L			10/02/20 18:27	1
Benzene	ND		1.0	0.60	ug/L			10/02/20 18:27	1
Bromoform	ND		1.0	0.98	ug/L			10/02/20 18:27	1
Bromomethane	ND		1.0	0.89	ug/L			10/02/20 18:27	1
2-Butanone (MEK)	ND	*1	5.0	2.6	ug/L			10/02/20 18:27	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/02/20 18:27	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/02/20 18:27	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/02/20 18:27	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/02/20 18:27	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/02/20 18:27	1
Chloroethane	ND	*1	1.0	0.90	ug/L			10/02/20 18:27	1
Chloroform	ND		1.0	0.60	ug/L			10/02/20 18:27	1
Chloromethane	ND	*1	1.0	0.90	ug/L			10/02/20 18:27	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/02/20 18:27	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/02/20 18:27	1
Dibromomethane	ND		1.0	0.33	ug/L			10/02/20 18:27	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/02/20 18:27	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/02/20 18:27	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/02/20 18:27	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/02/20 18:27	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/02/20 18:27	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/02/20 18:27	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/02/20 18:27	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/02/20 18:27	1
2-Hexanone	ND		5.0	3.3	ug/L			10/02/20 18:27	1
Iodomethane	ND		1.0	0.68	ug/L			10/02/20 18:27	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/02/20 18:27	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/02/20 18:27	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/02/20 18:27	1
Styrene	ND		1.0	0.47	ug/L			10/02/20 18:27	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/02/20 18:27	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/02/20 18:27	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/02/20 18:27	1
Toluene	ND		1.0	0.46	ug/L			10/02/20 18:27	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/02/20 18:27	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/02/20 18:27	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/02/20 18:27	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/02/20 18:27	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/02/20 18:27	1
Trichloroethene	ND		1.0	0.69	ug/L			10/02/20 18:27	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/02/20 18:27	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/02/20 18:27	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/02/20 18:27	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/02/20 18:27	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/02/20 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*64 - 120*		*10/02/20 18:27*	*1*
Dibromofluoromethane (Surr)	*100*		*71 - 132*		*10/02/20 18:27*	*1*

Client Sample ID: M-15

Date Collected: 09/23/20 14:05
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-6

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*83*		*62 - 146*		*10/02/20 18:27*	*1*
Toluene-d8 (Surr)	*103*		*75 - 120*		*10/02/20 18:27*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 16:00	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 16:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*112*		*60 - 140*	*10/05/20 12:12*	*10/06/20 16:00*	*1*
1,1,1,2-Tetrachloroethane	*106*		*60 - 140*	*10/05/20 12:12*	*10/06/20 16:00*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/24/20 15:53	1
Chloride	**8.4**		1.0	0.32	mg/L			09/24/20 15:53	1
Sulfate	**120**		1.0	0.38	mg/L			09/24/20 15:53	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 17:08	1
Arsenic	**5.0**		1.0	0.31	ug/L		10/06/20 13:50	10/15/20 17:08	1
Barium	**15**		10	1.6	ug/L		10/06/20 13:50	10/15/20 17:08	1
Beryllium	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:08	1
Cadmium	**3.4**		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 17:08	1
Calcium	**51000**		500	130	ug/L		10/06/20 13:50	10/15/20 17:08	1
Chromium	ND		2.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:08	1
Cobalt	**0.96**		0.50	0.13	ug/L		10/06/20 13:50	10/15/20 17:08	1
Copper	**1.8**	**J B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 17:08	1
Iron	**2500**		50	20	ug/L		10/06/20 13:50	10/15/20 17:08	1
Lead	ND		1.0	0.13	ug/L		10/06/20 13:50	10/15/20 17:08	1
Magnesium	**5000**		500	83	ug/L		10/06/20 13:50	10/15/20 17:08	1
Manganese	**220**	**^ B**	5.0	0.87	ug/L		10/06/20 13:50	10/15/20 17:08	1
Nickel	**25**		1.0	0.34	ug/L		10/06/20 13:50	10/15/20 17:08	1
Potassium	**2100**		500	160	ug/L		10/06/20 13:50	10/15/20 17:08	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:08	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:08	1
Sodium	**10000**		500	350	ug/L		10/06/20 13:50	10/15/20 17:08	1
Thallium	ND		1.0	0.15	ug/L		10/06/20 13:50	10/15/20 17:08	1
Tin	ND		5.0	0.96	ug/L		10/06/20 13:50	10/15/20 17:08	1
Vanadium	ND		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 17:08	1
Zinc	**67**		5.0	3.2	ug/L		10/06/20 13:50	10/15/20 17:08	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/07/20 18:43	10/08/20 19:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	4.1	mg/L			10/06/20 08:01	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-15

Date Collected: 09/23/20 14:05
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-6

Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**5.4**		0.85	0.050	NTU			09/24/20 13:39	1
Ammonia	ND		0.10	0.088	mg/L			10/06/20 19:48	1
Specific Conductance	**360**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**170**		5.0	5.0	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**260**		10	10	mg/L			09/25/20 18:00	1
Total Alkalinity as CaCO3 to pH 4.5	**22**		5.0	5.0	mg/L			09/29/20 11:33	1
Bicarbonate Alkalinity as CaCO3	**22**		5.0	5.0	mg/L			09/29/20 11:33	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 11:33	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 11:33	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-06

Date Collected: 09/23/20 12:25
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-7

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	*1	5.0	3.4	ug/L			10/02/20 18:56	1
Acrylonitrile	ND		20	7.8	ug/L			10/02/20 18:56	1
Benzene	ND		1.0	0.60	ug/L			10/02/20 18:56	1
Bromoform	ND		1.0	0.98	ug/L			10/02/20 18:56	1
Bromomethane	ND		1.0	0.89	ug/L			10/02/20 18:56	1
2-Butanone (MEK)	ND	*1	5.0	2.6	ug/L			10/02/20 18:56	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/02/20 18:56	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/02/20 18:56	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/02/20 18:56	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/02/20 18:56	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/02/20 18:56	1
Chloroethane	ND	*1	1.0	0.90	ug/L			10/02/20 18:56	1
Chloroform	ND		1.0	0.60	ug/L			10/02/20 18:56	1
Chloromethane	ND	*1	1.0	0.90	ug/L			10/02/20 18:56	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/02/20 18:56	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/02/20 18:56	1
Dibromomethane	ND		1.0	0.33	ug/L			10/02/20 18:56	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/02/20 18:56	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/02/20 18:56	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/02/20 18:56	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/02/20 18:56	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/02/20 18:56	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/02/20 18:56	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/02/20 18:56	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/02/20 18:56	1
2-Hexanone	ND		5.0	3.3	ug/L			10/02/20 18:56	1
Iodomethane	ND		1.0	0.68	ug/L			10/02/20 18:56	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/02/20 18:56	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/02/20 18:56	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/02/20 18:56	1
Styrene	ND		1.0	0.47	ug/L			10/02/20 18:56	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/02/20 18:56	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/02/20 18:56	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/02/20 18:56	1
Toluene	ND		1.0	0.46	ug/L			10/02/20 18:56	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/02/20 18:56	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/02/20 18:56	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/02/20 18:56	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/02/20 18:56	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/02/20 18:56	1
Trichloroethene	ND		1.0	0.69	ug/L			10/02/20 18:56	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/02/20 18:56	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/02/20 18:56	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/02/20 18:56	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/02/20 18:56	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/02/20 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*64 - 120*		*10/02/20 18:56*	*1*
Dibromofluoromethane (Surr)	*96*		*71 - 132*		*10/02/20 18:56*	*1*

Client Sample ID: M-06

Date Collected: 09/23/20 12:25
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-7

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*62 - 146*		*10/02/20 18:56*	*1*
Toluene-d8 (Surr)	*90*		*75 - 120*		*10/02/20 18:56*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 16:26	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 16:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*110*		*60 - 140*	*10/05/20 12:12*	*10/06/20 16:26*	*1*
1,1,1,2-Tetrachloroethane	*105*		*60 - 140*	*10/05/20 12:12*	*10/06/20 16:26*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/24/20 19:10	1
Chloride	**15**		1.0	0.32	mg/L			09/24/20 19:10	1
Sulfate	**170**		1.0	0.38	mg/L			09/24/20 19:10	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 17:12	1
Arsenic	**0.70**	**J**	1.0	0.31	ug/L		10/06/20 13:50	10/15/20 17:12	1
Barium	**28**		10	1.6	ug/L		10/06/20 13:50	10/15/20 17:12	1
Beryllium	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:12	1
Cadmium	**2.1**		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 17:12	1
Calcium	**130000**		500	130	ug/L		10/06/20 13:50	10/15/20 17:12	1
Chromium	ND		2.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:12	1
Cobalt	**18**		0.50	0.13	ug/L		10/06/20 13:50	10/15/20 17:12	1
Copper	**2.7**	**B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 17:12	1
Iron	**24000**		50	20	ug/L		10/06/20 13:50	10/15/20 17:12	1
Lead	ND		1.0	0.13	ug/L		10/06/20 13:50	10/15/20 17:12	1
Magnesium	**67000**		500	83	ug/L		10/06/20 13:50	10/15/20 17:12	1
Manganese	**1800**	**^ B**	5.0	0.87	ug/L		10/06/20 13:50	10/15/20 17:12	1
Nickel	**26**		1.0	0.34	ug/L		10/06/20 13:50	10/15/20 17:12	1
Potassium	**3000**		500	160	ug/L		10/06/20 13:50	10/15/20 17:12	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:12	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:12	1
Sodium	**22000**		500	350	ug/L		10/06/20 13:50	10/15/20 17:12	1
Thallium	**0.67**	**J**	1.0	0.15	ug/L		10/06/20 13:50	10/15/20 17:12	1
Tin	ND		5.0	0.96	ug/L		10/06/20 13:50	10/15/20 17:12	1
Vanadium	ND		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 17:12	1
Zinc	**92**		5.0	3.2	ug/L		10/06/20 13:50	10/15/20 17:12	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.33**		0.20	0.13	ug/L		10/07/20 18:43	10/08/20 19:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**25**		10	4.1	mg/L			10/06/20 08:02	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-06

Date Collected: 09/23/20 12:25
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-7

Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**14**		0.85	0.050	NTU			09/24/20 13:37	1
Ammonia	**0.12**		0.10	0.088	mg/L			10/06/20 19:50	1
Specific Conductance	**1100**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**660**		25	25	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**650**		10	10	mg/L			09/25/20 18:00	1
Total Alkalinity as CaCO3 to pH 4.5	**440**		5.0	5.0	mg/L			09/29/20 11:40	1
Bicarbonate Alkalinity as CaCO3	**440**		5.0	5.0	mg/L			09/29/20 11:40	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 11:40	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 11:40	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-07

Date Collected: 09/23/20 13:40
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-8

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			10/05/20 15:46	1
Acrylonitrile	ND		20	7.8	ug/L			10/05/20 15:46	1
Benzene	ND		1.0	0.60	ug/L			10/05/20 15:46	1
Bromoform	ND		1.0	0.98	ug/L			10/05/20 15:46	1
Bromomethane	ND		1.0	0.89	ug/L			10/05/20 15:46	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			10/05/20 15:46	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/05/20 15:46	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/05/20 15:46	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/05/20 15:46	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/05/20 15:46	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/05/20 15:46	1
Chloroethane	ND		1.0	0.90	ug/L			10/05/20 15:46	1
Chloroform	ND		1.0	0.60	ug/L			10/05/20 15:46	1
Chloromethane	ND		1.0	0.90	ug/L			10/05/20 15:46	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/05/20 15:46	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/05/20 15:46	1
Dibromomethane	ND		1.0	0.33	ug/L			10/05/20 15:46	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/05/20 15:46	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/05/20 15:46	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/05/20 15:46	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/05/20 15:46	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/05/20 15:46	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/05/20 15:46	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/05/20 15:46	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/05/20 15:46	1
2-Hexanone	ND		5.0	3.3	ug/L			10/05/20 15:46	1
Iodomethane	ND		1.0	0.68	ug/L			10/05/20 15:46	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/05/20 15:46	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/05/20 15:46	1
Methyl tert-butyl ether	ND	*	1.0	0.59	ug/L			10/05/20 15:46	1
Styrene	ND		1.0	0.47	ug/L			10/05/20 15:46	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/05/20 15:46	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/05/20 15:46	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/05/20 15:46	1
Toluene	ND		1.0	0.46	ug/L			10/05/20 15:46	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/05/20 15:46	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/05/20 15:46	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/05/20 15:46	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/05/20 15:46	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/05/20 15:46	1
Trichloroethene	ND		1.0	0.69	ug/L			10/05/20 15:46	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/05/20 15:46	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/05/20 15:46	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/05/20 15:46	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/05/20 15:46	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/05/20 15:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*64 - 120*		*10/05/20 15:46*	*1*
Dibromofluoromethane (Surr)	*89*		*71 - 132*		*10/05/20 15:46*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-07

Date Collected: 09/23/20 13:40
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-8

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*78*		*62 - 146*		*10/05/20 15:46*	*1*
Toluene-d8 (Surr)	*103*		*75 - 120*		*10/05/20 15:46*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 16:51	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 16:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*112*		*60 - 140*	*10/05/20 12:12*	*10/06/20 16:51*	*1*
1,1,1,2-Tetrachloroethane	*105*		*60 - 140*	*10/05/20 12:12*	*10/06/20 16:51*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/24/20 21:37	1
Chloride	**16**		1.0	0.32	mg/L			09/24/20 21:37	1
Sulfate	**200**	**F1**	1.0	0.38	mg/L			09/24/20 21:37	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 17:15	1
Arsenic	**1.8**		1.0	0.31	ug/L		10/06/20 13:50	10/15/20 17:15	1
Barium	**21**		10	1.6	ug/L		10/06/20 13:50	10/15/20 17:15	1
Beryllium	**0.45**	**J**	1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:15	1
Cadmium	**4.9**		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 17:15	1
Calcium	**58000**		500	130	ug/L		10/06/20 13:50	10/15/20 17:15	1
Chromium	ND		2.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:15	1
Cobalt	**3.4**		0.50	0.13	ug/L		10/06/20 13:50	10/15/20 17:15	1
Copper	**5.9**	**B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 17:15	1
Iron	**5900**		50	20	ug/L		10/06/20 13:50	10/15/20 17:15	1
Lead	**0.60**	**J**	1.0	0.13	ug/L		10/06/20 13:50	10/15/20 17:15	1
Magnesium	**13000**		500	83	ug/L		10/06/20 13:50	10/15/20 17:15	1
Manganese	**270**	**^ B**	5.0	0.87	ug/L		10/06/20 13:50	10/15/20 17:15	1
Nickel	**29**		1.0	0.34	ug/L		10/06/20 13:50	10/15/20 17:15	1
Potassium	**4000**		500	160	ug/L		10/06/20 13:50	10/15/20 17:15	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:15	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:15	1
Sodium	**17000**		500	350	ug/L		10/06/20 13:50	10/15/20 17:15	1
Thallium	ND		1.0	0.15	ug/L		10/06/20 13:50	10/15/20 17:15	1
Tin	ND		5.0	0.96	ug/L		10/06/20 13:50	10/15/20 17:15	1
Vanadium	**1.1**		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 17:15	1
Zinc	**28**		5.0	3.2	ug/L		10/06/20 13:50	10/15/20 17:15	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/07/20 18:43	10/08/20 19:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**4.3**	**J**	10	4.1	mg/L			10/06/20 08:03	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: M-07
Date Collected: 09/23/20 13:40
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-8
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**28**		0.85	0.050	NTU			09/24/20 13:41	1
Ammonia	ND		0.10	0.088	mg/L			10/06/20 19:58	1
Specific Conductance	**520**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**250**		25	25	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**330**		10	10	mg/L			09/25/20 18:00	1
Total Alkalinity as CaCO3 to pH 4.5	ND		5.0	5.0	mg/L			09/29/20 12:00	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 12:00	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 12:00	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 12:00	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: TRIP BLANK-03

Date Collected: 09/23/20 15:00
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-9

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			10/05/20 12:43	1
Acrylonitrile	ND		20	7.8	ug/L			10/05/20 12:43	1
Benzene	ND		1.0	0.60	ug/L			10/05/20 12:43	1
Bromoform	ND		1.0	0.98	ug/L			10/05/20 12:43	1
Bromomethane	ND		1.0	0.89	ug/L			10/05/20 12:43	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			10/05/20 12:43	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/05/20 12:43	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/05/20 12:43	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/05/20 12:43	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/05/20 12:43	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/05/20 12:43	1
Chloroethane	ND		1.0	0.90	ug/L			10/05/20 12:43	1
Chloroform	ND		1.0	0.60	ug/L			10/05/20 12:43	1
Chloromethane	ND		1.0	0.90	ug/L			10/05/20 12:43	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/05/20 12:43	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/05/20 12:43	1
Dibromomethane	ND		1.0	0.33	ug/L			10/05/20 12:43	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/05/20 12:43	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/05/20 12:43	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/05/20 12:43	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			10/05/20 12:43	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/05/20 12:43	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/05/20 12:43	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/05/20 12:43	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/05/20 12:43	1
2-Hexanone	ND		5.0	3.3	ug/L			10/05/20 12:43	1
Iodomethane	ND		1.0	0.68	ug/L			10/05/20 12:43	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/05/20 12:43	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/05/20 12:43	1
Methyl tert-butyl ether	ND	*	1.0	0.59	ug/L			10/05/20 12:43	1
Styrene	ND		1.0	0.47	ug/L			10/05/20 12:43	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/05/20 12:43	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/05/20 12:43	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/05/20 12:43	1
Toluene	ND		1.0	0.46	ug/L			10/05/20 12:43	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/05/20 12:43	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/05/20 12:43	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/05/20 12:43	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/05/20 12:43	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/05/20 12:43	1
Trichloroethene	ND		1.0	0.69	ug/L			10/05/20 12:43	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/05/20 12:43	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/05/20 12:43	1
Vinyl acetate	ND		1.0	0.81	ug/L			10/05/20 12:43	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/05/20 12:43	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/05/20 12:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*64 - 120*		*10/05/20 12:43*	*1*
Dibromofluoromethane (Surr)	*91*		*71 - 132*		*10/05/20 12:43*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111349-1

Client Sample ID: TRIP BLANK-03

Date Collected: 09/23/20 15:00
Date Received: 09/24/20 09:15

Lab Sample ID: 180-111349-9

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*81*		*62 - 146*		*10/05/20 12:43*	*1*
Toluene-d8 (Surr)	*100*		*75 - 120*		*10/05/20 12:43*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/05/20 12:12	10/06/20 17:17	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/05/20 12:12	10/06/20 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*114*		*60 - 140*	*10/05/20 12:12*	*10/06/20 17:17*	*1*
1,1,1,2-Tetrachloroethane	*108*		*60 - 140*	*10/05/20 12:12*	*10/06/20 17:17*	*1*

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ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-111432-1
Client Project/Site: Ritchie Rubble LF

For:
Geosyntec Consultants, Inc.
10211 Wincopin Circle
4'th Floor
Columbia, Maryland 21044

Attn: Yovanna Cortes

Roxanne Cisneros

Authorized for release by:
10/29/2020 8:35:05 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@Eurofinset.com

PA Lab ID: 02-00416

Table of Contents

Job ID: 180-111432-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-111432-1

Comments
No additional comments.

Receipt
The samples were received on 9/25/2020 9:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.7º C and 3.4º C.

GC/MS VOA
Methods 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-332683 was outside the method criteria for the following analyte: Bromoform. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Methods 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-332683 was outside the method criteria for the following analytes: 4-Methyl-2-pentanone, 2-Hexanone, Bromomethane, Ethylbenzene, Iodomethane, Styrene, Trichloroethene, Vinyl chloride, cis-1,2-Dichloroethene, trans-1,4-Dichloro-2-butene, Bromomethane, Xylenes, Total and Vinyl acetate. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Methods 8260C LL: The laboratory control sample (LCS) for analytical batch 180-332683 recovered outside control limits for the following analytes: Vinyl acetate 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, trans-1,3-Dichloropropene and Vinyl acetate. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260C LL: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 180-332683 were outside control limits. Sample matrix interference is suspected for M-09 (180-111432-1).

Methods 8260C LL: Internal standard (ISTD) response for TBA-d9 for the following samples were outside acceptance criteria: M-09 (180-111432-1) and (180-111432-I-1 MS). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

Methods 8260C LL: Surrogate recovery for the following sample was outside control limits: M-12 (180-111432-7). Evidence of matrix interferences is not obvious. Sample was re-analyzed outside holding time.

Method 8260C LL: Reanalysis of the following samples were performed outside of the analytical holding time due to failure of quality control parameters in the initial analysis. M-09 (180-111432-1), M-10 (180-111432-2), M-11 (180-111432-3), M-12 (180-111432-7), M-14 (180-111432-8) and TRIP BLANK-04 (180-111432-9)

Methods 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-333337 was outside the method criteria for the following analyte: Acetone. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Methods 8260C LL: The continuing calibration verification (CCV) analyzed in batch 180-333337 was outside the method criteria for the following analytes: 1,2-Dibromo-3-Chloropropane, 1,4-Dioxane (Low Minimum RRF), Bromoform and Bromomethane. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8011: The closing continuing calibration verification (CCVC) associated with batch 332589 recovered slightly above the upper control limit for Surrogate 1,1,1,2-Tetrachloroethane. The samples associated with this CCV were non-detects for target analytes; therefore, the data have been reported.

Job ID: 180-111432-1 (Continued)

Laboratory: Eurofins TestAmerica, Pittsburgh (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method 6020A: The low level continuing calibration verification (CCVL) associated with batch 180-333648 recovered above the upper control limit for Manganese. The samples associated with this CCVL were at least 10X the RL for the affected analyte; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method 180.1: The following samples were diluted to bring the concentration of target analytes within the calibration range: M-11 (180-111432-3), M-11B (180-111432-5) and M-14 (180-111432-8). Elevated reporting limits (RLs) are provided.

Method SM 2340C: The following samples were diluted due to the nature of the sample matrix: M-11 (180-111432-3), M-11A (180-111432-4), M-11B (180-111432-5) and M-14 (180-111432-8). Elevated reporting limits (RLs) are provided.

Method 350.1: The following samples were diluted to bring the concentration of target analytes within the calibration range: M-11 (180-111432-3), M-11A (180-111432-4) and M-11B (180-111432-5). Elevated reporting limits (RLs) are provided.

Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: M-11B (180-111432-5) and M-11D (180-111432-6). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Geosyntec Consultants, Inc. Job ID: 180-111432-1
Project/Site: Ritchie Rubble LF

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate recovery exceeds control limits

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-21
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20 *
Florida	NELAP	E871008	06-30-21
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-21
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-21
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-21
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-21
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	04-30-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-21
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-21
Virginia	NELAP	10043	09-14-21
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc. Job ID: 180-111432-1
Project/Site: Ritchie Rubble LF

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-111432-1	M-09	Water	09/24/20 13:15	09/25/20 09:00	
180-111432-2	M-10	Water	09/24/20 09:00	09/25/20 09:00	
180-111432-3	M-11	Water	09/24/20 09:05	09/25/20 09:00	
180-111432-4	M-11A	Water	09/24/20 11:35	09/25/20 09:00	
180-111432-5	M-11B	Water	09/24/20 10:25	09/25/20 09:00	
180-111432-6	M-11D	Water	09/24/20 13:00	09/25/20 09:00	
180-111432-7	M-12	Water	09/24/20 10:30	09/25/20 09:00	
180-111432-8	M-14	Water	09/24/20 11:45	09/25/20 09:00	
180-111432-9	TRIP BLANK-04	Water	09/24/20 14:00	09/25/20 09:00	

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Method	Method Description	Protocol	Laboratory
EPA 8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT
EPA 8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	TAL PIT
EPA 300.0 R2.1	Anions, Ion Chromatgraphy	EPA	TAL PIT
EPA 6020A	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
410.4-1993 R2.0	COD	MCAWW	TAL CAN
EPA 180.1	Turbidity, Nephelometric	EPA	TAL PIT
EPA 350.1	Nitrogen, Ammonia	EPA	TAL PIT
EPA 9050A	Specific Conductance	SW846	TAL PIT
SM 2340C	Hardness, Total	SM	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
5030C	Purge and Trap	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT
8011	Microextraction	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL CAN

Batch Type: Analysis

TPH = Tom Harshman

Lab: TAL PIT

Batch Type: Prep

DFE = David Eppinger

MM1 = Mary Beth Miller

TJO = Tyler Oliver

Batch Type: Analysis

AVS = Abbey Smith

DFE = David Eppinger

GRB = Gabriel Berghe

KEM = Kimberly Mahoney

MJH = Matthew Hartman

PJJ = Patrick Journet

PMH = Paloma Hoelzle

RSK = Robert Kurtz

TAM = Tessa Mastalski

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-09

Date Collected: 09/24/20 13:15
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-1

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			10/08/20 10:08	1
Acrylonitrile	ND		20	7.8	ug/L			10/08/20 10:08	1
Benzene	ND		1.0	0.60	ug/L			10/08/20 10:08	1
Bromoform	ND		1.0	0.98	ug/L			10/08/20 10:08	1
Bromomethane	ND		1.0	0.89	ug/L			10/08/20 10:08	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			10/08/20 10:08	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/08/20 10:08	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/08/20 10:08	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/08/20 10:08	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/08/20 10:08	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/08/20 10:08	1
Chloroethane	ND		1.0	0.90	ug/L			10/08/20 10:08	1
Chloroform	ND		1.0	0.60	ug/L			10/08/20 10:08	1
Chloromethane	ND		1.0	0.90	ug/L			10/08/20 10:08	1
cis-1,2-Dichloroethene	ND	F1	1.0	0.71	ug/L			10/08/20 10:08	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/08/20 10:08	1
Dibromomethane	ND		1.0	0.33	ug/L			10/08/20 10:08	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/08/20 10:08	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/08/20 10:08	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/08/20 10:08	1
1,1-Dichloroethane	ND	*	1.0	0.31	ug/L			10/08/20 10:08	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/08/20 10:08	1
1,1-Dichloroethene	ND	F1	1.0	0.55	ug/L			10/08/20 10:08	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/08/20 10:08	1
Ethylbenzene	ND	F1	1.0	0.51	ug/L			10/08/20 10:08	1
2-Hexanone	ND		5.0	3.3	ug/L			10/08/20 10:08	1
Iodomethane	ND		1.0	0.68	ug/L			10/08/20 10:08	1
Methylene Chloride	ND	F1	1.0	0.89	ug/L			10/08/20 10:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/08/20 10:08	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/08/20 10:08	1
Styrene	ND	F1	1.0	0.47	ug/L			10/08/20 10:08	1
1,1,1,2-Tetrachloroethane	ND	*	1.0	0.57	ug/L			10/08/20 10:08	1
1,1,2,2-Tetrachloroethane	ND	*	1.0	0.60	ug/L			10/08/20 10:08	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/08/20 10:08	1
Toluene	ND		1.0	0.46	ug/L			10/08/20 10:08	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/08/20 10:08	1
trans-1,2-Dichloroethene	ND	F1	1.0	0.67	ug/L			10/08/20 10:08	1
trans-1,3-Dichloropropene	ND	*	1.0	0.58	ug/L			10/08/20 10:08	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/08/20 10:08	1
1,1,2-Trichloroethane	ND	*	1.0	0.45	ug/L			10/08/20 10:08	1
Trichloroethene	ND	F1	1.0	0.69	ug/L			10/08/20 10:08	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/08/20 10:08	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/08/20 10:08	1
Vinyl acetate	ND	F1 *	1.0	0.81	ug/L			10/08/20 10:08	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/08/20 10:08	1
Xylenes, Total	ND	F1	2.0	0.89	ug/L			10/08/20 10:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*64 - 120*		*10/08/20 10:08*	*1*
Dibromofluoromethane (Surr)	*112*		*71 - 132*		*10/08/20 10:08*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-09
Date Collected: 09/24/20 13:15
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-1
Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*124*		*62 - 146*		*10/08/20 10:08*	*1*
Toluene-d8 (Surr)	*86*		*75 - 120*		*10/08/20 10:08*	*1*

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	H	5.0	3.4	ug/L			10/14/20 11:51	1
Acrylonitrile	ND	H	20	7.8	ug/L			10/14/20 11:51	1
Benzene	ND	H	1.0	0.60	ug/L			10/14/20 11:51	1
Bromoform	ND	H	1.0	0.98	ug/L			10/14/20 11:51	1
Bromomethane	ND	H	1.0	0.89	ug/L			10/14/20 11:51	1
2-Butanone (MEK)	ND	H	5.0	2.6	ug/L			10/14/20 11:51	1
Carbon disulfide	ND	H	1.0	0.88	ug/L			10/14/20 11:51	1
Carbon tetrachloride	ND	H	1.0	0.88	ug/L			10/14/20 11:51	1
Chlorobenzene	ND	H	1.0	0.50	ug/L			10/14/20 11:51	1
Chlorobromomethane	ND	H	1.0	0.63	ug/L			10/14/20 11:51	1
Chlorodibromomethane	ND	H	1.0	0.84	ug/L			10/14/20 11:51	1
Chloroethane	ND	H	1.0	0.90	ug/L			10/14/20 11:51	1
Chloroform	ND	H	1.0	0.60	ug/L			10/14/20 11:51	1
Chloromethane	ND	H	1.0	0.90	ug/L			10/14/20 11:51	1
cis-1,2-Dichloroethene	ND	H	1.0	0.71	ug/L			10/14/20 11:51	1
cis-1,3-Dichloropropene	ND	H	1.0	0.59	ug/L			10/14/20 11:51	1
Dibromomethane	ND	H	1.0	0.33	ug/L			10/14/20 11:51	1
1,2-Dichlorobenzene	ND	H	1.0	0.36	ug/L			10/14/20 11:51	1
1,4-Dichlorobenzene	ND	H	1.0	0.54	ug/L			10/14/20 11:51	1
Dichlorobromomethane	ND	H	1.0	0.64	ug/L			10/14/20 11:51	1
1,1-Dichloroethane	ND	H	1.0	0.31	ug/L			10/14/20 11:51	1
1,2-Dichloroethane	ND	H	1.0	0.57	ug/L			10/14/20 11:51	1
1,1-Dichloroethene	ND	H	1.0	0.55	ug/L			10/14/20 11:51	1
1,2-Dichloropropane	ND	H	1.0	0.66	ug/L			10/14/20 11:51	1
Ethylbenzene	ND	H	1.0	0.51	ug/L			10/14/20 11:51	1
2-Hexanone	ND	H	5.0	3.3	ug/L			10/14/20 11:51	1
Iodomethane	ND	H	1.0	0.68	ug/L			10/14/20 11:51	1
Methylene Chloride	ND	H	1.0	0.89	ug/L			10/14/20 11:51	1
4-Methyl-2-pentanone (MIBK)	ND	H	5.0	3.1	ug/L			10/14/20 11:51	1
Methyl tert-butyl ether	ND	H	1.0	0.59	ug/L			10/14/20 11:51	1
Styrene	ND	H	1.0	0.47	ug/L			10/14/20 11:51	1
1,1,1,2-Tetrachloroethane	ND	H	1.0	0.57	ug/L			10/14/20 11:51	1
1,1,2,2-Tetrachloroethane	ND	H	1.0	0.60	ug/L			10/14/20 11:51	1
Tetrachloroethene	ND	H	1.0	0.47	ug/L			10/14/20 11:51	1
Toluene	ND	H	1.0	0.46	ug/L			10/14/20 11:51	1
trans-1,4-Dichloro-2-butene	ND	H	1.0	0.83	ug/L			10/14/20 11:51	1
trans-1,2-Dichloroethene	ND	H	1.0	0.67	ug/L			10/14/20 11:51	1
trans-1,3-Dichloropropene	ND	H	1.0	0.58	ug/L			10/14/20 11:51	1
1,1,1-Trichloroethane	ND	H	1.0	0.60	ug/L			10/14/20 11:51	1
1,1,2-Trichloroethane	ND	H	1.0	0.45	ug/L			10/14/20 11:51	1
Trichloroethene	ND	H	1.0	0.69	ug/L			10/14/20 11:51	1
Trichlorofluoromethane	ND	H	1.0	0.87	ug/L			10/14/20 11:51	1
1,2,3-Trichloropropane	ND	H	1.0	0.80	ug/L			10/14/20 11:51	1
Vinyl acetate	ND	H	1.0	0.81	ug/L			10/14/20 11:51	1

Client Sample ID: M-09

Date Collected: 09/24/20 13:15
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-1

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND	H	1.0	0.40	ug/L			10/14/20 11:51	1
Xylenes, Total	ND	H	2.0	0.89	ug/L			10/14/20 11:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*64 - 120*		*10/14/20 11:51*	*1*
Dibromofluoromethane (Surr)	*92*		*71 - 132*		*10/14/20 11:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*62 - 146*		*10/14/20 11:51*	*1*
Toluene-d8 (Surr)	*95*		*75 - 120*		*10/14/20 11:51*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/07/20 09:18	10/07/20 11:55	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/07/20 09:18	10/07/20 11:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*108*		*60 - 140*	*10/07/20 09:18*	*10/07/20 11:55*	*1*
1,1,1,2-Tetrachloroethane	*110*		*60 - 140*	*10/07/20 09:18*	*10/07/20 11:55*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/25/20 11:01	1
Chloride	**2.2**		1.0	0.32	mg/L			09/25/20 11:01	1
Sulfate	**14**		1.0	0.38	mg/L			09/25/20 11:01	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 17:38	1
Arsenic	ND		1.0	0.31	ug/L		10/06/20 13:50	10/15/20 17:38	1
Barium	**70**		10	1.6	ug/L		10/06/20 13:50	10/15/20 17:38	1
Beryllium	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:38	1
Cadmium	ND		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 17:38	1
Calcium	**15000**		500	130	ug/L		10/06/20 13:50	10/15/20 17:38	1
Chromium	ND		2.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:38	1
Cobalt	ND		0.50	0.13	ug/L		10/06/20 13:50	10/15/20 17:38	1
Copper	**1.9**	**J B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 17:38	1
Iron	**2700**		50	20	ug/L		10/06/20 13:50	10/15/20 17:38	1
Lead	ND		1.0	0.13	ug/L		10/06/20 13:50	10/15/20 17:38	1
Magnesium	**2100**		500	83	ug/L		10/06/20 13:50	10/15/20 17:38	1
Manganese	**68**	**^ B**	5.0	0.87	ug/L		10/06/20 13:50	10/15/20 17:38	1
Nickel	**0.60**	**J**	1.0	0.34	ug/L		10/06/20 13:50	10/15/20 17:38	1
Potassium	**1400**		500	160	ug/L		10/06/20 13:50	10/15/20 17:38	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:38	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:38	1
Sodium	**3300**		500	350	ug/L		10/06/20 13:50	10/15/20 17:38	1
Thallium	ND		1.0	0.15	ug/L		10/06/20 13:50	10/15/20 17:38	1
Tin	ND		5.0	0.96	ug/L		10/06/20 13:50	10/15/20 17:38	1
Vanadium	ND		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 17:38	1
Zinc	**8.3**		5.0	3.2	ug/L		10/06/20 13:50	10/15/20 17:38	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-09

Date Collected: 09/24/20 13:15
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-1

Matrix: Water

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/07/20 18:43	10/08/20 19:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	4.1	mg/L			10/06/20 08:12	1
Turbidity	**7.5**		0.85	0.050	NTU			09/25/20 12:38	1
Ammonia	ND		0.10	0.088	mg/L			10/08/20 18:51	1
Specific Conductance	**110**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**60**		5.0	5.0	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**70**		10	10	mg/L			09/26/20 06:48	1
Total Alkalinity as CaCO3 to pH 4.5	**26**		5.0	5.0	mg/L			09/29/20 15:04	1
Bicarbonate Alkalinity as CaCO3	**26**		5.0	5.0	mg/L			09/29/20 15:04	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 15:04	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 15:04	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-10

Date Collected: 09/24/20 09:00
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-2

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			10/08/20 15:20	1
Acrylonitrile	ND		20	7.8	ug/L			10/08/20 15:20	1
Benzene	ND		1.0	0.60	ug/L			10/08/20 15:20	1
Bromoform	ND		1.0	0.98	ug/L			10/08/20 15:20	1
Bromomethane	ND		1.0	0.89	ug/L			10/08/20 15:20	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			10/08/20 15:20	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/08/20 15:20	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/08/20 15:20	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/08/20 15:20	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/08/20 15:20	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/08/20 15:20	1
Chloroethane	ND		1.0	0.90	ug/L			10/08/20 15:20	1
Chloroform	ND		1.0	0.60	ug/L			10/08/20 15:20	1
Chloromethane	ND		1.0	0.90	ug/L			10/08/20 15:20	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/08/20 15:20	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/08/20 15:20	1
Dibromomethane	ND		1.0	0.33	ug/L			10/08/20 15:20	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/08/20 15:20	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/08/20 15:20	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/08/20 15:20	1
1,1-Dichloroethane	ND	*	1.0	0.31	ug/L			10/08/20 15:20	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/08/20 15:20	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/08/20 15:20	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/08/20 15:20	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/08/20 15:20	1
2-Hexanone	ND		5.0	3.3	ug/L			10/08/20 15:20	1
Iodomethane	ND		1.0	0.68	ug/L			10/08/20 15:20	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/08/20 15:20	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/08/20 15:20	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/08/20 15:20	1
Styrene	ND		1.0	0.47	ug/L			10/08/20 15:20	1
1,1,1,2-Tetrachloroethane	ND	*	1.0	0.57	ug/L			10/08/20 15:20	1
1,1,2,2-Tetrachloroethane	ND	*	1.0	0.60	ug/L			10/08/20 15:20	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/08/20 15:20	1
Toluene	ND		1.0	0.46	ug/L			10/08/20 15:20	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/08/20 15:20	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/08/20 15:20	1
trans-1,3-Dichloropropene	ND	*	1.0	0.58	ug/L			10/08/20 15:20	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/08/20 15:20	1
1,1,2-Trichloroethane	ND	*	1.0	0.45	ug/L			10/08/20 15:20	1
Trichloroethene	ND		1.0	0.69	ug/L			10/08/20 15:20	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/08/20 15:20	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/08/20 15:20	1
Vinyl acetate	ND	*	1.0	0.81	ug/L			10/08/20 15:20	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/08/20 15:20	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/08/20 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*64 - 120*		*10/08/20 15:20*	*1*
Dibromofluoromethane (Surr)	*124*		*71 - 132*		*10/08/20 15:20*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-10

Date Collected: 09/24/20 09:00
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-2

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*138*		*62 - 146*		*10/08/20 15:20*	*1*
Toluene-d8 (Surr)	*93*		*75 - 120*		*10/08/20 15:20*	*1*

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	H	5.0	3.4	ug/L			10/14/20 12:15	1
Acrylonitrile	ND	H	20	7.8	ug/L			10/14/20 12:15	1
Benzene	ND	H	1.0	0.60	ug/L			10/14/20 12:15	1
Bromoform	ND	H	1.0	0.98	ug/L			10/14/20 12:15	1
Bromomethane	ND	H	1.0	0.89	ug/L			10/14/20 12:15	1
2-Butanone (MEK)	ND	H	5.0	2.6	ug/L			10/14/20 12:15	1
Carbon disulfide	ND	H	1.0	0.88	ug/L			10/14/20 12:15	1
Carbon tetrachloride	ND	H	1.0	0.88	ug/L			10/14/20 12:15	1
Chlorobenzene	ND	H	1.0	0.50	ug/L			10/14/20 12:15	1
Chlorobromomethane	ND	H	1.0	0.63	ug/L			10/14/20 12:15	1
Chlorodibromomethane	ND	H	1.0	0.84	ug/L			10/14/20 12:15	1
Chloroethane	ND	H	1.0	0.90	ug/L			10/14/20 12:15	1
Chloroform	ND	H	1.0	0.60	ug/L			10/14/20 12:15	1
Chloromethane	ND	H	1.0	0.90	ug/L			10/14/20 12:15	1
cis-1,2-Dichloroethene	ND	H	1.0	0.71	ug/L			10/14/20 12:15	1
cis-1,3-Dichloropropene	ND	H	1.0	0.59	ug/L			10/14/20 12:15	1
Dibromomethane	ND	H	1.0	0.33	ug/L			10/14/20 12:15	1
1,2-Dichlorobenzene	ND	H	1.0	0.36	ug/L			10/14/20 12:15	1
1,4-Dichlorobenzene	ND	H	1.0	0.54	ug/L			10/14/20 12:15	1
Dichlorobromomethane	ND	H	1.0	0.64	ug/L			10/14/20 12:15	1
1,1-Dichloroethane	ND	H	1.0	0.31	ug/L			10/14/20 12:15	1
1,2-Dichloroethane	ND	H	1.0	0.57	ug/L			10/14/20 12:15	1
1,1-Dichloroethene	ND	H	1.0	0.55	ug/L			10/14/20 12:15	1
1,2-Dichloropropane	ND	H	1.0	0.66	ug/L			10/14/20 12:15	1
Ethylbenzene	ND	H	1.0	0.51	ug/L			10/14/20 12:15	1
2-Hexanone	ND	H	5.0	3.3	ug/L			10/14/20 12:15	1
Iodomethane	ND	H	1.0	0.68	ug/L			10/14/20 12:15	1
Methylene Chloride	ND	H	1.0	0.89	ug/L			10/14/20 12:15	1
4-Methyl-2-pentanone (MIBK)	ND	H	5.0	3.1	ug/L			10/14/20 12:15	1
Methyl tert-butyl ether	ND	H	1.0	0.59	ug/L			10/14/20 12:15	1
Styrene	ND	H	1.0	0.47	ug/L			10/14/20 12:15	1
1,1,1,2-Tetrachloroethane	ND	H	1.0	0.57	ug/L			10/14/20 12:15	1
1,1,2,2-Tetrachloroethane	ND	H	1.0	0.60	ug/L			10/14/20 12:15	1
Tetrachloroethene	ND	H	1.0	0.47	ug/L			10/14/20 12:15	1
Toluene	ND	H	1.0	0.46	ug/L			10/14/20 12:15	1
trans-1,4-Dichloro-2-butene	ND	H	1.0	0.83	ug/L			10/14/20 12:15	1
trans-1,2-Dichloroethene	ND	H	1.0	0.67	ug/L			10/14/20 12:15	1
trans-1,3-Dichloropropene	ND	H	1.0	0.58	ug/L			10/14/20 12:15	1
1,1,1-Trichloroethane	ND	H	1.0	0.60	ug/L			10/14/20 12:15	1
1,1,2-Trichloroethane	ND	H	1.0	0.45	ug/L			10/14/20 12:15	1
Trichloroethene	ND	H	1.0	0.69	ug/L			10/14/20 12:15	1
Trichlorofluoromethane	ND	H	1.0	0.87	ug/L			10/14/20 12:15	1
1,2,3-Trichloropropane	ND	H	1.0	0.80	ug/L			10/14/20 12:15	1
Vinyl acetate	ND	H	1.0	0.81	ug/L			10/14/20 12:15	1

Client Sample ID: M-10

Date Collected: 09/24/20 09:00
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-2

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND	H	1.0	0.40	ug/L			10/14/20 12:15	1
Xylenes, Total	ND	H	2.0	0.89	ug/L			10/14/20 12:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*64 - 120*		*10/14/20 12:15*	*1*
Dibromofluoromethane (Surr)	*95*		*71 - 132*		*10/14/20 12:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*62 - 146*		*10/14/20 12:15*	*1*
Toluene-d8 (Surr)	*101*		*75 - 120*		*10/14/20 12:15*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/07/20 09:18	10/07/20 12:21	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/07/20 09:18	10/07/20 12:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*105*		*60 - 140*	*10/07/20 09:18*	*10/07/20 12:21*	*1*
1,1,1,2-Tetrachloroethane	*108*		*60 - 140*	*10/07/20 09:18*	*10/07/20 12:21*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**1.1**		0.10	0.023	mg/L			09/25/20 11:22	1
Chloride	**2.4**		1.0	0.32	mg/L			09/25/20 11:22	1
Sulfate	**4.4**		1.0	0.38	mg/L			09/25/20 11:22	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 17:41	1
Arsenic	ND		1.0	0.31	ug/L		10/06/20 13:50	10/15/20 17:41	1
Barium	**23**		10	1.6	ug/L		10/06/20 13:50	10/15/20 17:41	1
Beryllium	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:41	1
Cadmium	**1.7**		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 17:41	1
Calcium	**2300**		500	130	ug/L		10/06/20 13:50	10/15/20 17:41	1
Chromium	ND		2.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:41	1
Cobalt	**0.93**		0.50	0.13	ug/L		10/06/20 13:50	10/15/20 17:41	1
Copper	**4.1**	**B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 17:41	1
Iron	**80**		50	20	ug/L		10/06/20 13:50	10/15/20 17:41	1
Lead	**0.22**	**J**	1.0	0.13	ug/L		10/06/20 13:50	10/15/20 17:41	1
Magnesium	**1300**		500	83	ug/L		10/06/20 13:50	10/15/20 17:41	1
Manganese	**9.3**		5.0	0.87	ug/L		10/06/20 13:50	10/27/20 11:45	1
Nickel	**2.0**		1.0	0.34	ug/L		10/06/20 13:50	10/15/20 17:41	1
Potassium	**1100**		500	160	ug/L		10/06/20 13:50	10/15/20 17:41	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:41	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:41	1
Sodium	**1500**		500	350	ug/L		10/06/20 13:50	10/15/20 17:41	1
Thallium	ND		1.0	0.15	ug/L		10/06/20 13:50	10/15/20 17:41	1
Tin	ND		5.0	0.96	ug/L		10/06/20 13:50	10/15/20 17:41	1
Vanadium	ND		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 17:41	1
Zinc	**9.6**		5.0	3.2	ug/L		10/06/20 13:50	10/15/20 17:41	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-10

Date Collected: 09/24/20 09:00
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-2

Matrix: Water

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/07/20 18:43	10/08/20 19:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	4.1	mg/L			10/06/20 08:13	1
Turbidity	**2.1**		0.85	0.050	NTU			09/25/20 12:42	1
Ammonia	ND		0.10	0.088	mg/L			10/08/20 18:53	1
Specific Conductance	**40**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**12**		5.0	5.0	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**26**		10	10	mg/L			09/26/20 06:48	1
Total Alkalinity as CaCO3 to pH 4.5	ND		5.0	5.0	mg/L			09/29/20 15:11	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 15:11	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 15:11	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 15:11	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-11

Date Collected: 09/24/20 09:05
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-3

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			10/08/20 15:47	1
Acrylonitrile	ND		20	7.8	ug/L			10/08/20 15:47	1
Benzene	ND		1.0	0.60	ug/L			10/08/20 15:47	1
Bromoform	ND		1.0	0.98	ug/L			10/08/20 15:47	1
Bromomethane	ND		1.0	0.89	ug/L			10/08/20 15:47	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			10/08/20 15:47	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/08/20 15:47	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/08/20 15:47	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/08/20 15:47	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/08/20 15:47	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/08/20 15:47	1
Chloroethane	ND		1.0	0.90	ug/L			10/08/20 15:47	1
Chloroform	ND		1.0	0.60	ug/L			10/08/20 15:47	1
Chloromethane	ND		1.0	0.90	ug/L			10/08/20 15:47	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/08/20 15:47	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/08/20 15:47	1
Dibromomethane	ND		1.0	0.33	ug/L			10/08/20 15:47	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/08/20 15:47	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/08/20 15:47	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/08/20 15:47	1
1,1-Dichloroethane	ND	*	1.0	0.31	ug/L			10/08/20 15:47	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/08/20 15:47	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/08/20 15:47	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/08/20 15:47	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/08/20 15:47	1
2-Hexanone	ND		5.0	3.3	ug/L			10/08/20 15:47	1
Iodomethane	ND		1.0	0.68	ug/L			10/08/20 15:47	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/08/20 15:47	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/08/20 15:47	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/08/20 15:47	1
Styrene	ND		1.0	0.47	ug/L			10/08/20 15:47	1
1,1,1,2-Tetrachloroethane	ND	*	1.0	0.57	ug/L			10/08/20 15:47	1
1,1,2,2-Tetrachloroethane	ND	*	1.0	0.60	ug/L			10/08/20 15:47	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/08/20 15:47	1
Toluene	ND		1.0	0.46	ug/L			10/08/20 15:47	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/08/20 15:47	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/08/20 15:47	1
trans-1,3-Dichloropropene	ND	*	1.0	0.58	ug/L			10/08/20 15:47	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/08/20 15:47	1
1,1,2-Trichloroethane	ND	*	1.0	0.45	ug/L			10/08/20 15:47	1
Trichloroethene	ND		1.0	0.69	ug/L			10/08/20 15:47	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/08/20 15:47	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/08/20 15:47	1
Vinyl acetate	ND	*	1.0	0.81	ug/L			10/08/20 15:47	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/08/20 15:47	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/08/20 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*64 - 120*		*10/08/20 15:47*	*1*
Dibromofluoromethane (Surr)	*124*		*71 - 132*		*10/08/20 15:47*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-11

Date Collected: 09/24/20 09:05
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-3

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*133*		*62 - 146*		*10/08/20 15:47*	*1*
Toluene-d8 (Surr)	*91*		*75 - 120*		*10/08/20 15:47*	*1*

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**5.5**	**H**	5.0	3.4	ug/L			10/14/20 16:20	1
Acrylonitrile	ND	H	20	7.8	ug/L			10/14/20 16:20	1
Benzene	ND	H	1.0	0.60	ug/L			10/14/20 16:20	1
Bromoform	ND	H	1.0	0.98	ug/L			10/14/20 16:20	1
Bromomethane	ND	H	1.0	0.89	ug/L			10/14/20 16:20	1
2-Butanone (MEK)	ND	H	5.0	2.6	ug/L			10/14/20 16:20	1
Carbon disulfide	ND	H	1.0	0.88	ug/L			10/14/20 16:20	1
Carbon tetrachloride	ND	H	1.0	0.88	ug/L			10/14/20 16:20	1
Chlorobenzene	ND	H	1.0	0.50	ug/L			10/14/20 16:20	1
Chlorobromomethane	ND	H	1.0	0.63	ug/L			10/14/20 16:20	1
Chlorodibromomethane	ND	H	1.0	0.84	ug/L			10/14/20 16:20	1
Chloroethane	ND	H	1.0	0.90	ug/L			10/14/20 16:20	1
Chloroform	ND	H	1.0	0.60	ug/L			10/14/20 16:20	1
Chloromethane	ND	H	1.0	0.90	ug/L			10/14/20 16:20	1
cis-1,2-Dichloroethene	ND	H	1.0	0.71	ug/L			10/14/20 16:20	1
cis-1,3-Dichloropropene	ND	H	1.0	0.59	ug/L			10/14/20 16:20	1
Dibromomethane	ND	H	1.0	0.33	ug/L			10/14/20 16:20	1
1,2-Dichlorobenzene	ND	H	1.0	0.36	ug/L			10/14/20 16:20	1
1,4-Dichlorobenzene	ND	H	1.0	0.54	ug/L			10/14/20 16:20	1
Dichlorobromomethane	ND	H	1.0	0.64	ug/L			10/14/20 16:20	1
1,1-Dichloroethane	ND	H	1.0	0.31	ug/L			10/14/20 16:20	1
1,2-Dichloroethane	ND	H	1.0	0.57	ug/L			10/14/20 16:20	1
1,1-Dichloroethene	ND	H	1.0	0.55	ug/L			10/14/20 16:20	1
1,2-Dichloropropane	ND	H	1.0	0.66	ug/L			10/14/20 16:20	1
Ethylbenzene	ND	H	1.0	0.51	ug/L			10/14/20 16:20	1
2-Hexanone	ND	H	5.0	3.3	ug/L			10/14/20 16:20	1
Iodomethane	ND	H	1.0	0.68	ug/L			10/14/20 16:20	1
Methylene Chloride	ND	H	1.0	0.89	ug/L			10/14/20 16:20	1
4-Methyl-2-pentanone (MIBK)	ND	H	5.0	3.1	ug/L			10/14/20 16:20	1
Methyl tert-butyl ether	ND	H	1.0	0.59	ug/L			10/14/20 16:20	1
Styrene	ND	H	1.0	0.47	ug/L			10/14/20 16:20	1
1,1,1,2-Tetrachloroethane	ND	H	1.0	0.57	ug/L			10/14/20 16:20	1
1,1,2,2-Tetrachloroethane	ND	H	1.0	0.60	ug/L			10/14/20 16:20	1
Tetrachloroethene	ND	H	1.0	0.47	ug/L			10/14/20 16:20	1
Toluene	ND	H	1.0	0.46	ug/L			10/14/20 16:20	1
trans-1,4-Dichloro-2-butene	ND	H	1.0	0.83	ug/L			10/14/20 16:20	1
trans-1,2-Dichloroethene	ND	H	1.0	0.67	ug/L			10/14/20 16:20	1
trans-1,3-Dichloropropene	ND	H	1.0	0.58	ug/L			10/14/20 16:20	1
1,1,1-Trichloroethane	ND	H	1.0	0.60	ug/L			10/14/20 16:20	1
1,1,2-Trichloroethane	ND	H	1.0	0.45	ug/L			10/14/20 16:20	1
Trichloroethene	ND	H	1.0	0.69	ug/L			10/14/20 16:20	1
Trichlorofluoromethane	ND	H	1.0	0.87	ug/L			10/14/20 16:20	1
1,2,3-Trichloropropane	ND	H	1.0	0.80	ug/L			10/14/20 16:20	1
Vinyl acetate	ND	H	1.0	0.81	ug/L			10/14/20 16:20	1

Client Sample ID: M-11

Date Collected: 09/24/20 09:05
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-3

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND	H	1.0	0.40	ug/L			10/14/20 16:20	1
Xylenes, Total	ND	H	2.0	0.89	ug/L			10/14/20 16:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*64 - 120*		*10/14/20 16:20*	*1*
Dibromofluoromethane (Surr)	*87*		*71 - 132*		*10/14/20 16:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*62 - 146*		*10/14/20 16:20*	*1*
Toluene-d8 (Surr)	*94*		*75 - 120*		*10/14/20 16:20*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/07/20 09:18	10/07/20 12:46	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/07/20 09:18	10/07/20 12:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*106*		*60 - 140*	*10/07/20 09:18*	*10/07/20 12:46*	*1*
1,1,1,2-Tetrachloroethane	*106*		*60 - 140*	*10/07/20 09:18*	*10/07/20 12:46*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/25/20 13:07	1
Chloride	**110**		1.0	0.32	mg/L			09/25/20 13:07	1
Sulfate	**90**		1.0	0.38	mg/L			09/25/20 13:07	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 17:45	1
Arsenic	**88**		1.0	0.31	ug/L		10/06/20 13:50	10/15/20 17:45	1
Barium	**8.5**	**J**	10	1.6	ug/L		10/06/20 13:50	10/15/20 17:45	1
Beryllium	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:45	1
Cadmium	ND		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 17:45	1
Calcium	**140000**		500	130	ug/L		10/06/20 13:50	10/15/20 17:45	1
Chromium	**2.0**		2.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:45	1
Cobalt	**1.1**		0.50	0.13	ug/L		10/06/20 13:50	10/15/20 17:45	1
Copper	**1.3**	**J B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 17:45	1
Iron	**70000**		50	20	ug/L		10/06/20 13:50	10/15/20 17:45	1
Lead	ND		1.0	0.13	ug/L		10/06/20 13:50	10/15/20 17:45	1
Magnesium	**41000**		500	83	ug/L		10/06/20 13:50	10/15/20 17:45	1
Manganese	**410**	**^ B**	5.0	0.87	ug/L		10/06/20 13:50	10/15/20 17:45	1
Nickel	**3.6**		1.0	0.34	ug/L		10/06/20 13:50	10/15/20 17:45	1
Potassium	**21000**		500	160	ug/L		10/06/20 13:50	10/15/20 17:45	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:45	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:45	1
Sodium	**94000**		500	350	ug/L		10/06/20 13:50	10/15/20 17:45	1
Thallium	ND		1.0	0.15	ug/L		10/06/20 13:50	10/15/20 17:45	1
Tin	ND		5.0	0.96	ug/L		10/06/20 13:50	10/15/20 17:45	1
Vanadium	**1.0**		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 17:45	1
Zinc	**5.5**		5.0	3.2	ug/L		10/06/20 13:50	10/15/20 17:45	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-11

Date Collected: 09/24/20 09:05
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-3

Matrix: Water

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/07/20 18:43	10/08/20 19:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**100**		10	4.1	mg/L			10/06/20 08:14	1
Turbidity	**280**		21	1.3	NTU			09/25/20 12:44	25
Ammonia	**6.5**		1.0	0.88	mg/L			10/08/20 20:21	10
Specific Conductance	**1300**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**550**		25	25	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**840**		10	10	mg/L			09/26/20 06:48	1
Total Alkalinity as CaCO3 to pH 4.5	**460**		5.0	5.0	mg/L			09/29/20 15:17	1
Bicarbonate Alkalinity as CaCO3	**460**		5.0	5.0	mg/L			09/29/20 15:17	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 15:17	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 15:17	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-11A

Date Collected: 09/24/20 11:35
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-4

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/25/20 13:48	1
Chloride	**110**		1.0	0.32	mg/L			09/25/20 13:48	1
Sulfate	**200**		1.0	0.38	mg/L			09/25/20 13:48	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 17:56	1
Arsenic	**28**		1.0	0.31	ug/L		10/06/20 13:50	10/15/20 17:56	1
Barium	**12**		10	1.6	ug/L		10/06/20 13:50	10/15/20 17:56	1
Beryllium	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:56	1
Cadmium	ND		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 17:56	1
Calcium	**110000**		500	130	ug/L		10/06/20 13:50	10/15/20 17:56	1
Chromium	**1.9**	**J**	2.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:56	1
Cobalt	**1.5**		0.50	0.13	ug/L		10/06/20 13:50	10/15/20 17:56	1
Copper	**1.9**	**J B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 17:56	1
Iron	**29000**		50	20	ug/L		10/06/20 13:50	10/15/20 17:56	1
Lead	ND		1.0	0.13	ug/L		10/06/20 13:50	10/15/20 17:56	1
Magnesium	**40000**		500	83	ug/L		10/06/20 13:50	10/15/20 17:56	1
Manganese	**160**	**^ B**	5.0	0.87	ug/L		10/06/20 13:50	10/15/20 17:56	1
Nickel	**4.8**		1.0	0.34	ug/L		10/06/20 13:50	10/15/20 17:56	1
Potassium	**17000**		500	160	ug/L		10/06/20 13:50	10/15/20 17:56	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:56	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:56	1
Sodium	**110000**		500	350	ug/L		10/06/20 13:50	10/15/20 17:56	1
Thallium	**0.33**	**J**	1.0	0.15	ug/L		10/06/20 13:50	10/15/20 17:56	1
Tin	ND		5.0	0.96	ug/L		10/06/20 13:50	10/15/20 17:56	1
Vanadium	**1.0**		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 17:56	1
Zinc	**35**		5.0	3.2	ug/L		10/06/20 13:50	10/15/20 17:56	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/07/20 18:43	10/08/20 19:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**72**		10	4.1	mg/L			10/06/20 08:15	1
Turbidity	**34**		0.85	0.050	NTU			09/25/20 12:46	1
Ammonia	**2.4**		0.50	0.44	mg/L			10/08/20 20:23	5
Specific Conductance	**1300**		1.0	1.0	umhos/cm			10/02/20 11:46	1
Hardness as calcium carbonate	**420**		25	25	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**840**		10	10	mg/L			09/26/20 06:48	1
Total Alkalinity as CaCO3 to pH 4.5	**310**		5.0	5.0	mg/L			09/29/20 15:24	1
Bicarbonate Alkalinity as CaCO3	**310**		5.0	5.0	mg/L			09/29/20 15:24	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 15:24	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 15:24	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-11B

Date Collected: 09/24/20 10:25
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-5

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/25/20 12:25	1
Chloride	**51**		1.0	0.32	mg/L			09/25/20 12:25	1
Sulfate	**350**		10	3.8	mg/L			09/25/20 12:46	10

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 17:59	1
Arsenic	**33**		1.0	0.31	ug/L		10/06/20 13:50	10/15/20 17:59	1
Barium	**41**		10	1.6	ug/L		10/06/20 13:50	10/15/20 17:59	1
Beryllium	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:59	1
Cadmium	ND		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 17:59	1
Calcium	**230000**		500	130	ug/L		10/06/20 13:50	10/15/20 17:59	1
Chromium	ND		2.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:59	1
Cobalt	**0.41**	**J**	0.50	0.13	ug/L		10/06/20 13:50	10/15/20 17:59	1
Copper	**1.4**	**J B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 17:59	1
Iron	**25000**		50	20	ug/L		10/06/20 13:50	10/15/20 17:59	1
Lead	ND		1.0	0.13	ug/L		10/06/20 13:50	10/15/20 17:59	1
Magnesium	**56000**		500	83	ug/L		10/06/20 13:50	10/15/20 17:59	1
Manganese	**340**	**^ B**	5.0	0.87	ug/L		10/06/20 13:50	10/15/20 17:59	1
Nickel	**1.4**		1.0	0.34	ug/L		10/06/20 13:50	10/15/20 17:59	1
Potassium	**28000**		500	160	ug/L		10/06/20 13:50	10/15/20 17:59	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 17:59	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 17:59	1
Sodium	**67000**		500	350	ug/L		10/06/20 13:50	10/15/20 17:59	1
Thallium	ND		1.0	0.15	ug/L		10/06/20 13:50	10/15/20 17:59	1
Tin	ND		5.0	0.96	ug/L		10/06/20 13:50	10/15/20 17:59	1
Vanadium	**1.1**		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 17:59	1
Zinc	ND		5.0	3.2	ug/L		10/06/20 13:50	10/15/20 17:59	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/07/20 18:43	10/08/20 19:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**53**	**F1**	10	4.1	mg/L			10/06/20 08:19	1
Turbidity	**200**		4.3	0.25	NTU			09/25/20 12:49	5
Ammonia	**3.3**		0.50	0.44	mg/L			10/09/20 20:09	5
Specific Conductance	**1600**		1.0	1.0	umhos/cm			10/05/20 11:51	1
Hardness as calcium carbonate	**870**		25	25	mg/L			10/08/20 07:46	1
Total Dissolved Solids	**1100**		10	10	mg/L			09/26/20 06:48	1
Total Alkalinity as CaCO3 to pH 4.5	**490**		5.0	5.0	mg/L			09/29/20 15:31	1
Bicarbonate Alkalinity as CaCO3	**490**		5.0	5.0	mg/L			09/29/20 15:31	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 15:31	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 15:31	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-11D

Date Collected: 09/24/20 13:00
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-6

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/25/20 14:30	1
Chloride	**44**		1.0	0.32	mg/L			09/25/20 14:30	1
Sulfate	**310**		5.0	1.9	mg/L			09/25/20 16:23	5

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 18:03	1
Arsenic	**3.5**		1.0	0.31	ug/L		10/06/20 13:50	10/15/20 18:03	1
Barium	**24**		10	1.6	ug/L		10/06/20 13:50	10/15/20 18:03	1
Beryllium	**4.0**		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 18:03	1
Cadmium	**12**		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 18:03	1
Calcium	**56000**		500	130	ug/L		10/06/20 13:50	10/15/20 18:03	1
Chromium	**2.8**		2.0	1.5	ug/L		10/06/20 13:50	10/15/20 18:03	1
Cobalt	**13**		0.50	0.13	ug/L		10/06/20 13:50	10/15/20 18:03	1
Copper	**1.5**	**J B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 18:03	1
Iron	**17000**		50	20	ug/L		10/06/20 13:50	10/15/20 18:03	1
Lead	**0.22**	**J**	1.0	0.13	ug/L		10/06/20 13:50	10/15/20 18:03	1
Magnesium	**20000**		500	83	ug/L		10/06/20 13:50	10/15/20 18:03	1
Manganese	**200**	**^ B**	5.0	0.87	ug/L		10/06/20 13:50	10/15/20 18:03	1
Nickel	**47**		1.0	0.34	ug/L		10/06/20 13:50	10/15/20 18:03	1
Potassium	**6000**		500	160	ug/L		10/06/20 13:50	10/15/20 18:03	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 18:03	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 18:03	1
Sodium	**45000**		500	350	ug/L		10/06/20 13:50	10/15/20 18:03	1
Thallium	**2.2**		1.0	0.15	ug/L		10/06/20 13:50	10/15/20 18:03	1
Tin	ND		5.0	0.96	ug/L		10/06/20 13:50	10/15/20 18:03	1
Vanadium	**3.4**		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 18:03	1
Zinc	**710**		5.0	3.2	ug/L		10/06/20 13:50	10/15/20 18:03	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/06/20 18:43	10/08/20 19:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**14**		10	4.1	mg/L			10/06/20 08:22	1
Turbidity	**1.1**		0.85	0.050	NTU			09/25/20 12:51	1
Ammonia	**0.42**		0.10	0.088	mg/L			10/08/20 19:11	1
Specific Conductance	**900**		1.0	1.0	umhos/cm			10/05/20 11:51	1
Hardness as calcium carbonate	**48**		5.0	5.0	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**550**		10	10	mg/L			09/26/20 06:48	1
Total Alkalinity as CaCO3 to pH 4.5	ND		5.0	5.0	mg/L			09/29/20 15:35	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 15:35	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 15:35	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 15:35	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-12

Date Collected: 09/24/20 10:30
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-7

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			10/08/20 16:14	1
Acrylonitrile	ND		20	7.8	ug/L			10/08/20 16:14	1
Benzene	ND		1.0	0.60	ug/L			10/08/20 16:14	1
Bromoform	ND		1.0	0.98	ug/L			10/08/20 16:14	1
Bromomethane	ND		1.0	0.89	ug/L			10/08/20 16:14	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			10/08/20 16:14	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/08/20 16:14	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/08/20 16:14	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/08/20 16:14	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/08/20 16:14	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/08/20 16:14	1
Chloroethane	ND		1.0	0.90	ug/L			10/08/20 16:14	1
Chloroform	ND		1.0	0.60	ug/L			10/08/20 16:14	1
Chloromethane	ND		1.0	0.90	ug/L			10/08/20 16:14	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/08/20 16:14	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/08/20 16:14	1
Dibromomethane	ND		1.0	0.33	ug/L			10/08/20 16:14	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/08/20 16:14	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/08/20 16:14	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/08/20 16:14	1
1,1-Dichloroethane	ND	*	1.0	0.31	ug/L			10/08/20 16:14	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/08/20 16:14	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/08/20 16:14	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/08/20 16:14	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/08/20 16:14	1
2-Hexanone	ND		5.0	3.3	ug/L			10/08/20 16:14	1
Iodomethane	ND		1.0	0.68	ug/L			10/08/20 16:14	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/08/20 16:14	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/08/20 16:14	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/08/20 16:14	1
Styrene	ND		1.0	0.47	ug/L			10/08/20 16:14	1
1,1,1,2-Tetrachloroethane	ND	*	1.0	0.57	ug/L			10/08/20 16:14	1
1,1,2,2-Tetrachloroethane	ND	*	1.0	0.60	ug/L			10/08/20 16:14	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/08/20 16:14	1
Toluene	ND		1.0	0.46	ug/L			10/08/20 16:14	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/08/20 16:14	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/08/20 16:14	1
trans-1,3-Dichloropropene	ND	*	1.0	0.58	ug/L			10/08/20 16:14	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/08/20 16:14	1
1,1,2-Trichloroethane	ND	*	1.0	0.45	ug/L			10/08/20 16:14	1
Trichloroethene	ND		1.0	0.69	ug/L			10/08/20 16:14	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/08/20 16:14	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/08/20 16:14	1
Vinyl acetate	ND	*	1.0	0.81	ug/L			10/08/20 16:14	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/08/20 16:14	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/08/20 16:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*64 - 120*		*10/08/20 16:14*	*1*
Dibromofluoromethane (Surr)	*143*	*X*	*71 - 132*		*10/08/20 16:14*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-12

Date Collected: 09/24/20 10:30
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-7

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*155*	*X*	*62 - 146*		*10/08/20 16:14*	*1*
Toluene-d8 (Surr)	*107*		*75 - 120*		*10/08/20 16:14*	*1*

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**4.2**	**J H**	5.0	3.4	ug/L			10/14/20 16:44	1
Acrylonitrile	ND	H	20	7.8	ug/L			10/14/20 16:44	1
Benzene	ND	H	1.0	0.60	ug/L			10/14/20 16:44	1
Bromoform	ND	H	1.0	0.98	ug/L			10/14/20 16:44	1
Bromomethane	ND	H	1.0	0.89	ug/L			10/14/20 16:44	1
2-Butanone (MEK)	ND	H	5.0	2.6	ug/L			10/14/20 16:44	1
Carbon disulfide	ND	H	1.0	0.88	ug/L			10/14/20 16:44	1
Carbon tetrachloride	ND	H	1.0	0.88	ug/L			10/14/20 16:44	1
Chlorobenzene	ND	H	1.0	0.50	ug/L			10/14/20 16:44	1
Chlorobromomethane	ND	H	1.0	0.63	ug/L			10/14/20 16:44	1
Chlorodibromomethane	ND	H	1.0	0.84	ug/L			10/14/20 16:44	1
Chloroethane	ND	H	1.0	0.90	ug/L			10/14/20 16:44	1
Chloroform	ND	H	1.0	0.60	ug/L			10/14/20 16:44	1
Chloromethane	ND	H	1.0	0.90	ug/L			10/14/20 16:44	1
cis-1,2-Dichloroethene	ND	H	1.0	0.71	ug/L			10/14/20 16:44	1
cis-1,3-Dichloropropene	ND	H	1.0	0.59	ug/L			10/14/20 16:44	1
Dibromomethane	ND	H	1.0	0.33	ug/L			10/14/20 16:44	1
1,2-Dichlorobenzene	ND	H	1.0	0.36	ug/L			10/14/20 16:44	1
1,4-Dichlorobenzene	ND	H	1.0	0.54	ug/L			10/14/20 16:44	1
Dichlorobromomethane	ND	H	1.0	0.64	ug/L			10/14/20 16:44	1
1,1-Dichloroethane	ND	H	1.0	0.31	ug/L			10/14/20 16:44	1
1,2-Dichloroethane	ND	H	1.0	0.57	ug/L			10/14/20 16:44	1
1,1-Dichloroethene	ND	H	1.0	0.55	ug/L			10/14/20 16:44	1
1,2-Dichloropropane	ND	H	1.0	0.66	ug/L			10/14/20 16:44	1
Ethylbenzene	ND	H	1.0	0.51	ug/L			10/14/20 16:44	1
2-Hexanone	ND	H	5.0	3.3	ug/L			10/14/20 16:44	1
Iodomethane	ND	H	1.0	0.68	ug/L			10/14/20 16:44	1
Methylene Chloride	ND	H	1.0	0.89	ug/L			10/14/20 16:44	1
4-Methyl-2-pentanone (MIBK)	ND	H	5.0	3.1	ug/L			10/14/20 16:44	1
Methyl tert-butyl ether	ND	H	1.0	0.59	ug/L			10/14/20 16:44	1
Styrene	ND	H	1.0	0.47	ug/L			10/14/20 16:44	1
1,1,1,2-Tetrachloroethane	ND	H	1.0	0.57	ug/L			10/14/20 16:44	1
1,1,2,2-Tetrachloroethane	ND	H	1.0	0.60	ug/L			10/14/20 16:44	1
Tetrachloroethene	ND	H	1.0	0.47	ug/L			10/14/20 16:44	1
Toluene	ND	H	1.0	0.46	ug/L			10/14/20 16:44	1
trans-1,4-Dichloro-2-butene	ND	H	1.0	0.83	ug/L			10/14/20 16:44	1
trans-1,2-Dichloroethene	ND	H	1.0	0.67	ug/L			10/14/20 16:44	1
trans-1,3-Dichloropropene	ND	H	1.0	0.58	ug/L			10/14/20 16:44	1
1,1,1-Trichloroethane	ND	H	1.0	0.60	ug/L			10/14/20 16:44	1
1,1,2-Trichloroethane	ND	H	1.0	0.45	ug/L			10/14/20 16:44	1
Trichloroethene	ND	H	1.0	0.69	ug/L			10/14/20 16:44	1
Trichlorofluoromethane	ND	H	1.0	0.87	ug/L			10/14/20 16:44	1
1,2,3-Trichloropropane	ND	H	1.0	0.80	ug/L			10/14/20 16:44	1
Vinyl acetate	ND	H	1.0	0.81	ug/L			10/14/20 16:44	1

Client Sample ID: M-12

Date Collected: 09/24/20 10:30
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-7

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND	H	1.0	0.40	ug/L			10/14/20 16:44	1
Xylenes, Total	ND	H	2.0	0.89	ug/L			10/14/20 16:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*64 - 120*		*10/14/20 16:44*	*1*
Dibromofluoromethane (Surr)	*101*		*71 - 132*		*10/14/20 16:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*137*		*62 - 146*		*10/14/20 16:44*	*1*
Toluene-d8 (Surr)	*93*		*75 - 120*		*10/14/20 16:44*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/07/20 09:18	10/07/20 13:11	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/07/20 09:18	10/07/20 13:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*111*		*60 - 140*	*10/07/20 09:18*	*10/07/20 13:11*	*1*
1,1,1,2-Tetrachloroethane	*110*		*60 - 140*	*10/07/20 09:18*	*10/07/20 13:11*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/25/20 17:05	1
Chloride	**7.3**		1.0	0.32	mg/L			09/25/20 17:05	1
Sulfate	**41**		1.0	0.38	mg/L			09/25/20 17:05	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 18:06	1
Arsenic	**1.2**		1.0	0.31	ug/L		10/06/20 13:50	10/15/20 18:06	1
Barium	**78**		10	1.6	ug/L		10/06/20 13:50	10/15/20 18:06	1
Beryllium	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 18:06	1
Cadmium	ND		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 18:06	1
Calcium	**17000**		500	130	ug/L		10/06/20 13:50	10/15/20 18:06	1
Chromium	ND		2.0	1.5	ug/L		10/06/20 13:50	10/15/20 18:06	1
Cobalt	**0.81**		0.50	0.13	ug/L		10/06/20 13:50	10/15/20 18:06	1
Copper	**1.2**	**J B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 18:06	1
Iron	**4300**		50	20	ug/L		10/06/20 13:50	10/15/20 18:06	1
Lead	**0.21**	**J**	1.0	0.13	ug/L		10/06/20 13:50	10/15/20 18:06	1
Magnesium	**1800**		500	83	ug/L		10/06/20 13:50	10/15/20 18:06	1
Manganese	**120**	**^ B**	5.0	0.87	ug/L		10/06/20 13:50	10/15/20 18:06	1
Nickel	**11**		1.0	0.34	ug/L		10/06/20 13:50	10/15/20 18:06	1
Potassium	**2500**		500	160	ug/L		10/06/20 13:50	10/15/20 18:06	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 18:06	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 18:06	1
Sodium	**5900**		500	350	ug/L		10/06/20 13:50	10/15/20 18:06	1
Thallium	ND		1.0	0.15	ug/L		10/06/20 13:50	10/15/20 18:06	1
Tin	ND		5.0	0.96	ug/L		10/06/20 13:50	10/15/20 18:06	1
Vanadium	ND		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 18:06	1
Zinc	**14**		5.0	3.2	ug/L		10/06/20 13:50	10/15/20 18:06	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-12

Date Collected: 09/24/20 10:30
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-7

Matrix: Water

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/07/20 18:43	10/08/20 19:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	4.1	mg/L			10/06/20 08:22	1
Turbidity	**37**		0.85	0.050	NTU			09/25/20 12:53	1
Ammonia	ND		0.10	0.088	mg/L			10/08/20 19:13	1
Specific Conductance	**150**		1.0	1.0	umhos/cm			10/05/20 11:51	1
Hardness as calcium carbonate	**56**		5.0	5.0	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**470**		10	10	mg/L			09/26/20 06:48	1
Total Alkalinity as CaCO3 to pH 4.5	**38**		5.0	5.0	mg/L			09/29/20 16:10	1
Bicarbonate Alkalinity as CaCO3	**38**		5.0	5.0	mg/L			09/29/20 16:10	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 16:10	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 16:10	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-14

Date Collected: 09/24/20 11:45
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-8

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			10/08/20 16:41	1
Acrylonitrile	ND		20	7.8	ug/L			10/08/20 16:41	1
Benzene	ND		1.0	0.60	ug/L			10/08/20 16:41	1
Bromoform	ND		1.0	0.98	ug/L			10/08/20 16:41	1
Bromomethane	ND		1.0	0.89	ug/L			10/08/20 16:41	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			10/08/20 16:41	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/08/20 16:41	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/08/20 16:41	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/08/20 16:41	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/08/20 16:41	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/08/20 16:41	1
Chloroethane	ND		1.0	0.90	ug/L			10/08/20 16:41	1
Chloroform	ND		1.0	0.60	ug/L			10/08/20 16:41	1
Chloromethane	ND		1.0	0.90	ug/L			10/08/20 16:41	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/08/20 16:41	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/08/20 16:41	1
Dibromomethane	ND		1.0	0.33	ug/L			10/08/20 16:41	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/08/20 16:41	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/08/20 16:41	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/08/20 16:41	1
1,1-Dichloroethane	ND	*	1.0	0.31	ug/L			10/08/20 16:41	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/08/20 16:41	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/08/20 16:41	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/08/20 16:41	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/08/20 16:41	1
2-Hexanone	ND		5.0	3.3	ug/L			10/08/20 16:41	1
Iodomethane	ND		1.0	0.68	ug/L			10/08/20 16:41	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/08/20 16:41	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/08/20 16:41	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/08/20 16:41	1
Styrene	ND		1.0	0.47	ug/L			10/08/20 16:41	1
1,1,1,2-Tetrachloroethane	ND	*	1.0	0.57	ug/L			10/08/20 16:41	1
1,1,2,2-Tetrachloroethane	ND	*	1.0	0.60	ug/L			10/08/20 16:41	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/08/20 16:41	1
Toluene	ND		1.0	0.46	ug/L			10/08/20 16:41	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/08/20 16:41	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/08/20 16:41	1
trans-1,3-Dichloropropene	ND	*	1.0	0.58	ug/L			10/08/20 16:41	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/08/20 16:41	1
1,1,2-Trichloroethane	ND	*	1.0	0.45	ug/L			10/08/20 16:41	1
Trichloroethene	ND		1.0	0.69	ug/L			10/08/20 16:41	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/08/20 16:41	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/08/20 16:41	1
Vinyl acetate	ND	*	1.0	0.81	ug/L			10/08/20 16:41	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/08/20 16:41	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/08/20 16:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*64 - 120*		*10/08/20 16:41*	*1*
Dibromofluoromethane (Surr)	*130*		*71 - 132*		*10/08/20 16:41*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-14
Date Collected: 09/24/20 11:45
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-8
Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*145*		*62 - 146*		*10/08/20 16:41*	*1*
Toluene-d8 (Surr)	*83*		*75 - 120*		*10/08/20 16:41*	*1*

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	H	5.0	3.4	ug/L			10/14/20 17:08	1
Acrylonitrile	ND	H	20	7.8	ug/L			10/14/20 17:08	1
Benzene	ND	H	1.0	0.60	ug/L			10/14/20 17:08	1
Bromoform	ND	H	1.0	0.98	ug/L			10/14/20 17:08	1
Bromomethane	ND	H	1.0	0.89	ug/L			10/14/20 17:08	1
2-Butanone (MEK)	ND	H	5.0	2.6	ug/L			10/14/20 17:08	1
Carbon disulfide	ND	H	1.0	0.88	ug/L			10/14/20 17:08	1
Carbon tetrachloride	ND	H	1.0	0.88	ug/L			10/14/20 17:08	1
Chlorobenzene	ND	H	1.0	0.50	ug/L			10/14/20 17:08	1
Chlorobromomethane	ND	H	1.0	0.63	ug/L			10/14/20 17:08	1
Chlorodibromomethane	ND	H	1.0	0.84	ug/L			10/14/20 17:08	1
Chloroethane	ND	H	1.0	0.90	ug/L			10/14/20 17:08	1
Chloroform	ND	H	1.0	0.60	ug/L			10/14/20 17:08	1
Chloromethane	ND	H	1.0	0.90	ug/L			10/14/20 17:08	1
cis-1,2-Dichloroethene	ND	H	1.0	0.71	ug/L			10/14/20 17:08	1
cis-1,3-Dichloropropene	ND	H	1.0	0.59	ug/L			10/14/20 17:08	1
Dibromomethane	ND	H	1.0	0.33	ug/L			10/14/20 17:08	1
1,2-Dichlorobenzene	ND	H	1.0	0.36	ug/L			10/14/20 17:08	1
1,4-Dichlorobenzene	ND	H	1.0	0.54	ug/L			10/14/20 17:08	1
Dichlorobromomethane	ND	H	1.0	0.64	ug/L			10/14/20 17:08	1
1,1-Dichloroethane	ND	H	1.0	0.31	ug/L			10/14/20 17:08	1
1,2-Dichloroethane	ND	H	1.0	0.57	ug/L			10/14/20 17:08	1
1,1-Dichloroethene	ND	H	1.0	0.55	ug/L			10/14/20 17:08	1
1,2-Dichloropropane	ND	H	1.0	0.66	ug/L			10/14/20 17:08	1
Ethylbenzene	ND	H	1.0	0.51	ug/L			10/14/20 17:08	1
2-Hexanone	ND	H	5.0	3.3	ug/L			10/14/20 17:08	1
Iodomethane	ND	H	1.0	0.68	ug/L			10/14/20 17:08	1
Methylene Chloride	ND	H	1.0	0.89	ug/L			10/14/20 17:08	1
4-Methyl-2-pentanone (MIBK)	ND	H	5.0	3.1	ug/L			10/14/20 17:08	1
Methyl tert-butyl ether	ND	H	1.0	0.59	ug/L			10/14/20 17:08	1
Styrene	ND	H	1.0	0.47	ug/L			10/14/20 17:08	1
1,1,1,2-Tetrachloroethane	ND	H	1.0	0.57	ug/L			10/14/20 17:08	1
1,1,2,2-Tetrachloroethane	ND	H	1.0	0.60	ug/L			10/14/20 17:08	1
Tetrachloroethene	ND	H	1.0	0.47	ug/L			10/14/20 17:08	1
Toluene	ND	H	1.0	0.46	ug/L			10/14/20 17:08	1
trans-1,4-Dichloro-2-butene	ND	H	1.0	0.83	ug/L			10/14/20 17:08	1
trans-1,2-Dichloroethene	ND	H	1.0	0.67	ug/L			10/14/20 17:08	1
trans-1,3-Dichloropropene	ND	H	1.0	0.58	ug/L			10/14/20 17:08	1
1,1,1-Trichloroethane	ND	H	1.0	0.60	ug/L			10/14/20 17:08	1
1,1,2-Trichloroethane	ND	H	1.0	0.45	ug/L			10/14/20 17:08	1
Trichloroethene	ND	H	1.0	0.69	ug/L			10/14/20 17:08	1
Trichlorofluoromethane	ND	H	1.0	0.87	ug/L			10/14/20 17:08	1
1,2,3-Trichloropropane	ND	H	1.0	0.80	ug/L			10/14/20 17:08	1
Vinyl acetate	ND	H	1.0	0.81	ug/L			10/14/20 17:08	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-14

Date Collected: 09/24/20 11:45
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-8

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND	H	1.0	0.40	ug/L			10/14/20 17:08	1
Xylenes, Total	ND	H	2.0	0.89	ug/L			10/14/20 17:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*64 - 120*		*10/14/20 17:08*	*1*
Dibromofluoromethane (Surr)	*99*		*71 - 132*		*10/14/20 17:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*122*		*62 - 146*		*10/14/20 17:08*	*1*
Toluene-d8 (Surr)	*94*		*75 - 120*		*10/14/20 17:08*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/07/20 09:18	10/07/20 13:37	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/07/20 09:18	10/07/20 13:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*115*		*60 - 140*	*10/07/20 09:18*	*10/07/20 13:37*	*1*
1,1,1,2-Tetrachloroethane	*115*		*60 - 140*	*10/07/20 09:18*	*10/07/20 13:37*	*1*

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.10	0.023	mg/L			09/25/20 16:44	1
Chloride	**25**		1.0	0.32	mg/L			09/25/20 16:44	1
Sulfate	**17**		1.0	0.38	mg/L			09/25/20 16:44	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.38	ug/L		10/06/20 13:50	10/15/20 18:10	1
Arsenic	**0.94**	**J**	1.0	0.31	ug/L		10/06/20 13:50	10/15/20 18:10	1
Barium	**350**		10	1.6	ug/L		10/06/20 13:50	10/15/20 18:10	1
Beryllium	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 18:10	1
Cadmium	ND		1.0	0.22	ug/L		10/06/20 13:50	10/15/20 18:10	1
Calcium	**93000**		500	130	ug/L		10/06/20 13:50	10/15/20 18:10	1
Chromium	ND		2.0	1.5	ug/L		10/06/20 13:50	10/15/20 18:10	1
Cobalt	ND		0.50	0.13	ug/L		10/06/20 13:50	10/15/20 18:10	1
Copper	**1.2**	**J B**	2.0	0.63	ug/L		10/06/20 13:50	10/15/20 18:10	1
Iron	**11000**		50	20	ug/L		10/06/20 13:50	10/15/20 18:10	1
Lead	ND		1.0	0.13	ug/L		10/06/20 13:50	10/15/20 18:10	1
Magnesium	**2200**		500	83	ug/L		10/06/20 13:50	10/15/20 18:10	1
Manganese	**72**	**^ B**	5.0	0.87	ug/L		10/06/20 13:50	10/15/20 18:10	1
Nickel	**0.66**	**J**	1.0	0.34	ug/L		10/06/20 13:50	10/15/20 18:10	1
Potassium	**4300**		500	160	ug/L		10/06/20 13:50	10/15/20 18:10	1
Selenium	ND		5.0	1.5	ug/L		10/06/20 13:50	10/15/20 18:10	1
Silver	ND		1.0	0.18	ug/L		10/06/20 13:50	10/15/20 18:10	1
Sodium	**6100**		500	350	ug/L		10/06/20 13:50	10/15/20 18:10	1
Thallium	ND		1.0	0.15	ug/L		10/06/20 13:50	10/15/20 18:10	1
Tin	ND		5.0	0.96	ug/L		10/06/20 13:50	10/15/20 18:10	1
Vanadium	ND		1.0	0.99	ug/L		10/06/20 13:50	10/15/20 18:10	1
Zinc	**3.5**	**J**	5.0	3.2	ug/L		10/06/20 13:50	10/15/20 18:10	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: M-14

Date Collected: 09/24/20 11:45
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-8

Matrix: Water

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/07/20 18:43	10/08/20 19:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	4.1	mg/L			10/06/20 08:23	1
Turbidity	**100**		4.3	0.25	NTU			09/25/20 12:59	5
Ammonia	ND		0.10	0.088	mg/L			10/08/20 19:15	1
Specific Conductance	**470**		1.0	1.0	umhos/cm			10/05/20 11:51	1
Hardness as calcium carbonate	**210**		25	25	mg/L			10/07/20 08:07	1
Total Dissolved Solids	**300**		10	10	mg/L			09/26/20 06:48	1
Total Alkalinity as CaCO3 to pH 4.5	**210**		5.0	5.0	mg/L			09/29/20 16:16	1
Bicarbonate Alkalinity as CaCO3	**210**		5.0	5.0	mg/L			09/29/20 16:16	1
Carbonate Alkalinity as CaCO3	ND		5.0	5.0	mg/L			09/29/20 16:16	1
Phenolphthalein Alkalinity	ND		5.0	5.0	mg/L			09/29/20 16:16	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: TRIP BLANK-04

Date Collected: 09/24/20 14:00
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-9

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	3.4	ug/L			10/08/20 17:09	1
Acrylonitrile	ND		20	7.8	ug/L			10/08/20 17:09	1
Benzene	ND		1.0	0.60	ug/L			10/08/20 17:09	1
Bromoform	ND		1.0	0.98	ug/L			10/08/20 17:09	1
Bromomethane	ND		1.0	0.89	ug/L			10/08/20 17:09	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			10/08/20 17:09	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/08/20 17:09	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/08/20 17:09	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/08/20 17:09	1
Chlorobromomethane	ND		1.0	0.63	ug/L			10/08/20 17:09	1
Chlorodibromomethane	ND		1.0	0.84	ug/L			10/08/20 17:09	1
Chloroethane	ND		1.0	0.90	ug/L			10/08/20 17:09	1
Chloroform	ND		1.0	0.60	ug/L			10/08/20 17:09	1
Chloromethane	ND		1.0	0.90	ug/L			10/08/20 17:09	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/08/20 17:09	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/08/20 17:09	1
Dibromomethane	ND		1.0	0.33	ug/L			10/08/20 17:09	1
1,2-Dichlorobenzene	ND		1.0	0.36	ug/L			10/08/20 17:09	1
1,4-Dichlorobenzene	ND		1.0	0.54	ug/L			10/08/20 17:09	1
Dichlorobromomethane	ND		1.0	0.64	ug/L			10/08/20 17:09	1
1,1-Dichloroethane	ND	*	1.0	0.31	ug/L			10/08/20 17:09	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/08/20 17:09	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/08/20 17:09	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/08/20 17:09	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/08/20 17:09	1
2-Hexanone	ND		5.0	3.3	ug/L			10/08/20 17:09	1
Iodomethane	ND		1.0	0.68	ug/L			10/08/20 17:09	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/08/20 17:09	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/08/20 17:09	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/08/20 17:09	1
Styrene	ND		1.0	0.47	ug/L			10/08/20 17:09	1
1,1,1,2-Tetrachloroethane	ND	*	1.0	0.57	ug/L			10/08/20 17:09	1
1,1,2,2-Tetrachloroethane	ND	*	1.0	0.60	ug/L			10/08/20 17:09	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/08/20 17:09	1
Toluene	ND		1.0	0.46	ug/L			10/08/20 17:09	1
trans-1,4-Dichloro-2-butene	ND		1.0	0.83	ug/L			10/08/20 17:09	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/08/20 17:09	1
trans-1,3-Dichloropropene	ND	*	1.0	0.58	ug/L			10/08/20 17:09	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/08/20 17:09	1
1,1,2-Trichloroethane	ND	*	1.0	0.45	ug/L			10/08/20 17:09	1
Trichloroethene	ND		1.0	0.69	ug/L			10/08/20 17:09	1
Trichlorofluoromethane	ND		1.0	0.87	ug/L			10/08/20 17:09	1
1,2,3-Trichloropropane	ND		1.0	0.80	ug/L			10/08/20 17:09	1
Vinyl acetate	ND	*	1.0	0.81	ug/L			10/08/20 17:09	1
Vinyl chloride	ND		1.0	0.40	ug/L			10/08/20 17:09	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/08/20 17:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*64 - 120*		*10/08/20 17:09*	*1*
Dibromofluoromethane (Surr)	*127*		*71 - 132*		*10/08/20 17:09*	*1*

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: TRIP BLANK-04

Date Collected: 09/24/20 14:00
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-9

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*137*		*62 - 146*		*10/08/20 17:09*	*1*
Toluene-d8 (Surr)	*83*		*75 - 120*		*10/08/20 17:09*	*1*

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**4.0**	**J H**	5.0	3.4	ug/L			10/14/20 17:33	1
Acrylonitrile	ND	H	20	7.8	ug/L			10/14/20 17:33	1
Benzene	ND	H	1.0	0.60	ug/L			10/14/20 17:33	1
Bromoform	ND	H	1.0	0.98	ug/L			10/14/20 17:33	1
Bromomethane	ND	H	1.0	0.89	ug/L			10/14/20 17:33	1
2-Butanone (MEK)	ND	H	5.0	2.6	ug/L			10/14/20 17:33	1
Carbon disulfide	ND	H	1.0	0.88	ug/L			10/14/20 17:33	1
Carbon tetrachloride	ND	H	1.0	0.88	ug/L			10/14/20 17:33	1
Chlorobenzene	ND	H	1.0	0.50	ug/L			10/14/20 17:33	1
Chlorobromomethane	ND	H	1.0	0.63	ug/L			10/14/20 17:33	1
Chlorodibromomethane	ND	H	1.0	0.84	ug/L			10/14/20 17:33	1
Chloroethane	ND	H	1.0	0.90	ug/L			10/14/20 17:33	1
Chloroform	ND	H	1.0	0.60	ug/L			10/14/20 17:33	1
Chloromethane	ND	H	1.0	0.90	ug/L			10/14/20 17:33	1
cis-1,2-Dichloroethene	ND	H	1.0	0.71	ug/L			10/14/20 17:33	1
cis-1,3-Dichloropropene	ND	H	1.0	0.59	ug/L			10/14/20 17:33	1
Dibromomethane	ND	H	1.0	0.33	ug/L			10/14/20 17:33	1
1,2-Dichlorobenzene	ND	H	1.0	0.36	ug/L			10/14/20 17:33	1
1,4-Dichlorobenzene	ND	H	1.0	0.54	ug/L			10/14/20 17:33	1
Dichlorobromomethane	ND	H	1.0	0.64	ug/L			10/14/20 17:33	1
1,1-Dichloroethane	ND	H	1.0	0.31	ug/L			10/14/20 17:33	1
1,2-Dichloroethane	ND	H	1.0	0.57	ug/L			10/14/20 17:33	1
1,1-Dichloroethene	ND	H	1.0	0.55	ug/L			10/14/20 17:33	1
1,2-Dichloropropane	ND	H	1.0	0.66	ug/L			10/14/20 17:33	1
Ethylbenzene	ND	H	1.0	0.51	ug/L			10/14/20 17:33	1
2-Hexanone	ND	H	5.0	3.3	ug/L			10/14/20 17:33	1
Iodomethane	ND	H	1.0	0.68	ug/L			10/14/20 17:33	1
Methylene Chloride	ND	H	1.0	0.89	ug/L			10/14/20 17:33	1
4-Methyl-2-pentanone (MIBK)	ND	H	5.0	3.1	ug/L			10/14/20 17:33	1
Methyl tert-butyl ether	ND	H	1.0	0.59	ug/L			10/14/20 17:33	1
Styrene	ND	H	1.0	0.47	ug/L			10/14/20 17:33	1
1,1,1,2-Tetrachloroethane	ND	H	1.0	0.57	ug/L			10/14/20 17:33	1
1,1,2,2-Tetrachloroethane	ND	H	1.0	0.60	ug/L			10/14/20 17:33	1
Tetrachloroethene	ND	H	1.0	0.47	ug/L			10/14/20 17:33	1
Toluene	ND	H	1.0	0.46	ug/L			10/14/20 17:33	1
trans-1,4-Dichloro-2-butene	ND	H	1.0	0.83	ug/L			10/14/20 17:33	1
trans-1,2-Dichloroethene	ND	H	1.0	0.67	ug/L			10/14/20 17:33	1
trans-1,3-Dichloropropene	ND	H	1.0	0.58	ug/L			10/14/20 17:33	1
1,1,1-Trichloroethane	ND	H	1.0	0.60	ug/L			10/14/20 17:33	1
1,1,2-Trichloroethane	ND	H	1.0	0.45	ug/L			10/14/20 17:33	1
Trichloroethene	ND	H	1.0	0.69	ug/L			10/14/20 17:33	1
Trichlorofluoromethane	ND	H	1.0	0.87	ug/L			10/14/20 17:33	1
1,2,3-Trichloropropane	ND	H	1.0	0.80	ug/L			10/14/20 17:33	1
Vinyl acetate	ND	H	1.0	0.81	ug/L			10/14/20 17:33	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-111432-1

Client Sample ID: TRIP BLANK-04

Date Collected: 09/24/20 14:00
Date Received: 09/25/20 09:00

Lab Sample ID: 180-111432-9

Matrix: Water

Method: EPA 8260C - Volatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND	H	1.0	0.40	ug/L			10/14/20 17:33	1
Xylenes, Total	ND	H	2.0	0.89	ug/L			10/14/20 17:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*64 - 120*		*10/14/20 17:33*	*1*
Dibromofluoromethane (Surr)	*106*		*71 - 132*		*10/14/20 17:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*134*		*62 - 146*		*10/14/20 17:33*	*1*
Toluene-d8 (Surr)	*96*		*75 - 120*		*10/14/20 17:33*	*1*

Method: EPA 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.020	0.0086	ug/L		10/07/20 09:18	10/07/20 14:02	1
1,2-Dibromoethane	ND		0.020	0.0087	ug/L		10/07/20 09:18	10/07/20 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1,2-Tetrachloroethane	*111*		*60 - 140*	*10/07/20 09:18*	*10/07/20 14:02*	*1*
1,1,1,2-Tetrachloroethane	*111*		*60 - 140*	*10/07/20 09:18*	*10/07/20 14:02*	*1*

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-113482-1
Client Project/Site: Ritchie Rubble LF

For:
Geosyntec Consultants, Inc.
10211 Wincopin Circle
4'th Floor
Columbia, Maryland 21044

Attn: Yovanna Cortes

Roxanne Cisneros

Authorized for release by:
11/20/2020 8:56:06 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@Eurofinset.com

PA Lab ID: 02-00416

Table of Contents

Case Narrative

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-113482-1

Job ID: 180-113482-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-113482-1

Comments
No additional comments.

Receipt
The sample was received on 11/11/2020 9:30 AM; the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.4° C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-113482-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc. Job ID: 180-113482-1
Project/Site: Ritchie Rubble LF

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-21
California	State	2891	04-30-21
Connecticut	State	PH-0688	09-30-20 *
Florida	NELAP	E871008	06-30-21
Georgia	State	PA 02-00416	04-30-21
Illinois	NELAP	004375	06-30-21
Kansas	NELAP	E-10350	01-31-21
Kentucky (UST)	State	162013	04-30-21
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-21
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-21
New Hampshire	NELAP	2030	04-05-21
New Jersey	NELAP	PA005	06-30-21
New York	NELAP	11182	04-01-21
North Carolina (WW/SW)	State	434	12-31-21
North Dakota	State	R-227	04-30-21
Oregon	NELAP	PA-2151	02-06-21
Pennsylvania	NELAP	02-00416	04-30-21
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-21
Texas	NELAP	T104704528	03-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-21
Virginia	NELAP	10043	09-14-21
West Virginia DEP	State	142	02-01-21
Wisconsin	State	998027800	08-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-113482-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-113482-1	D2-UD	Water	11/10/20 09:45	11/11/20 09:30	

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-113482-1

Method	Method Description	Protocol	Laboratory
EPA 6020A	Metals (ICP/MS)	SW846	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-113482-1

Client Sample ID: D2-UD

Date Collected: 11/10/20 09:45
Date Received: 11/11/20 09:30

Lab Sample ID: 180-113482-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	337455	11/17/20 15:40	TJO	TAL PIT
Total Recoverable	Analysis	EPA 6020A		1			337741	11/18/20 17:01	RSK	TAL PIT
	Instrument ID: DORY									

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

TJO = Tyler Oliver

Batch Type: Analysis

RSK = Robert Kurtz

Client Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-113482-1

Client Sample ID: D2-UD

Date Collected: 11/10/20 09:45
Date Received: 11/11/20 09:30

Lab Sample ID: 180-113482-1

Matrix: Water

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vanadium	13		1.0	0.99	ug/L		11/17/20 15:40	11/18/20 17:01	1

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-113482-1

Method: EPA 6020A - Metals (ICP/MS)

Lab Sample ID: MB 180-337455/1-A
Matrix: Water
Analysis Batch: 337741

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 337455

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vanadium	ND		1.0	0.99	ug/L		11/17/20 15:40	11/18/20 15:08	1

Lab Sample ID: LCS 180-337455/2-A
Matrix: Water
Analysis Batch: 337741

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 337455

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vanadium	500	518		ug/L		104	80 - 120

QC Association Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Ritchie Rubble LF

Job ID: 180-113482-1

Metals

Prep Batch: 337455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113482-1	D2-UD	Total Recoverable	Water	3005A	
MB 180-337455/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-337455/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 337741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-113482-1	D2-UD	Total Recoverable	Water	EPA 6020A	337455
MB 180-337455/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	337455
LCS 180-337455/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	337455

SITE MAP

LEGEND

- PHASE I LINED LANDFILL CELL BOUNDARY
- PHASE I – OLD FILL AREA/FORMER RECLAMATION AREA
- LIMIT OF PERMITTED LANDFILL AREA (PHASE I OPERATIONAL AREA)
- PHASE II LANDFILL EXPANSION AREA
- PHASE III LANDFILL VERTICAL EXPANSION AREA
- SITE BOUNDARY

N

RITCHIE MARLBORO ROAD

SEDIMENTATION BASIN NO. 11

TRUCK SCALE STATION

PHASE II LANDFILL EXPANSION AREA

AREA 1 BASINS

PHASE I OPERATIONAL AREA BOUNDARY

FORMER RECLAMATION AREA/ "OLD FILL" AREA (APPROXIMATELY 18 ACRES)

SEDIMENTATION TRAP NO. 6

RITCHIE MARLBORO ROAD SCREENING BERM

PHASE II LANDFILL EXPANSION AREA BOUNDARY

LANDFILL ACCESS ROAD

ARROWHEAD ELEMENTARY SCHOOL

PHASE III LANDFILL VERTICAL EXPANSION BOUNDARY

PHASE III LANDFILL VERTICAL EXPANSION AREA

SEDIMENTATION BASIN NO. 12

LEACHATE LAGOON NO. 3

SEDIMENTATION BASIN NO. 13

LEACHATE LIFT STATION AND UTILITIES CONTROL PANEL

LEACHATE LAGOON NO. 2

SEDIMENTATION TRAP NO. 5

LEACHATE LAGOON NO. 1

SEDIMENTATION TRAP NO. 4

SEDIMENTATION BASIN NO. 3

SEDIMENTATION BASIN NO. 2

PHASE I OPERATIONAL AREA

GRAPHIC SCALE IN FEET
500 250 0 500

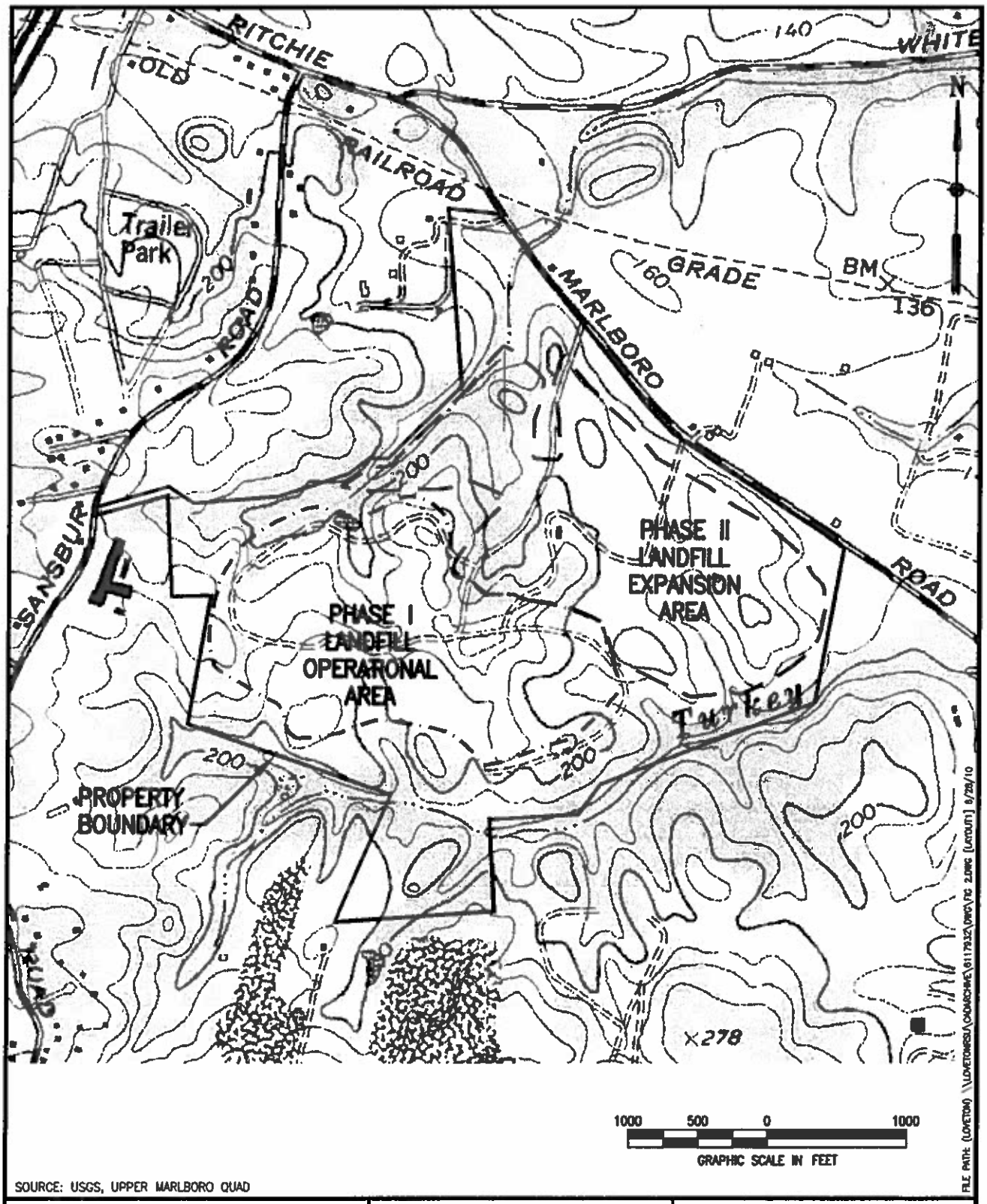
FILE PATH: Q:\PROJECTS\RITCHIERUBBLELF\DWG\61179.91 – VERTICAL EXPANSION PHASE III ENGINEERING DESIGN\PHASE 3 REPORT FIGURES\FIG 1-3.DWG [FIG 1-3] GARDINA, COLLEEN 8/23/2017 2:13 PM

EA Engineering, Science, and Technology, Inc.,PBC

RITCHIE RUBBLE LANDFILL
PHASE III VERTICAL EXPANSION AREA
PHASE III REPORT
UPPER MARLBORO, MARYLAND

FACILITY SITE PLAN

PROJECT NUMBER:	DESIGNED BY:	DRAWN BY:	FIGURE:
61179.91	KEJ	JAP	FIG 1-3
DATE:	CHECKED BY:	PROJECT MGR.:	SHEET NUMBER:
AUGUST 2017	SMD/PL	GAT	1 OF 1



SOURCE: USGS, UPPER MARLBORO QUAD

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

RITCHIE LAND RECLAMATION PARTNERSHIP
RITCHIE RUBBLE LANDFILL
GROUNDWATER DISCHARGE
PERMIT RENEWAL APPLICATION
UPPER MARLBORO, MARYLAND

FIGURE 2
REGIONAL TOPOGRAPHY