From: Ziegelbauer, Heather <Heather.Ziegelbauer@jacobs.com>
Sent: Friday, September 1, 2023 9:05 AM
To: Kleinberg, Andrew
Cc: Carey, Angela J - DNR; Krueger, Sarah E - DNR; Denice Karen Nelson; Ryan Suennen; Finney, David; Mitchell, David
Subject: RE: Requested Sediment Sampling Event Data - Tyco Fire Products LP Stanton Street Property, Marinette, WI
Attachments: Table01-2023SedSampFieldData-DRAFT-20230901.pdf; J158967-1 UDS Level 2 Report Final Report.pdf; J158889-1 UDS Level 2 Report Rev(1) Final Report.pdf

Andrew, Attached is a simple table with the information you requested in your last email. To minimize the number of emails, also attached are the laboratory data reports that Angie recently requested.

Thanks,

Heather Ziegelbauer, PE* | Jacobs | Project Manager
O:+1.262.644.6167 | M:+1.312.933.1017 | heather.ziegelbauer@jacobs.com
1610 N. 2nd Street, Suite 201 | Milwaukee, WI 53202 | USA
*Wisconsin

From: Kleinberg, Andrew <Kleinberg.Andrew@epa.gov>
Sent: Tuesday, August 29, 2023 3:52 PM
To: Ziegelbauer, Heather <Heather.Ziegelbauer@jacobs.com>
Cc: angela.carey@wisconsin.gov; Krueger, Sarah E - DNR <sarah.krueger@wisconsin.gov>; Denice Karen Nelson <denice.karen.nelson@jci.com>; Ryan Suennen <ryan.suennen@jci.com>; Finney, David <David.Finney@jacobs.com>; Mitchell, David <David.Mitchell2@jacobs.com>
Subject: [EXTERNAL] RE: Requested Sediment Sampling Event Data - Tyco Fire Products LP Stanton Street Property, Marinette, WI

Hey Heather,

I would prefer getting sample lat and longs, surface water elevations, and water depth data as soon as you can provide it if possible. A simple table with the information will work fine.

Thanks!

Andrew Kleinberg
Project Manager - Geologist
RCRA Corrective Action Section 2
Land, Chemicals & Redevelopment Division, Region 5, U.S. EPA

77 West Jackson Blvd. (LR-16J), Chicago, IL 60604
(312) 353-4374
Kleinberg.Andrew@epa.gov

From: Ziegelbauer, Heather <Heather.Ziegelbauer@jacobs.com>
Sent: Tuesday, August 29, 2023 2:35 PM
To: Kleinberg, Andrew <Kleinberg.Andrew@epa.gov>
Cc: angela.carey@wisconsin.gov; Krueger, Sarah E - DNR <sarah.krueger@wisconsin.gov>; Denice Karen Nelson <denice.karen.nelson@jci.com>; Ryan Suennen <ryan.suennen@jci.com>; Finney, David <David.Finney@jacobs.com>; Mitchell, David <David.Mitchell2@jacobs.com>
Subject: RE: Requested Sediment Sampling Event Data - Tyco Fire Products LP Stanton Street Property, Marinette, WI

Andrew, We are in the middle of preparing a report that would include the information you are requesting. We are anticipating getting this out by the end of September or early October. Can we provide the information at that time?

Heather Ziegelbauer, PE* | Jacobs | Project Manager
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*Wisconsin

From: Kleinberg, Andrew <Kleinberg.Andrew@epa.gov>
Sent: Monday, August 28, 2023 4:00 PM
To: Ziegelbauer, Heather <Heather.Ziegelbauer@jacobs.com>
Cc: angela.carey@wisconsin.gov; Krueger, Sarah E - DNR <sarah.krueger@wisconsin.gov>; Denice Karen Nelson <denice.karen.nelson@jci.com>; Ryan Suennen <ryan.suennen@jci.com>; Finney, David <David.Finney@jacobs.com>; Mitchell, David <David.Mitchell2@jacobs.com>
Subject: [EXTERNAL] RE: Requested Sediment Sampling Event Data - Tyco Fire Products LP Stanton Street Property, Marinette, WI

Hey Heather,

Can you please send the following information related to this sampling event:

- Lat and Long of each sample location
- Surface water elevation
- Water depth/depth to river bottom
- Sampling/boring logs
- Map with sample locations (if available).

Andrew Kleinberg
Project Manager - Geologist
RCRA Corrective Action Section 2
Land, Chemicals & Redevelopment Division, Region 5, U.S. EPA
77 West Jackson Blvd. (LR-16J), Chicago, IL 60604
(312) 353-4374

Kleinberg.Andrew@epa.gov

From: Ziegelbauer, Heather <Heather.Ziegelbauer@jacobs.com>
Sent: Friday, July 14, 2023 3:07 PM
To: Kleinberg, Andrew <Kleinberg.Andrew@epa.gov>
Cc: angela.carey@wisconsin.gov; Krueger, Sarah E - DNR <sarah.krueger@wisconsin.gov>; Denice Karen Nelson <denice.karen.nelson@jci.com>; Ryan Suennen <ryan.suennen@jci.com>; Finney, David <David.Finney@jacobs.com>; Mitchell, David <David.Mitchell2@jacobs.com>
Subject: Requested Sediment Sampling Event Data - Tyco Fire Products LP Stanton Street Property, Marinette, WI

Andrew,
On behalf of Tyco and per your June 27, 2023 email request to submit these data within 10 days from demobilization, the following is a summary of the measured sediment thicknesses and sample core percent recoveries from the diver conducted sediment sampling event that was completed on July 6, 2023. All core percent recoveries were greater than 75%. A second mobilization with an alternative collection method will not be required.

Sample/Core Location	Draft Measured Sediment Thickness (feet)	Core Recovery Length (feet)	% Recovery	Comments
SD-001A	<0.08	-	-	Thickness only location
SD-001B	<0.08	-	-	Not sampled, insufficient thickness
SD-002	<0.08	-	-	Not sampled, insufficient thickness
SD-003	<0.08	-	-	Not sampled, insufficient thickness
SD-004	0.04	-	-	Not sampled, insufficient thickness
SD-005A	0.25	-	-	Thickness only location
SD-005B	1.67	1.67	100.0	
SD-006	1.4	1.4	100.0	
SD-007A	0.33	-	-	Thickness only location
SD-007B	0.2	0.2	100.0	
SD-008	0.25	0.25	100.0	
SD-009	1.8	1.5	83.3	
SD-010	0.5	0.5	100.0	
SD-011	1.2	1.2	100.0	
SD-012	1.25	1.0	80.0	
SD-013	1.4	1.1	78.6	
SD-014	0.6	0.6	100.0	
SD-015	0.33	0.33	100.0	
SD-016	0.8	0.8	100.0	
SD-017	0.25	0.25	100.0	
SD-018	1.1	1.0	90.9	
SD-102	0.83	0.75	90.0	
SD-107	1.67	1.33	79.6	

SD-108	1.1	1.1	100.0	
SD-201	1.0	1.0	100.0	
SD-202	0.4	0.4	100.0	
SD-203	0.55	0.55	100.0	
SD-204	0.75	0.75	100.0	
D-001	2.0	-		Thickness only location
D-002	0.17	-		Thickness only location
D-003	0.42	-		Thickness only location
D-004	<0.08	-		Thickness only location and insufficient thickness as alternate sample location for SD-004
D-005	0.33	-		Thickness only location

Please let us know if you have any question.

Thanks,

Heather Ziegelbauer, PE* | Jacobs | Project Manager
O:+1.262.644.6167 | M:+1.312.933.1017 | heather.ziegelbauer@jacobs.com
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*Wisconsin

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Table 1. Soft Sediment Sampling Field Data June 30 to July 6, 2023 DRAFT

2023 Sediment Sampling Report

Tyco Fire Products LP, Marinette, Wisconsin

Proposed Sample Location	Associated 2018/2019 Location	River Area	Easting	Northing	Latitude	Longitude	Water Depth (feet and inches)	Date	Surface Water Elevation
SD-001A	-	Main Channel	2584487.87	470595.98	45.099350	-87.614164	20' 11"	7/6/2023	580.58
SD-001B	-	Main Channel	2584358.89	470635.95	45.099470	-87.614659	19' 5 "	7/2/2023	580.38
SD-002	-	Main Channel	2584668.95	470537.03	45.099174	-87.613470	22' 9 "	7/2/2023	580.38
SD-003	-	Main Channel	2584904.56	470459.97	45.098944	-87.612567	21' 2"	7/2/2023	580.38
SD-004	-	Main Channel	2585637.35	470297.33	45.098439	-87.609749	25' 6"	7/2/2023	580.38
SD-005A	-	Turning Basin	2584991.49	470239.25	45.098332	-87.612256	25' 10"	7/6/2023	580.58
SD-005B	VP-105	Turning Basin	2585070.63	470305.95	45.098508	-87.611942	26' 0"	7/2/2023	580.38
SD-006	-	Turning Basin	2585106.36	470211.13	45.098245	-87.611814	25' 2"	7/2/2023	580.38
SD-007A	-	Turning Basin	2585248.57	470289.93	45.098450	-87.611255	24' 7"	7/6/2023	580.58
SD-007B	-	Turning Basin	2585196.46	470311.47	45.098513	-87.611454	27' 3"	7/2/2023	580.38
SD-008	-	Turning Basin	2584965.57	470064.08	45.097853	-87.612376	13' 8"	7/2/2023	580.38
SD-009	VP-101	Turning Basin	2585130.97	470033.99	45.097758	-87.611739	24' 10"	7/2/2023	580.38
SD-010	VP-104	Turning Basin	2585235.86	470116.94	45.097977	-87.611324	25' 4"	7/2/2023	580.38
SD-011	-	Turning Basin	2585504.22	470152.51	45.098052	-87.610281	28' 4"	7/2/2023	580.38
SD-012	VP-103	Turning Basin	2585037.70	469944.72	45.097520	-87.612110	17' 2"	7/2/2023	580.38
SD-013	-	Turning Basin	2585339.34	470019.00	45.097700	-87.610934	22' 10"	7/2/2023	580.38
SD-014	-	Turning Basin	2585447.63	469949.95	45.097502	-87.610523	28' 7"	7/2/2023	580.38
SD-015	D-6	Turning Basin	2585221.23	469898.31	45.097378	-87.611405	19' 10"	7/2/2023	580.38
SD-016	D-7	Transition Area	2585632.50	469852.40	45.097219	-87.609818	20' 6"	7/2/2023	580.38
SD-017	-	Transition Area	2585866.97	469608.66	45.096532	-87.608939	11' 3"	7/2/2023	580.38
SD-018	VP-106	Transition Area	2585721.93	469825.60	45.097139	-87.609475	24' 1"	7/2/2023	580.38
SD-102	VP-102, South of SD-09	Turning Basin	2585088.26	469979.98	45.097613	-87.611910	21' 5"	7/2/2023	580.38
SD-107	SD-107, West of SD-09	Turning Basin	2585134.33	470135.60	45.098036	-87.611714	25' 10"	7/2/2023	580.38
SD-108	SD-108, East of SD-09	Turning Basin	2585221.13	469979.33	45.097601	-87.611396	24' 6"	7/2/2023	580.38
SD-201	New	Turning Basin	2585021.16	470183.58	45.098177	-87.612147	20' 8"	7/2/2023	580.38
SD-202	New	Turning Basin	2585395.92	470254.54	45.098341	-87.610688	25' 11"	7/2/2023	580.38
SD-203	New	Turning Basin	2585635.82	470094.99	45.097884	-87.609778	25' 0"	7/2/2023	580.38
SD-204	New	Turning Basin	2585583.32	469997.33	45.097621	-87.609992	17' 7"	7/2/2023	580.38
D-001	D-1	Turning Basin	2584995.47	470347.57	45.098628	-87.612228	19' 9"	7/2/2023	580.38
D-002	D-2	Turning Basin	2584956.08	470022.51	45.097740	-87.612417	15' 8"	7/6/2023	580.58
D-003	D-3	Turning Basin	2585275.70	470180.00	45.098146	-87.611162	25' 7"	7/6/2023	580.58
D-004	D-4, South of SD-004	Main Channel	2585595.67	470255.18	45.098327	-87.609915	27' 0"	7/6/2023	580.58
D-005	D-5	Turning Basin	2585426.61	470086.18	45.097877	-87.610589	24' 5"	7/6/2023	580.58

Note:

Northing and Eastings are reported in NAD 83 State Plane Wisconsin Central - Survey Feet.

Elevations are reported in feet relative to the North American Vertical Datum 1988 (NAVD88)

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Heather Ziegelbauer
Jacobs Engineering Group, Inc.
1610 N 2nd Street
Suite 201
Milwaukee, Wisconsin 53212

Generated 8/24/2023 7:53:44 AM Revision 1

JOB DESCRIPTION

Tyco Sediment

JOB NUMBER

180-158889-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

PA Lab ID: 02-00416

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Pittsburgh Project Manager.

Authorization

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8/24/2023 7:53:44 AM
Revision 1

Authorized for release by
Sandie Fredrick, Project Manager II
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

Table of Contents

Job ID: 180-158889-1

Laboratory: Eurofins Pittsburgh

Narrative

Job Narrative
180-158889-1

Comments
No additional comments.

Revision
The report being provided is a revision of the original report sent on 8/21/2023. The report (revision 1) is being revised due to: Updated NCM information along with flagging for MS/MSD.

Receipt
The samples were received on 7/7/2023 8:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.6º C and 2.9º C.

GC Semi VOA
Method Lloyd Kahn: Please note that the reporting limit for Lloyd Kahn TOC analysis is a nominal value and does not reflect adjustments in sample mass processed on an individual basis

SD009-2023-0.0/0.5' (180-158889-1), SD018-2023-0.0/0.5' (180-158889-5), SD013-2023-0.0/0.5' (180-158889-8), SD016-2023-0.0/0.5' (180-158889-10), SD006-2023-0.0/0.5' (180-158889-12), SD107-2023-0.0/0.5' (180-158889-15), SD010-2023-0.0/0.5' (180-158889-19), SD203-2023-0.0/0.55' (180-158889-20), SD007B-2023-0.0/0.2' (180-158889-22), SD202-2023-0.0/0.4' (180-158889-23), SD202-2023-0.0/0.4' (180-158889-23[MS]), SD202-2023-0.0/0.4' (180-158889-23[MSD]), SD108-2023-0.0/0.5' (180-158889-24), SD015-2023-0.0/0.33' (180-158889-27), SD015-2023-0.0/0.33' (180-158889-27[MS]), SD015-2023-0.0/0.33' (180-158889-27[MSD]), SD014-2023-0.0/0.6' (180-158889-28), SD0201-2023-0.0/0.5' (180-158889-29), SD008-2023-0.0/0.25' (180-158889-31), SD012-2023-0.0/0.5' (180-158889-33), SD017-2023-0.0/0.25' (180-158889-35) and SD204-2023-0.0/0.5' (180-158889-36)

Method Lloyd Kahn: All samples are analyzed in duplicate with the average results reported. For samples SD202-2023-0.0/0.4' (180-158889-23[MS]) and SD015-2023-0.0/0.33' (180-158889-27[MSD]), the % RPD of the individual result exceeded 50%. The samples were reanalyzed and the %RPD failure repeated due to the non-homogeneous nature of the sample. The results of the original analysis are reported. SD202-2023-0.0/0.4' (180-158889-23[MS]) and SD015-2023-0.0/0.33' (180-158889-27[MSD])

Method Lloyd Kahn: All samples are analyzed in duplicate with the average results reported. For samples SD008-2023-0.0/0.25' (180-158889-31), the % RPD of the individual result exceeded 50%. The sample was reanalyzed and reanalysis meet %RPD requirements. However, the reanalysis of the sample was outside of holding time. Therefore, both sets of results are reported. SD008-2023-0.0/0.25' (180-158889-31)

Method Lloyd Kahn: All samples are analyzed in duplicate with the average results reported. For samples SD013-2023-0.0/0.5' (180-158889-8) and SD017-2023-0.0/0.25' (180-158889-35), the % RPD of the individual result exceeded 50%. The samples were reanalyzed and the %RPD failure repeated due to the non-homogeneous nature of the sample. The results of the original analysis are reported. SD013-2023-0.0/0.5' (180-158889-8) and SD017-2023-0.0/0.25' (180-158889-35)

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

Metals
Method 6020B: The serial dilution performed for the following samples associated with batch 180-441456 was outside control limits: SD107-2023-1.0/1.3' (180-158889-18), SD010-2023-0.0/0.5' (180-158889-19), SD203-2023-0.0/0.55' (180-158889-20), SD203-2023-0.0/0.55'-FD (180-158889-21), SD007B-2023-0.0/0.2' (180-158889-22), SD202-2023-0.0/0.4' (180-158889-23), SD202-2023-0.0/0.4' (180-158889-23[MS]), SD202-2023-0.0/0.4' (180-158889-23[MSD]), SD108-2023-0.0/0.5' (180-158889-24), SD108-2023-0.5/1.1' (180-158889-25), SD108-2023-0.0/0.5'-FD (180-158889-26), SD014-2023-0.0/0.6' (180-158889-28), SD0201-2023-0.0/0.5' (180-158889-29), SD0201-2023-0.5/1.0' (180-158889-30), SD008-2023-0.0/0.25' (180-158889-31), SD008-2023-0.0/0.25'-FD (180-158889-32), SD012-2023-0.0/0.5' (180-158889-33), SD012-2023-0.5/1.0' (180-158889-34), SD017-2023-0.0/0.25' (180-158889-35), SD204-2023-0.0/0.5' (180-158889-36), (MB 180-441181/1-A), (180-158889-A-23-A PDS) and (180-158889-A-23-A SD ^5)

Method 6020B: The following sample was diluted to bring the concentration of arsenic within the calibration range: SD108-2023-0.5/1.1'

Job ID: 180-158889-1 (Continued)

Laboratory: Eurofins Pittsburgh (Continued)

(180-158889-25). 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.

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

Definitions/Glossary

Client: Jacobs Engineering Group, Inc. Job ID: 180-158889-1
Project/Site: Tyco Sediment

Qualifiers

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

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: Jacobs Engineering Group, Inc. Job ID: 180-158889-1
Project/Site: Tyco Sediment

Laboratory: Eurofins Pittsburgh

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998027800	08-31-24

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-158889-1	SD009-2023-0.0/0.5'	Sediment	07/05/23 12:20	07/07/23 08:30
180-158889-2	SD009-2023-0.0/0.5'-FD	Sediment	07/05/23 12:25	07/07/23 08:30
180-158889-3	SD009-2023-0.5/1.0'	Sediment	07/05/23 12:30	07/07/23 08:30
180-158889-4	SD009-2023-1.0/1.2'	Sediment	07/05/23 12:35	07/07/23 08:30
180-158889-5	SD018-2023-0.0/0.5'	Sediment	07/05/23 10:40	07/07/23 08:30
180-158889-6	SD018-2023-0.0/0.5'-FD	Sediment	07/05/23 10:45	07/07/23 08:30
180-158889-7	SD018-2023-0.5/0.75'	Sediment	07/05/23 10:50	07/07/23 08:30
180-158889-8	SD013-2023-0.0/0.5'	Sediment	07/05/23 11:45	07/07/23 08:30
180-158889-9	SD013-2023-0.5/0.75'	Sediment	07/05/23 11:50	07/07/23 08:30
180-158889-10	SD016-2023-0.0/0.5'	Sediment	07/04/23 15:25	07/07/23 08:30
180-158889-11	SD016-2023-0.5/0.8'	Sediment	07/04/23 15:05	07/07/23 08:30
180-158889-12	SD006-2023-0.0/0.5'	Sediment	07/05/23 09:15	07/07/23 08:30
180-158889-13	SD006-2023-0.5/1.0'	Sediment	07/05/23 09:20	07/07/23 08:30
180-158889-14	SD006-2023-1.0/1.4'	Sediment	07/05/23 09:25	07/07/23 08:30
180-158889-15	SD107-2023-0.0/0.5'	Sediment	07/05/23 10:10	07/07/23 08:30
180-158889-16	SD107-2023-0.0/0.5'-FD	Sediment	07/05/23 10:15	07/07/23 08:30
180-158889-17	SD107-2023-0.5/1.0'	Sediment	07/05/23 10:20	07/07/23 08:30
180-158889-18	SD107-2023-1.0/1.3'	Sediment	07/05/23 10:25	07/07/23 08:30
180-158889-19	SD010-2023-0.0/0.5'	Sediment	07/04/23 13:30	07/07/23 08:30
180-158889-20	SD203-2023-0.0/0.55'	Sediment	07/04/23 14:00	07/07/23 08:30
180-158889-21	SD203-2023-0.0/0.55'-FD	Sediment	07/04/23 14:05	07/07/23 08:30
180-158889-22	SD007B-2023-0.0/0.2'	Sediment	07/04/23 12:10	07/07/23 08:30
180-158889-23	SD202-2023-0.0/0.4'	Sediment	07/03/23 12:55	07/07/23 08:30
180-158889-24	SD108-2023-0.0/0.5'	Sediment	07/04/23 08:25	07/07/23 08:30
180-158889-25	SD108-2023-0.5/1.1'	Sediment	07/04/23 08:45	07/07/23 08:30
180-158889-26	SD108-2023-0.0/0.5'-FD	Sediment	07/04/23 08:30	07/07/23 08:30
180-158889-27	SD015-2023-0.0/0.33'	Sediment	07/04/23 13:05	07/07/23 08:30
180-158889-28	SD014-2023-0.0/0.6'	Sediment	07/04/23 09:45	07/07/23 08:30
180-158889-29	SD0201-2023-0.0/0.5'	Sediment	07/04/23 10:15	07/07/23 08:30
180-158889-30	SD0201-2023-0.5/1.0'	Sediment	07/04/23 10:40	07/07/23 08:30
180-158889-31	SD008-2023-0.0/0.25'	Sediment	07/03/23 12:30	07/07/23 08:30
180-158889-32	SD008-2023-0.0/0.25'-FD	Sediment	07/03/23 12:35	07/07/23 08:30
180-158889-33	SD012-2023-0.0/0.5'	Sediment	07/04/23 09:20	07/07/23 08:30
180-158889-34	SD012-2023-0.5/1.0'	Sediment	07/04/23 09:30	07/07/23 08:30
180-158889-35	SD017-2023-0.0/0.25'	Sediment	07/03/23 13:25	07/07/23 08:30
180-158889-36	SD204-2023-0.0/0.5'	Sediment	07/04/23 11:20	07/07/23 08:30
180-158889-37	SD204-2023-0.5/0.75'	Sediment	07/04/23 11:10	07/07/23 08:30
180-158889-38	EB01-2023-070423	Water	07/04/23 15:55	07/07/23 08:30
180-158889-39	EB02-2023-070523	Water	07/05/23 14:05	07/07/23 08:30

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Method	Method Description	Protocol	Laboratory
EPA 6020B	Metals (ICP/MS)	SW846	EET PIT
2540G	SM 2540G	SM22	EET PIT
EPA-Lloyd Kahn	Organic Carbon, Total (TOC)	EPA	EET PIT
3010A	Preparation, Total Metals	SW846	EET PIT
3050B	Preparation, Metals	SW846	EET PIT

Protocol References:

EPA = US Environmental Protection Agency

SM22 = Standard Methods For The Examination Of Water And Wastewater, 22nd Edition

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

Laboratory References:

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

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD009-2023-0.0/0.5'
Lab Sample ID: 180-158889-1
Date Collected: 07/05/23 12:20
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD009-2023-0.0/0.5'
Lab Sample ID: 180-158889-1
Date Collected: 07/05/23 12:20
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 23.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.84 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 19:35	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1			440663	07/16/23 20:29	TLT	EET PIT
	Instrument ID: FLASHEA									

Client Sample ID: SD009-2023-0.0/0.5'-FD
Lab Sample ID: 180-158889-2
Date Collected: 07/05/23 12:25
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD009-2023-0.0/0.5'-FD
Lab Sample ID: 180-158889-2
Date Collected: 07/05/23 12:25
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 24.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.69 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 19:38	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD009-2023-0.5/1.0'
Lab Sample ID: 180-158889-3
Date Collected: 07/05/23 12:30
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD009-2023-0.5/1.0'
Lab Sample ID: 180-158889-3
Date Collected: 07/05/23 12:30
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 29.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.59 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 19:41	MRG	EET PIT
	Instrument ID: NEMO									

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD009-2023-1.0/1.2'
Date Collected: 07/05/23 12:35
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-4
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD009-2023-1.0/1.2'
Date Collected: 07/05/23 12:35
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-4
Matrix: Sediment
Percent Solids: 35.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.85 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		5			443624	08/16/23 00:20	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD018-2023-0.0/0.5'
Date Collected: 07/05/23 10:40
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-5
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD018-2023-0.0/0.5'
Date Collected: 07/05/23 10:40
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-5
Matrix: Sediment
Percent Solids: 36.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.74 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 19:53	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1			440663	07/16/23 20:52	TLT	EET PIT
	Instrument ID: FLASHEA									

Client Sample ID: SD018-2023-0.0/0.5'-FD
Date Collected: 07/05/23 10:45
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-6
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD018-2023-0.0/0.5'-FD
Date Collected: 07/05/23 10:45
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-6
Matrix: Sediment
Percent Solids: 38.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.79 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 19:56	MRG	EET PIT
	Instrument ID: NEMO									

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD018-2023-0.5/0.75'
Date Collected: 07/05/23 10:50
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-7
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD018-2023-0.5/0.75'
Date Collected: 07/05/23 10:50
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-7
Matrix: Sediment
Percent Solids: 30.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.90 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		2			443624	08/16/23 00:23	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD013-2023-0.0/0.5'
Date Collected: 07/05/23 11:45
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-8
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD013-2023-0.0/0.5'
Date Collected: 07/05/23 11:45
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-8
Matrix: Sediment
Percent Solids: 54.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.85 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 20:03	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1			440663	07/16/23 21:15	TLT	EET PIT
	Instrument ID: FLASHEA									

Client Sample ID: SD013-2023-0.5/0.75'
Date Collected: 07/05/23 11:50
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-9
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD013-2023-0.5/0.75'
Date Collected: 07/05/23 11:50
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-9
Matrix: Sediment
Percent Solids: 54.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.89 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		10			443624	08/16/23 00:29	MRG	EET PIT
	Instrument ID: NEMO									

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD016-2023-0.0/0.5'
Date Collected: 07/04/23 15:25
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-10
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD016-2023-0.0/0.5'
Date Collected: 07/04/23 15:25
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-10
Matrix: Sediment
Percent Solids: 53.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.91 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 20:09	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1			440663	07/16/23 21:37	TLT	EET PIT
	Instrument ID: FLASHEA									

Client Sample ID: SD016-2023-0.5/0.8'
Date Collected: 07/04/23 15:05
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-11
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD016-2023-0.5/0.8'
Date Collected: 07/04/23 15:05
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-11
Matrix: Sediment
Percent Solids: 80.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.81 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 20:12	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD006-2023-0.0/0.5'
Date Collected: 07/05/23 09:15
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-12
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD006-2023-0.0/0.5'
Date Collected: 07/05/23 09:15
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-12
Matrix: Sediment
Percent Solids: 22.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.69 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 20:15	MRG	EET PIT
	Instrument ID: NEMO									

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD006-2023-0.0/0.5'
Lab Sample ID: 180-158889-12
Date Collected: 07/05/23 09:15
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 22.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA-Lloyd Kahn		1			440663	07/16/23 22:00	TLT	EET PIT

Client Sample ID: SD006-2023-0.5/1.0'
Lab Sample ID: 180-158889-13
Date Collected: 07/05/23 09:20
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD006-2023-0.5/1.0'
Lab Sample ID: 180-158889-13
Date Collected: 07/05/23 09:20
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 35.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.86 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 20:18	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD006-2023-1.0/1.4'
Lab Sample ID: 180-158889-14
Date Collected: 07/05/23 09:25
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD006-2023-1.0/1.4'
Lab Sample ID: 180-158889-14
Date Collected: 07/05/23 09:25
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 48.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.96 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 20:27	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD107-2023-0.0/0.5'
Lab Sample ID: 180-158889-15
Date Collected: 07/05/23 10:10
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD107-2023-0.0/0.5'
Lab Sample ID: 180-158889-15
Date Collected: 07/05/23 10:10
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 22.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.64 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 20:30	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1			440663	07/16/23 22:45	TLT	EET PIT
	Instrument ID: FLASHEA									

Client Sample ID: SD107-2023-0.0/0.5'-FD
Lab Sample ID: 180-158889-16
Date Collected: 07/05/23 10:15
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD107-2023-0.0/0.5'-FD
Lab Sample ID: 180-158889-16
Date Collected: 07/05/23 10:15
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 22.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.68 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 20:33	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD107-2023-0.5/1.0'
Lab Sample ID: 180-158889-17
Date Collected: 07/05/23 10:20
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD107-2023-0.5/1.0'
Lab Sample ID: 180-158889-17
Date Collected: 07/05/23 10:20
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 41.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.95 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 20:36	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD107-2023-1.0/1.3'
Lab Sample ID: 180-158889-18
Date Collected: 07/05/23 10:25
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD107-2023-1.0/1.3'

Lab Sample ID: 180-158889-18
Date Collected: 07/05/23 10:25
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 49.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.66 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 21:06	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD010-2023-0.0/0.5'

Lab Sample ID: 180-158889-19
Date Collected: 07/04/23 13:30
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD010-2023-0.0/0.5'

Lab Sample ID: 180-158889-19
Date Collected: 07/04/23 13:30
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 66.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.82 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 21:09	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1			440663	07/16/23 23:08	TLT	EET PIT
	Instrument ID: FLASHEA									

Client Sample ID: SD203-2023-0.0/0.55'

Lab Sample ID: 180-158889-20
Date Collected: 07/04/23 14:00
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439832	07/08/23 12:35	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD203-2023-0.0/0.55'

Lab Sample ID: 180-158889-20
Date Collected: 07/04/23 14:00
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 62.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.91 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 21:12	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1			440663	07/16/23 23:31	TLT	EET PIT
	Instrument ID: FLASHEA									

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD203-2023-0.0/0.55'-FD
Date Collected: 07/04/23 14:05
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-21
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD203-2023-0.0/0.55'-FD
Date Collected: 07/04/23 14:05
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-21
Matrix: Sediment
Percent Solids: 58.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.98 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 21:15	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD007B-2023-0.0/0.2'
Date Collected: 07/04/23 12:10
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-22
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD007B-2023-0.0/0.2'
Date Collected: 07/04/23 12:10
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-22
Matrix: Sediment
Percent Solids: 54.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.97 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 21:18	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1			440663	07/16/23 23:54	TLT	EET PIT
	Instrument ID: FLASHEA									

Client Sample ID: SD202-2023-0.0/0.4'
Date Collected: 07/03/23 12:55
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-23
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD202-2023-0.0/0.4'
Date Collected: 07/03/23 12:55
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-23
Matrix: Sediment
Percent Solids: 60.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.77 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 20:45	MRG	EET PIT
	Instrument ID: NEMO									

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD202-2023-0.0/0.4'
Lab Sample ID: 180-158889-23
Date Collected: 07/03/23 12:55
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 60.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA-Lloyd Kahn		1	15.74 mg	15.74 mg	440663	07/17/23 00:16	TLT	EET PIT

Client Sample ID: SD108-2023-0.0/0.5'
Lab Sample ID: 180-158889-24
Date Collected: 07/04/23 08:25
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD108-2023-0.0/0.5'
Lab Sample ID: 180-158889-24
Date Collected: 07/04/23 08:25
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 29.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.94 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 21:21	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1			440663	07/17/23 01:47	TLT	EET PIT
	Instrument ID: FLASHEA									

Client Sample ID: SD108-2023-0.5/1.1'
Lab Sample ID: 180-158889-25
Date Collected: 07/04/23 08:45
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD108-2023-0.5/1.1'
Lab Sample ID: 180-158889-25
Date Collected: 07/04/23 08:45
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 58.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.97 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		2			441780	07/27/23 18:47	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD108-2023-0.0/0.5'-FD
Lab Sample ID: 180-158889-26
Date Collected: 07/04/23 08:30
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD108-2023-0.0/0.5'-FD

Lab Sample ID: 180-158889-26
Date Collected: 07/04/23 08:30
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 27.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.75 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 21:34	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD015-2023-0.0/0.33'

Lab Sample ID: 180-158889-27
Date Collected: 07/04/23 13:05
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD015-2023-0.0/0.33'

Lab Sample ID: 180-158889-27
Date Collected: 07/04/23 13:05
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 60.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.81 g	50 mL	441180	07/24/23 11:30	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 19:20	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1	15.84 mg	15.84 mg	440663	07/17/23 02:10	TLT	EET PIT
	Instrument ID: FLASHEA									

Client Sample ID: SD014-2023-0.0/0.6'

Lab Sample ID: 180-158889-28
Date Collected: 07/04/23 09:45
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD014-2023-0.0/0.6'

Lab Sample ID: 180-158889-28
Date Collected: 07/04/23 09:45
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 40.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.79 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 21:37	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1			440761	07/18/23 20:40	TLT	EET PIT
	Instrument ID: FLASHSMART									

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD0201-2023-0.0/0.5'
Date Collected: 07/04/23 10:15
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-29
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD0201-2023-0.0/0.5'
Date Collected: 07/04/23 10:15
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-29
Matrix: Sediment
Percent Solids: 30.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.83 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 21:40	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1			440663	07/17/23 04:04	TLT	EET PIT
	Instrument ID: FLASHEA									

Client Sample ID: SD0201-2023-0.5/1.0'
Date Collected: 07/04/23 10:40
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-30
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD0201-2023-0.5/1.0'
Date Collected: 07/04/23 10:40
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-30
Matrix: Sediment
Percent Solids: 51.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.96 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 21:43	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD008-2023-0.0/0.25'
Date Collected: 07/03/23 12:30
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-31
Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD008-2023-0.0/0.25'
Date Collected: 07/03/23 12:30
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-31
Matrix: Sediment
Percent Solids: 77.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.76 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 21:46	MRG	EET PIT
	Instrument ID: NEMO									

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD008-2023-0.0/0.25'

Lab Sample ID: 180-158889-31
Date Collected: 07/03/23 12:30
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 77.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA-Lloyd Kahn		1			440663	07/17/23 04:26	TLT	EET PIT
Total/NA	Analysis	EPA-Lloyd Kahn		1			440761	07/18/23 21:03	TLT	EET PIT
	Instrument ID: FLASHSMART									

Client Sample ID: SD008-2023-0.0/0.25'-FD

Lab Sample ID: 180-158889-32
Date Collected: 07/03/23 12:35
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD008-2023-0.0/0.25'-FD

Lab Sample ID: 180-158889-32
Date Collected: 07/03/23 12:35
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 77.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.70 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 21:49	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD012-2023-0.0/0.5'

Lab Sample ID: 180-158889-33
Date Collected: 07/04/23 09:20
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD012-2023-0.0/0.5'

Lab Sample ID: 180-158889-33
Date Collected: 07/04/23 09:20
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 27.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.60 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 21:52	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1			440663	07/17/23 04:49	TLT	EET PIT
	Instrument ID: FLASHEA									

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD012-2023-0.5/1.0'
Lab Sample ID: 180-158889-34
Date Collected: 07/04/23 09:30
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD012-2023-0.5/1.0'
Lab Sample ID: 180-158889-34
Date Collected: 07/04/23 09:30
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 50.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.78 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 21:55	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD017-2023-0.0/0.25'
Lab Sample ID: 180-158889-35
Date Collected: 07/03/23 13:25
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD017-2023-0.0/0.25'
Lab Sample ID: 180-158889-35
Date Collected: 07/03/23 13:25
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 74.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.68 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 22:04	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1			440663	07/17/23 05:12	TLT	EET PIT
	Instrument ID: FLASHEA									

Client Sample ID: SD204-2023-0.0/0.5'
Lab Sample ID: 180-158889-36
Date Collected: 07/04/23 11:20
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD204-2023-0.0/0.5'
Lab Sample ID: 180-158889-36
Date Collected: 07/04/23 11:20
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 57.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.93 g	50 mL	441181	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 22:07	MRG	EET PIT
	Instrument ID: NEMO									

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD204-2023-0.0/0.5'
Lab Sample ID: 180-158889-36
Date Collected: 07/04/23 11:20
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 57.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA-Lloyd Kahn		1			440663	07/17/23 05:35	TLT	EET PIT

Client Sample ID: SD204-2023-0.5/0.75'
Lab Sample ID: 180-158889-37
Date Collected: 07/04/23 11:10
Matrix: Sediment
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			439838	07/08/23 13:02	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD204-2023-0.5/0.75'
Lab Sample ID: 180-158889-37
Date Collected: 07/04/23 11:10
Matrix: Sediment
Date Received: 07/07/23 08:30
Percent Solids: 76.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.71 g	50 mL	441294	07/25/23 09:20	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			442190	08/02/23 03:42	KED	EET PIT
	Instrument ID: DORY									

Client Sample ID: EB01-2023-070423
Lab Sample ID: 180-158889-38
Date Collected: 07/04/23 15:55
Matrix: Water
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			25 mL	25 mL	443230	08/11/23 12:30	SJM	EET PIT
Total/NA	Analysis	EPA 6020B		1			443495	08/14/23 23:58	KED	EET PIT
	Instrument ID: DORY									

Client Sample ID: EB02-2023-070523
Lab Sample ID: 180-158889-39
Date Collected: 07/05/23 14:05
Matrix: Water
Date Received: 07/07/23 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			25 mL	25 mL	443230	08/11/23 12:30	SJM	EET PIT
Total/NA	Analysis	EPA 6020B		1			443495	08/15/23 00:01	KED	EET PIT
	Instrument ID: DORY									

Laboratory References:

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

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Analyst References:

Lab: EET PIT

Batch Type: Prep

S1Z = Sage Ziviello

SJM = Shannon Mueller

Batch Type: Analysis

CMC = Candace California

KED = Katie Dacko

MRG = Mismel Garcia

TLT = Tyonah Tipton

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD009-2023-0.0/0.5'
Date Collected: 07/05/23 12:20
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-1
Matrix: Sediment
Percent Solids: 23.9

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	38		0.25	0.14	mg/Kg	☼	07/24/23 11:30	07/25/23 19:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	85000		4200	4100	mg/Kg	☼		07/16/23 20:29	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD009-2023-0.0/0.5'-FD
Date Collected: 07/05/23 12:25
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-2
Matrix: Sediment
Percent Solids: 24.5

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	40		0.30	0.17	mg/Kg	☼	07/24/23 11:30	07/25/23 19:38	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD009-2023-0.5/1.0'
Date Collected: 07/05/23 12:30
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-3
Matrix: Sediment
Percent Solids: 29.6

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	530		0.29	0.17	mg/Kg	☼	07/24/23 11:30	07/25/23 19:41	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD009-2023-1.0/1.2'
Date Collected: 07/05/23 12:35
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-4
Matrix: Sediment
Percent Solids: 35.7

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	780		0.82	0.48	mg/Kg	☼	07/24/23 11:30	08/16/23 00:20	5

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD018-2023-0.0/0.5'
Date Collected: 07/05/23 10:40
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-5
Matrix: Sediment
Percent Solids: 36.7

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	93		0.18	0.11	mg/Kg	☼	07/24/23 11:30	07/25/23 19:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	55000		2700	2600	mg/Kg	☼		07/16/23 20:52	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD018-2023-0.0/0.5'-FD
Date Collected: 07/05/23 10:45
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-6
Matrix: Sediment
Percent Solids: 38.5

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	130		0.16	0.095	mg/Kg	☼	07/24/23 11:30	07/25/23 19:56	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD018-2023-0.5/0.75'
Date Collected: 07/05/23 10:50
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-7
Matrix: Sediment
Percent Solids: 30.0

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	500		0.37	0.21	mg/Kg	☼	07/24/23 11:30	08/16/23 00:23	2

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD013-2023-0.0/0.5'
Date Collected: 07/05/23 11:45
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-8
Matrix: Sediment
Percent Solids: 54.4

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	49		0.11	0.063	mg/Kg	☼	07/24/23 11:30	07/25/23 20:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	51000		1800	1800	mg/Kg	☼		07/16/23 21:15	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD013-2023-0.5/0.75'
Date Collected: 07/05/23 11:50
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-9
Matrix: Sediment
Percent Solids: 54.5

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	930		1.0	0.60	mg/Kg	☼	07/24/23 11:30	08/16/23 00:29	10

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD016-2023-0.0/0.5'
Date Collected: 07/04/23 15:25
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-10
Matrix: Sediment
Percent Solids: 53.7

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.7		0.10	0.059	mg/Kg	☼	07/24/23 11:30	07/25/23 20:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	29000		1900	1800	mg/Kg	☼		07/16/23 21:37	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD016-2023-0.5/0.8'
Date Collected: 07/04/23 15:05
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-11
Matrix: Sediment
Percent Solids: 80.4

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.9		0.077	0.045	mg/Kg	☼	07/24/23 11:30	07/25/23 20:12	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD006-2023-0.0/0.5'
Date Collected: 07/05/23 09:15
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-12
Matrix: Sediment
Percent Solids: 22.7

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	19		0.32	0.18	mg/Kg	☼	07/24/23 11:30	07/25/23 20:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	73000		4400	4300	mg/Kg	☼		07/16/23 22:00	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD006-2023-0.5/1.0'
Date Collected: 07/05/23 09:20
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-13
Matrix: Sediment
Percent Solids: 35.1

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	32		0.17	0.096	mg/Kg	☼	07/24/23 11:30	07/25/23 20:18	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD006-2023-1.0/1.4'
Date Collected: 07/05/23 09:25
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-14
Matrix: Sediment
Percent Solids: 48.8

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	120		0.11	0.062	mg/Kg	☼	07/24/23 11:30	07/25/23 20:27	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD107-2023-0.0/0.5'
Date Collected: 07/05/23 10:10
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-15
Matrix: Sediment
Percent Solids: 22.5

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	26		0.35	0.20	mg/Kg	☼	07/24/23 11:30	07/25/23 20:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	93000		4400	4300	mg/Kg	☼		07/16/23 22:45	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD107-2023-0.0/0.5'-FD
Date Collected: 07/05/23 10:15
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-16
Matrix: Sediment
Percent Solids: 22.9

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	26		0.32	0.19	mg/Kg	☼	07/24/23 11:30	07/25/23 20:33	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD107-2023-0.5/1.0'
Date Collected: 07/05/23 10:20
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-17
Matrix: Sediment
Percent Solids: 41.6

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	33		0.13	0.073	mg/Kg	☼	07/24/23 11:30	07/25/23 20:36	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD107-2023-1.0/1.3'
Date Collected: 07/05/23 10:25
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-18
Matrix: Sediment
Percent Solids: 49.8

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	130		0.15	0.088	mg/Kg	☼	07/24/23 11:25	07/25/23 21:06	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD010-2023-0.0/0.5'
Date Collected: 07/04/23 13:30
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-19
Matrix: Sediment
Percent Solids: 66.3

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	63		0.092	0.053	mg/Kg	☼	07/24/23 11:25	07/25/23 21:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	33000		1500	1500	mg/Kg	☼		07/16/23 23:08	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD203-2023-0.0/0.55'
Date Collected: 07/04/23 14:00
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-20
Matrix: Sediment
Percent Solids: 62.2

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.2		0.088	0.051	mg/Kg	☼	07/24/23 11:25	07/25/23 21:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	16000		1600	1600	mg/Kg	☼		07/16/23 23:31	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD203-2023-0.0/0.55'-FD
Date Collected: 07/04/23 14:05
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-21
Matrix: Sediment
Percent Solids: 58.3

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.6		0.088	0.051	mg/Kg	☼	07/24/23 11:25	07/25/23 21:15	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD007B-2023-0.0/0.2'
Date Collected: 07/04/23 12:10
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-22
Matrix: Sediment
Percent Solids: 54.7

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.4		0.094	0.055	mg/Kg	☼	07/24/23 11:25	07/25/23 21:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	21000		1800	1800	mg/Kg	☼		07/16/23 23:54	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD202-2023-0.0/0.4'
Date Collected: 07/03/23 12:55
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-23
Matrix: Sediment
Percent Solids: 60.4

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.3		0.11	0.062	mg/Kg	☼	07/24/23 11:25	07/25/23 20:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	22000	F2 F1	1700	1600	mg/Kg	☼		07/17/23 00:16	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD108-2023-0.0/0.5'
Date Collected: 07/04/23 08:25
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-24
Matrix: Sediment
Percent Solids: 29.2

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	75		0.18	0.11	mg/Kg	☼	07/24/23 11:25	07/25/23 21:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	70000		3400	3300	mg/Kg	☼		07/17/23 01:47	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD108-2023-0.5/1.1'
Date Collected: 07/04/23 08:45
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-25
Matrix: Sediment
Percent Solids: 58.8

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	350		0.18	0.10	mg/Kg	☼	07/24/23 11:25	07/27/23 18:47	2

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD108-2023-0.0/0.5'-FD
Date Collected: 07/04/23 08:30
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-26
Matrix: Sediment
Percent Solids: 27.4

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	57		0.24	0.14	mg/Kg	☼	07/24/23 11:25	07/25/23 21:34	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD015-2023-0.0/0.33'
Date Collected: 07/04/23 13:05
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-27
Matrix: Sediment
Percent Solids: 60.8

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.2		0.10	0.059	mg/Kg	☼	07/24/23 11:30	07/25/23 19:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	28000	F2 F1	1600	1600	mg/Kg	☼		07/17/23 02:10	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD014-2023-0.0/0.6'
Date Collected: 07/04/23 09:45
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-28
Matrix: Sediment
Percent Solids: 40.8

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	19		0.15	0.090	mg/Kg	☼	07/24/23 11:25	07/25/23 21:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	70000		2400	2400	mg/Kg	☼		07/18/23 20:40	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD0201-2023-0.0/0.5'
Date Collected: 07/04/23 10:15
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-29
Matrix: Sediment
Percent Solids: 30.5

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	21		0.20	0.11	mg/Kg	☼	07/24/23 11:25	07/25/23 21:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	70000		3300	3200	mg/Kg	☼		07/17/23 04:04	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD0201-2023-0.5/1.0'
Date Collected: 07/04/23 10:40
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-30
Matrix: Sediment
Percent Solids: 51.5

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	50		0.10	0.059	mg/Kg	☼	07/24/23 11:25	07/25/23 21:43	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD008-2023-0.0/0.25'
Date Collected: 07/03/23 12:30
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-31
Matrix: Sediment
Percent Solids: 77.8

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.9		0.085	0.049	mg/Kg	☼	07/24/23 11:25	07/25/23 21:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	49000		1300	1200	mg/Kg	☼		07/17/23 04:26	1
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	46000	H	1300	1200	mg/Kg	☼		07/18/23 21:03	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD008-2023-0.0/0.25'-FD
Date Collected: 07/03/23 12:35
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-32
Matrix: Sediment
Percent Solids: 77.9

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.3		0.092	0.053	mg/Kg	☼	07/24/23 11:25	07/25/23 21:49	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD012-2023-0.0/0.5'
Date Collected: 07/04/23 09:20
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-33
Matrix: Sediment
Percent Solids: 27.7

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	20		0.30	0.17	mg/Kg	☼	07/24/23 11:25	07/25/23 21:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	71000		3600	3500	mg/Kg	☼		07/17/23 04:49	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD012-2023-0.5/1.0'
Date Collected: 07/04/23 09:30
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-34
Matrix: Sediment
Percent Solids: 50.1

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	230		0.13	0.074	mg/Kg	☼	07/24/23 11:25	07/25/23 21:55	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD017-2023-0.0/0.25'
Date Collected: 07/03/23 13:25
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-35
Matrix: Sediment
Percent Solids: 74.5

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.2		0.099	0.057	mg/Kg	☼	07/24/23 11:25	07/25/23 22:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	32000		1300	1300	mg/Kg	☼		07/17/23 05:12	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD204-2023-0.0/0.5'
Date Collected: 07/04/23 11:20
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-36
Matrix: Sediment
Percent Solids: 57.3

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.8		0.094	0.054	mg/Kg	☼	07/24/23 11:25	07/25/23 22:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	30000		1700	1700	mg/Kg	☼		07/17/23 05:35	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: SD204-2023-0.5/0.75'
Date Collected: 07/04/23 11:10
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-37
Matrix: Sediment
Percent Solids: 76.8

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.3		0.092	0.053	mg/Kg	☼	07/25/23 09:20	08/02/23 03:42	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: EB01-2023-070423
Date Collected: 07/04/23 15:55
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-38
Matrix: Water

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00028		0.0010	0.00028	mg/L		08/11/23 12:30	08/14/23 23:58	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158889-1

Client Sample ID: EB02-2023-070523
Date Collected: 07/05/23 14:05
Date Received: 07/07/23 08:30

Lab Sample ID: 180-158889-39
Matrix: Water

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00028		0.0010	0.00028	mg/L		08/11/23 12:30	08/15/23 00:01	1

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 180-441180/1-A
Matrix: Sediment
Analysis Batch: 441456

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 441180

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.055		0.094	0.055	mg/Kg		07/24/23 11:30	07/25/23 19:08	1

Lab Sample ID: MB 180-441180/1-A
Matrix: Sediment
Analysis Batch: 443624

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 441180

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.055		0.094	0.055	mg/Kg		07/24/23 11:30	08/16/23 00:13	1

Lab Sample ID: LCS 180-441180/2-A
Matrix: Sediment
Analysis Batch: 441456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 441180

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	102		mg/Kg		102	80 - 120

Lab Sample ID: LCS 180-441180/2-A
Matrix: Sediment
Analysis Batch: 443624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 441180

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	97.3		mg/Kg		97	80 - 120

Lab Sample ID: 180-158889-27 MS
Matrix: Sediment
Analysis Batch: 441456

Client Sample ID: SD015-2023-0.0/0.33'
Prep Type: Total/NA
Prep Batch: 441180

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	5.2		95.6	97.1		mg/Kg	☼	96	75 - 125

Lab Sample ID: 180-158889-27 MSD
Matrix: Sediment
Analysis Batch: 441456

Client Sample ID: SD015-2023-0.0/0.33'
Prep Type: Total/NA
Prep Batch: 441180

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	5.2		100	104		mg/Kg	☼	98	75 - 125	7	20

Lab Sample ID: MB 180-441181/1-A
Matrix: Sediment
Analysis Batch: 441456

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 441181

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.056		0.096	0.056	mg/Kg		07/24/23 11:25	07/25/23 20:39	1

Lab Sample ID: LCS 180-441181/2-A
Matrix: Sediment
Analysis Batch: 441456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 441181

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	100		mg/Kg		100	80 - 120

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: 180-158889-23 MS
Matrix: Sediment
Analysis Batch: 441456

Client Sample ID: SD202-2023-0.0/0.4'
Prep Type: Total/NA
Prep Batch: 441181

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	5.3		112	116		mg/Kg	☼	99	75 - 125

Lab Sample ID: 180-158889-23 MSD
Matrix: Sediment
Analysis Batch: 441456

Client Sample ID: SD202-2023-0.0/0.4'
Prep Type: Total/NA
Prep Batch: 441181

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	5.3		109	112		mg/Kg	☼	98	75 - 125	4	20

Lab Sample ID: MB 180-441294/1-A
Matrix: Sediment
Analysis Batch: 442190

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 441294

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.055		0.094	0.055	mg/Kg		07/25/23 09:20	08/02/23 03:31	1

Lab Sample ID: LCS 180-441294/2-A
Matrix: Sediment
Analysis Batch: 442190

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 441294

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	101		mg/Kg		101	80 - 120

Lab Sample ID: LCSD 180-441294/3-A
Matrix: Sediment
Analysis Batch: 442190

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 441294

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	98.0	104		mg/Kg		106	80 - 120	3	20

Lab Sample ID: MB 180-443027/1-A
Matrix: Water
Analysis Batch: 443188

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 443027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00028		0.0010	0.00028	mg/L		08/10/23 09:09	08/11/23 01:20	1

Lab Sample ID: MB 180-443230/1-A
Matrix: Water
Analysis Batch: 443495

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 443230

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00028		0.0010	0.00028	mg/L		08/11/23 12:30	08/14/23 23:47	1

Lab Sample ID: LCS 180-443230/2-A
Matrix: Water
Analysis Batch: 443495

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 443230

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1.00	0.997		mg/L		100	80 - 120

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: LCSD 180-443230/3-A
Matrix: Water
Analysis Batch: 443495

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 443230

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic			1.00	0.980		mg/L		98	80 - 120	2	20

Method: EPA-Lloyd Kahn - Organic Carbon, Total (TOC)

Lab Sample ID: MB 180-440663/4
Matrix: Sediment
Analysis Batch: 440663

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	<970		1000	970	mg/Kg			07/16/23 19:59	1

Lab Sample ID: LCS 180-440663/5
Matrix: Sediment
Analysis Batch: 440663

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon - Duplicates			40000	39300		mg/Kg		98	75 - 125		

Lab Sample ID: 180-158889-23 MS
Matrix: Sediment
Analysis Batch: 440663

Client Sample ID: SD202-2023-0.0/0.4'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon - Duplicates	22000	F2 F1	45800	113000	F1	mg/Kg	☼	198	75 - 125		

Lab Sample ID: 180-158889-23 MSD
Matrix: Sediment
Analysis Batch: 440663

Client Sample ID: SD202-2023-0.0/0.4'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon - Duplicates	22000	F2 F1	44200	62100	F2	mg/Kg	☼	90	75 - 125	58	20

Lab Sample ID: 180-158889-27 MS
Matrix: Sediment
Analysis Batch: 440663

Client Sample ID: SD015-2023-0.0/0.33'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon - Duplicates	28000	F2 F1	45100	67200		mg/Kg	☼	87	75 - 125		

Lab Sample ID: MB 180-440761/4
Matrix: Sediment
Analysis Batch: 440761

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	<970		1000	970	mg/Kg			07/18/23 19:02	1

Method: EPA-Lloyd Kahn - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 180-440761/5
Matrix: Sediment
Analysis Batch: 440761

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon - Duplicates			40000	39300		mg/Kg		98	75 - 125		

Lab Sample ID: 180-158889-27 MSD
Matrix: Sediment
Analysis Batch: 440761

Client Sample ID: SD015-2023-0.0/0.33'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon - Duplicates	28000	F2 F1	40800	61600		mg/Kg	☼	83	75 - 125	9	20

Metals

Prep Batch: 441180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158889-1	SD009-2023-0.0/0.5'	Total/NA	Sediment	3050B	
180-158889-2	SD009-2023-0.0/0.5'-FD	Total/NA	Sediment	3050B	
180-158889-3	SD009-2023-0.5/1.0'	Total/NA	Sediment	3050B	
180-158889-4	SD009-2023-1.0/1.2'	Total/NA	Sediment	3050B	
180-158889-5	SD018-2023-0.0/0.5'	Total/NA	Sediment	3050B	
180-158889-6	SD018-2023-0.0/0.5'-FD	Total/NA	Sediment	3050B	
180-158889-7	SD018-2023-0.5/0.75'	Total/NA	Sediment	3050B	
180-158889-8	SD013-2023-0.0/0.5'	Total/NA	Sediment	3050B	
180-158889-9	SD013-2023-0.5/0.75'	Total/NA	Sediment	3050B	
180-158889-10	SD016-2023-0.0/0.5'	Total/NA	Sediment	3050B	
180-158889-11	SD016-2023-0.5/0.8'	Total/NA	Sediment	3050B	
180-158889-12	SD006-2023-0.0/0.5'	Total/NA	Sediment	3050B	
180-158889-13	SD006-2023-0.5/1.0'	Total/NA	Sediment	3050B	
180-158889-14	SD006-2023-1.0/1.4'	Total/NA	Sediment	3050B	
180-158889-15	SD107-2023-0.0/0.5'	Total/NA	Sediment	3050B	
180-158889-16	SD107-2023-0.0/0.5'-FD	Total/NA	Sediment	3050B	
180-158889-17	SD107-2023-0.5/1.0'	Total/NA	Sediment	3050B	
180-158889-27	SD015-2023-0.0/0.33'	Total/NA	Sediment	3050B	
MB 180-441180/1-A	Method Blank	Total/NA	Sediment	3050B	
LCS 180-441180/2-A	Lab Control Sample	Total/NA	Sediment	3050B	
180-158889-27 MS	SD015-2023-0.0/0.33'	Total/NA	Sediment	3050B	
180-158889-27 MSD	SD015-2023-0.0/0.33'	Total/NA	Sediment	3050B	

Prep Batch: 441181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158889-18	SD107-2023-1.0/1.3'	Total/NA	Sediment	3050B	
180-158889-19	SD010-2023-0.0/0.5'	Total/NA	Sediment	3050B	
180-158889-20	SD203-2023-0.0/0.55'	Total/NA	Sediment	3050B	
180-158889-21	SD203-2023-0.0/0.55'-FD	Total/NA	Sediment	3050B	
180-158889-22	SD007B-2023-0.0/0.2'	Total/NA	Sediment	3050B	
180-158889-23	SD202-2023-0.0/0.4'	Total/NA	Sediment	3050B	
180-158889-24	SD108-2023-0.0/0.5'	Total/NA	Sediment	3050B	
180-158889-25	SD108-2023-0.5/1.1'	Total/NA	Sediment	3050B	
180-158889-26	SD108-2023-0.0/0.5'-FD	Total/NA	Sediment	3050B	
180-158889-28	SD014-2023-0.0/0.6'	Total/NA	Sediment	3050B	
180-158889-29	SD0201-2023-0.0/0.5'	Total/NA	Sediment	3050B	
180-158889-30	SD0201-2023-0.5/1.0'	Total/NA	Sediment	3050B	
180-158889-31	SD008-2023-0.0/0.25'	Total/NA	Sediment	3050B	
180-158889-32	SD008-2023-0.0/0.25'-FD	Total/NA	Sediment	3050B	
180-158889-33	SD012-2023-0.0/0.5'	Total/NA	Sediment	3050B	
180-158889-34	SD012-2023-0.5/1.0'	Total/NA	Sediment	3050B	
180-158889-35	SD017-2023-0.0/0.25'	Total/NA	Sediment	3050B	
180-158889-36	SD204-2023-0.0/0.5'	Total/NA	Sediment	3050B	
MB 180-441181/1-A	Method Blank	Total/NA	Sediment	3050B	
LCS 180-441181/2-A	Lab Control Sample	Total/NA	Sediment	3050B	
180-158889-23 MS	SD202-2023-0.0/0.4'	Total/NA	Sediment	3050B	
180-158889-23 MSD	SD202-2023-0.0/0.4'	Total/NA	Sediment	3050B	

Prep Batch: 441294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158889-37	SD204-2023-0.5/0.75'	Total/NA	Sediment	3050B	

Metals (Continued)

Prep Batch: 441294 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-441294/1-A	Method Blank	Total/NA	Sediment	3050B	
LCS 180-441294/2-A	Lab Control Sample	Total/NA	Sediment	3050B	
LCSD 180-441294/3-A	Lab Control Sample Dup	Total/NA	Sediment	3050B	

Analysis Batch: 441456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158889-1	SD009-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441180
180-158889-2	SD009-2023-0.0/0.5'-FD	Total/NA	Sediment	EPA 6020B	441180
180-158889-3	SD009-2023-0.5/1.0'	Total/NA	Sediment	EPA 6020B	441180
180-158889-5	SD018-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441180
180-158889-6	SD018-2023-0.0/0.5'-FD	Total/NA	Sediment	EPA 6020B	441180
180-158889-8	SD013-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441180
180-158889-10	SD016-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441180
180-158889-11	SD016-2023-0.5/0.8'	Total/NA	Sediment	EPA 6020B	441180
180-158889-12	SD006-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441180
180-158889-13	SD006-2023-0.5/1.0'	Total/NA	Sediment	EPA 6020B	441180
180-158889-14	SD006-2023-1.0/1.4'	Total/NA	Sediment	EPA 6020B	441180
180-158889-15	SD107-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441180
180-158889-16	SD107-2023-0.0/0.5'-FD	Total/NA	Sediment	EPA 6020B	441180
180-158889-17	SD107-2023-0.5/1.0'	Total/NA	Sediment	EPA 6020B	441180
180-158889-18	SD107-2023-1.0/1.3'	Total/NA	Sediment	EPA 6020B	441181
180-158889-19	SD010-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441181
180-158889-20	SD203-2023-0.0/0.55'	Total/NA	Sediment	EPA 6020B	441181
180-158889-21	SD203-2023-0.0/0.55'-FD	Total/NA	Sediment	EPA 6020B	441181
180-158889-22	SD007B-2023-0.0/0.2'	Total/NA	Sediment	EPA 6020B	441181
180-158889-23	SD202-2023-0.0/0.4'	Total/NA	Sediment	EPA 6020B	441181
180-158889-24	SD108-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441181
180-158889-26	SD108-2023-0.0/0.5'-FD	Total/NA	Sediment	EPA 6020B	441181
180-158889-27	SD015-2023-0.0/0.33'	Total/NA	Sediment	EPA 6020B	441180
180-158889-28	SD014-2023-0.0/0.6'	Total/NA	Sediment	EPA 6020B	441181
180-158889-29	SD0201-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441181
180-158889-30	SD0201-2023-0.5/1.0'	Total/NA	Sediment	EPA 6020B	441181
180-158889-31	SD008-2023-0.0/0.25'	Total/NA	Sediment	EPA 6020B	441181
180-158889-32	SD008-2023-0.0/0.25'-FD	Total/NA	Sediment	EPA 6020B	441181
180-158889-33	SD012-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441181
180-158889-34	SD012-2023-0.5/1.0'	Total/NA	Sediment	EPA 6020B	441181
180-158889-35	SD017-2023-0.0/0.25'	Total/NA	Sediment	EPA 6020B	441181
180-158889-36	SD204-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441181
MB 180-441180/1-A	Method Blank	Total/NA	Sediment	EPA 6020B	441180
MB 180-441181/1-A	Method Blank	Total/NA	Sediment	EPA 6020B	441181
LCS 180-441180/2-A	Lab Control Sample	Total/NA	Sediment	EPA 6020B	441180
LCS 180-441181/2-A	Lab Control Sample	Total/NA	Sediment	EPA 6020B	441181
180-158889-23 MS	SD202-2023-0.0/0.4'	Total/NA	Sediment	EPA 6020B	441181
180-158889-23 MSD	SD202-2023-0.0/0.4'	Total/NA	Sediment	EPA 6020B	441181
180-158889-27 MS	SD015-2023-0.0/0.33'	Total/NA	Sediment	EPA 6020B	441180
180-158889-27 MSD	SD015-2023-0.0/0.33'	Total/NA	Sediment	EPA 6020B	441180

Analysis Batch: 441780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158889-25	SD108-2023-0.5/1.1'	Total/NA	Sediment	EPA 6020B	441181

Metals

Analysis Batch: 442190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158889-37	SD204-2023-0.5/0.75'	Total/NA	Sediment	EPA 6020B	441294
MB 180-441294/1-A	Method Blank	Total/NA	Sediment	EPA 6020B	441294
LCS 180-441294/2-A	Lab Control Sample	Total/NA	Sediment	EPA 6020B	441294
LCSD 180-441294/3-A	Lab Control Sample Dup	Total/NA	Sediment	EPA 6020B	441294

Prep Batch: 443027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-443027/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 443188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-443027/1-A	Method Blank	Total/NA	Water	EPA 6020B	443027

Prep Batch: 443230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158889-38	EB01-2023-070423	Total/NA	Water	3010A	
180-158889-39	EB02-2023-070523	Total/NA	Water	3010A	
MB 180-443230/1-A	Method Blank	Total/NA	Water	3010A	
LCS 180-443230/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 180-443230/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	

Analysis Batch: 443495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158889-38	EB01-2023-070423	Total/NA	Water	EPA 6020B	443230
180-158889-39	EB02-2023-070523	Total/NA	Water	EPA 6020B	443230
MB 180-443230/1-A	Method Blank	Total/NA	Water	EPA 6020B	443230
LCS 180-443230/2-A	Lab Control Sample	Total/NA	Water	EPA 6020B	443230
LCSD 180-443230/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 6020B	443230

Analysis Batch: 443624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158889-4	SD009-2023-1.0/1.2'	Total/NA	Sediment	EPA 6020B	441180
180-158889-7	SD018-2023-0.5/0.75'	Total/NA	Sediment	EPA 6020B	441180
180-158889-9	SD013-2023-0.5/0.75'	Total/NA	Sediment	EPA 6020B	441180
MB 180-441180/1-A	Method Blank	Total/NA	Sediment	EPA 6020B	441180
LCS 180-441180/2-A	Lab Control Sample	Total/NA	Sediment	EPA 6020B	441180

General Chemistry

Analysis Batch: 439832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158889-1	SD009-2023-0.0/0.5'	Total/NA	Sediment	2540G	
180-158889-2	SD009-2023-0.0/0.5'-FD	Total/NA	Sediment	2540G	
180-158889-3	SD009-2023-0.5/1.0'	Total/NA	Sediment	2540G	
180-158889-4	SD009-2023-1.0/1.2'	Total/NA	Sediment	2540G	
180-158889-5	SD018-2023-0.0/0.5'	Total/NA	Sediment	2540G	
180-158889-6	SD018-2023-0.0/0.5'-FD	Total/NA	Sediment	2540G	
180-158889-7	SD018-2023-0.5/0.75'	Total/NA	Sediment	2540G	
180-158889-8	SD013-2023-0.0/0.5'	Total/NA	Sediment	2540G	
180-158889-9	SD013-2023-0.5/0.75'	Total/NA	Sediment	2540G	
180-158889-10	SD016-2023-0.0/0.5'	Total/NA	Sediment	2540G	

General Chemistry (Continued)

Analysis Batch: 439832 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158889-11	SD016-2023-0.5/0.8'	Total/NA	Sediment	2540G	
180-158889-12	SD006-2023-0.0/0.5'	Total/NA	Sediment	2540G	
180-158889-13	SD006-2023-0.5/1.0'	Total/NA	Sediment	2540G	
180-158889-14	SD006-2023-1.0/1.4'	Total/NA	Sediment	2540G	
180-158889-15	SD107-2023-0.0/0.5'	Total/NA	Sediment	2540G	
180-158889-16	SD107-2023-0.0/0.5'-FD	Total/NA	Sediment	2540G	
180-158889-17	SD107-2023-0.5/1.0'	Total/NA	Sediment	2540G	
180-158889-18	SD107-2023-1.0/1.3'	Total/NA	Sediment	2540G	
180-158889-19	SD010-2023-0.0/0.5'	Total/NA	Sediment	2540G	
180-158889-20	SD203-2023-0.0/0.55'	Total/NA	Sediment	2540G	
180-158889-1 DU	SD009-2023-0.0/0.5'	Total/NA	Sediment	2540G	
180-158889-11 DU	SD016-2023-0.5/0.8'	Total/NA	Sediment	2540G	

Analysis Batch: 439838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158889-21	SD203-2023-0.0/0.55'-FD	Total/NA	Sediment	2540G	
180-158889-22	SD007B-2023-0.0/0.2'	Total/NA	Sediment	2540G	
180-158889-23	SD202-2023-0.0/0.4'	Total/NA	Sediment	2540G	
180-158889-24	SD108-2023-0.0/0.5'	Total/NA	Sediment	2540G	
180-158889-25	SD108-2023-0.5/1.1'	Total/NA	Sediment	2540G	
180-158889-26	SD108-2023-0.0/0.5'-FD	Total/NA	Sediment	2540G	
180-158889-27	SD015-2023-0.0/0.33'	Total/NA	Sediment	2540G	
180-158889-28	SD014-2023-0.0/0.6'	Total/NA	Sediment	2540G	
180-158889-29	SD0201-2023-0.0/0.5'	Total/NA	Sediment	2540G	
180-158889-30	SD0201-2023-0.5/1.0'	Total/NA	Sediment	2540G	
180-158889-31	SD008-2023-0.0/0.25'	Total/NA	Sediment	2540G	
180-158889-32	SD008-2023-0.0/0.25'-FD	Total/NA	Sediment	2540G	
180-158889-33	SD012-2023-0.0/0.5'	Total/NA	Sediment	2540G	
180-158889-34	SD012-2023-0.5/1.0'	Total/NA	Sediment	2540G	
180-158889-35	SD017-2023-0.0/0.25'	Total/NA	Sediment	2540G	
180-158889-36	SD204-2023-0.0/0.5'	Total/NA	Sediment	2540G	
180-158889-37	SD204-2023-0.5/0.75'	Total/NA	Sediment	2540G	
180-158889-21 DU	SD203-2023-0.0/0.55'-FD	Total/NA	Sediment	2540G	
180-158889-31 DU	SD008-2023-0.0/0.25'	Total/NA	Sediment	2540G	

Analysis Batch: 440663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158889-1	SD009-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-5	SD018-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-8	SD013-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-10	SD016-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-12	SD006-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-15	SD107-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-19	SD010-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-20	SD203-2023-0.0/0.55'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-22	SD007B-2023-0.0/0.2'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-23	SD202-2023-0.0/0.4'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-24	SD108-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-27	SD015-2023-0.0/0.33'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-29	SD0201-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-31	SD008-2023-0.0/0.25'	Total/NA	Sediment	EPA-Lloyd Kahn	

General Chemistry (Continued)

Analysis Batch: 440663 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158889-33	SD012-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-35	SD017-2023-0.0/0.25'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-36	SD204-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	
MB 180-440663/4	Method Blank	Total/NA	Sediment	EPA-Lloyd Kahn	
LCS 180-440663/5	Lab Control Sample	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-23 MS	SD202-2023-0.0/0.4'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-23 MSD	SD202-2023-0.0/0.4'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-27 MS	SD015-2023-0.0/0.33'	Total/NA	Sediment	EPA-Lloyd Kahn	

Analysis Batch: 440761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158889-28	SD014-2023-0.0/0.6'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-31	SD008-2023-0.0/0.25'	Total/NA	Sediment	EPA-Lloyd Kahn	
MB 180-440761/4	Method Blank	Total/NA	Sediment	EPA-Lloyd Kahn	
LCS 180-440761/5	Lab Control Sample	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158889-27 MSD	SD015-2023-0.0/0.33'	Total/NA	Sediment	EPA-Lloyd Kahn	

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone. 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: J. Tortomasi / D. LaVoie	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No.: 180-92965-17079.5
Client Contact: Heather Ziegelbauer	Phone: 262-247-5195	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: WI	Page: Page 1 of 4
Company: Jacobs Engineering Group, Inc.	PWSID:			Job #:
Address: 1610 N 2nd Street Suite 201	Due Date Requested:			
City: Milwaukee	TAT Requested (days): Std			
State, Zip: WI, 53212	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order Requested			
Email: heather ziegelbauer@jacobs com	WO #:			
Project Name: Tyco Sediment	Project #: 18027362			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, Other:
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B, Moisture	Lloyd_Kahn_Mod - Lloyd Kahn TOC	6020B - Arsenic	Total Number of containers	Special
			Preservation Code:				N	N	D		
SD009-2023-0.0/0.5	7/5/23	12:20	C	Sediment			X	X	X	2	
SD009-2023-0.0/0.5-FD	7/5/23	12:25	C	Sediment			X		X	1	
SD009-2023-0.5/1.0	7/5/23	12:30	C	Sediment			X		X	1	
SD009-2023-1.0/1.2	7/5/23	12:35	C	Sediment			X		X	1	
SD018-2023-0.0/0.5	7/5/23	10:40	C	Sediment			X	X	X	2	
SD018-2023-0.0/0.5-FD	7/5/23	10:45	C	Sediment			X		X	1	
SD018-2023-0.5/0.75'	7/5/23	10:50	C	Sediment			X		X	1	
SD013-2023-0.0/0.5	7/5/23	11:45	C	Sediment			X	X	X	2	
SD013-2023-0.5/0.75'	7/5/23	11:50	C	Sediment			X		X	1	
SD016-2023-0.0/0.5'	7/4/23	15:25	C	Sediment			X	X	X	2	
SD016-2023-0.5/0.8'	7/4/23	15:05	C	Sediment			X		X	1	

180-158889 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 7/5/2023 1545	Company: JACOBS	Received by:	Date/Time: 7/7/23 830	Company: EUROFINS
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 06/08/2021

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information
Client Contact: Heather Ziegelbauer
Company: Jacobs Engineering Group, Inc
Address: 1610 N 2nd Street Suite 201
City: Milwaukee
State, Zip: WI, 53212
Phone:
Email: heather.ziegelbauer@jacobs.com
Project Name: Tyco Sediment
Site:

Sampler:
Phone:
PWSID:
Lab PM: Fredrick, Sandie
E-Mail: Sandra.Fredrick@et.eurofinsus.com
Carrier Tracking No(s):
State of Origin:
COC No: 180-92965-17079.6
Page: Page 2 of 4
Job #:

Due Date Requested:
TAT Requested (days):
Compliance Project: Δ Yes Δ No
PO #: Purchase Order Requested
WO #:
Project #: 18027362
SSOW#:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B_Moisture	Lloyd_Kahn_Mod - Lloyd Kahn TOC	6020B - Arsenic	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D		
SD006-2023-0.0/0.5'	7/5/23	09:15	C	Sediment			X	X	X	2	
SD006-2023-0.5/1.0'	"	09:20	C	Sediment			X		X	1	
SD006-2023-1.0/1.4	"	09:25	C	Sediment			X		X	1	
SD107-2023-0.0/0.5'	"	10:10	C	Sediment			X	X	X	2	
SD107-2023-0.0/0.5'-FD	"	10:15	C	Sediment			X		X	1	
SD107-2023-0.5/1.0	"	10:20	C	Sediment			X		X	1	
SD107-2023-1.0/1.3	"	10:25	C	Sediment			X		X	1	
SD010-2023-0.0/0.5	7/4/23	13:30	C	Sediment			X	X	X	2	
SD203-2023-0.0/0.55	7/4/23	14:00	C	Sediment			X	X	X	2	
SD203-2023-0.0/0.55-FD	7/4/23	14:05	C	Sediment			X		X	1	
SD007B-2023-0.0/0.2	7/4/23	12:10	C	Sediment			X	X	X	2	

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)
Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by: | Date/Time: 7/5/2023 1545 | Company | Received by: | Date/Time: 7/6/23 830 | Company

Relinquished by: | Date/Time | Company | Received by: | Date/Time | Company

Relinquished by: | Date/Time | Company | Received by: | Date/Time | Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No : | Cooler Temperature(s) °C and Other Remarks

Ver: 06/08/2021

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler:	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 180-92965-17079.7
Client Contact: Heather Ziegelbauer	Phone:	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin:	Page: Page 3 of 4
Company: Jacobs Engineering Group, Inc	PWSID:			Job #:
Address: 1610 N 2nd Street Suite 201	Due Date Requested:			
City: Milwaukee	TAT Requested (days):			
State, Zip: WI, 53212	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order Requested			
Email: heather.ziegelbauer@jacobs.com	WO #:			
Project Name: Tyco Sediment	Project #: 18027362			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B_Moisture	Lloyd_Kahn_Mod - Lloyd Kahn TOC	6020B - Arsenic	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D		
SD202-2023-0.0/0.4' +MS/MSD	7/3/23	1255	C	Sediment	Y	X	X	X	X	4	MS/MSD on sample
SD108-2023-0.0/0.5'	7/4/23	0825	C	Sediment		X	X	X	X	2	
SD108-2023-0.5/1.1'	7/4/23	0845	C	Sediment		X			X	1	
SD108-2023-0.0/0.5'-FD	7/4/23	0830	C	Sediment		X			X	1	
SD015-2023-0.0/0.33' +MS/MSD	7/4/23	1305	C	Sediment	Y	X	X	X	X	4	MS/MSD
SD014-2023-0.0/0.6	7/4/23	0945	C	Sediment		X	X	X	X	2	
SD201-2023-0.0/0.5	7/4/23	1015	C	Sediment		X	X	X	X	2	
SD201-2023-0.5/1.0	7/4/23	1040	C	Sediment		X			X	1	
SD008-2023-0.0/0.25	7/3/23	1230	C	Sediment		X	X	X	X	2	
SD008-2023-0.0/0.25 +FD	7/3/23	1235	C	Sediment		X			X	1	
				Sediment							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 7/5/2023 1545	Company	Received by:	Date/Time: 7/6/23 830	Company
Relinquished by	Date/Time	Company	Received by:	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks

Ver: 06/08/2021

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

4/4

Client Information	Sampler	Lab PM: Fredrick, Sandie	Carrier Tracking No(s)	COC No: 180-92965-17079.1
Client Contact: Heather Ziegelbauer	Phone	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin	Page: Page 4 of 4
Company: Jacobs Engineering Group, Inc	PWSID			Job #:
Address: 1610 N 2nd Street Suite 201	Due Date Requested:			
City: Milwaukee	TAT Requested (days):			
State, Zip: WI, 53212	Compliance Project: Δ Yes Δ No			
Phone	PO #: Purchase Order Requested			
Email: heather.ziegelbauer@jacobs.com	WO #:			
Project Name: Tyco Sediment	Project #: 18027362			
Site	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, Other:
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B_Moisture	Lloyd_Kahn_Mod - Lloyd Kahn TOC	6020B - Arsenic	Total Number of containers	Special Instructions/Note:
Preservation Code:							N	N	D		
SD012-2023-0.0/0.5'	7/4/23	0920	C	Sediment			X	X	X	2	
SD012-2023-0.5/1.0'	7/4/23	0930	C	Sediment			X		X	1	
SD017-2023-0.0/0.25'	7/3/23	1325	C	Sediment			X	X	X	2	
SD204-2023-0.0/0.5	7/4/23	1120	C	Sediment			X	X	X	2	
SD204-2023-0.5/0.75	7/4/23	1110	C	Sediment			X		X	1	
EB01-2023-070423	7/4/23	1555	G	~~Sediment~~ W					X	1	Aqueous Equip blank
EB02-2023-070523	7/5/23	1405	G	~~Sediment~~ W					X	1	" "
				Sediment							
				Sediment							
				Sediment							
				Sediment							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

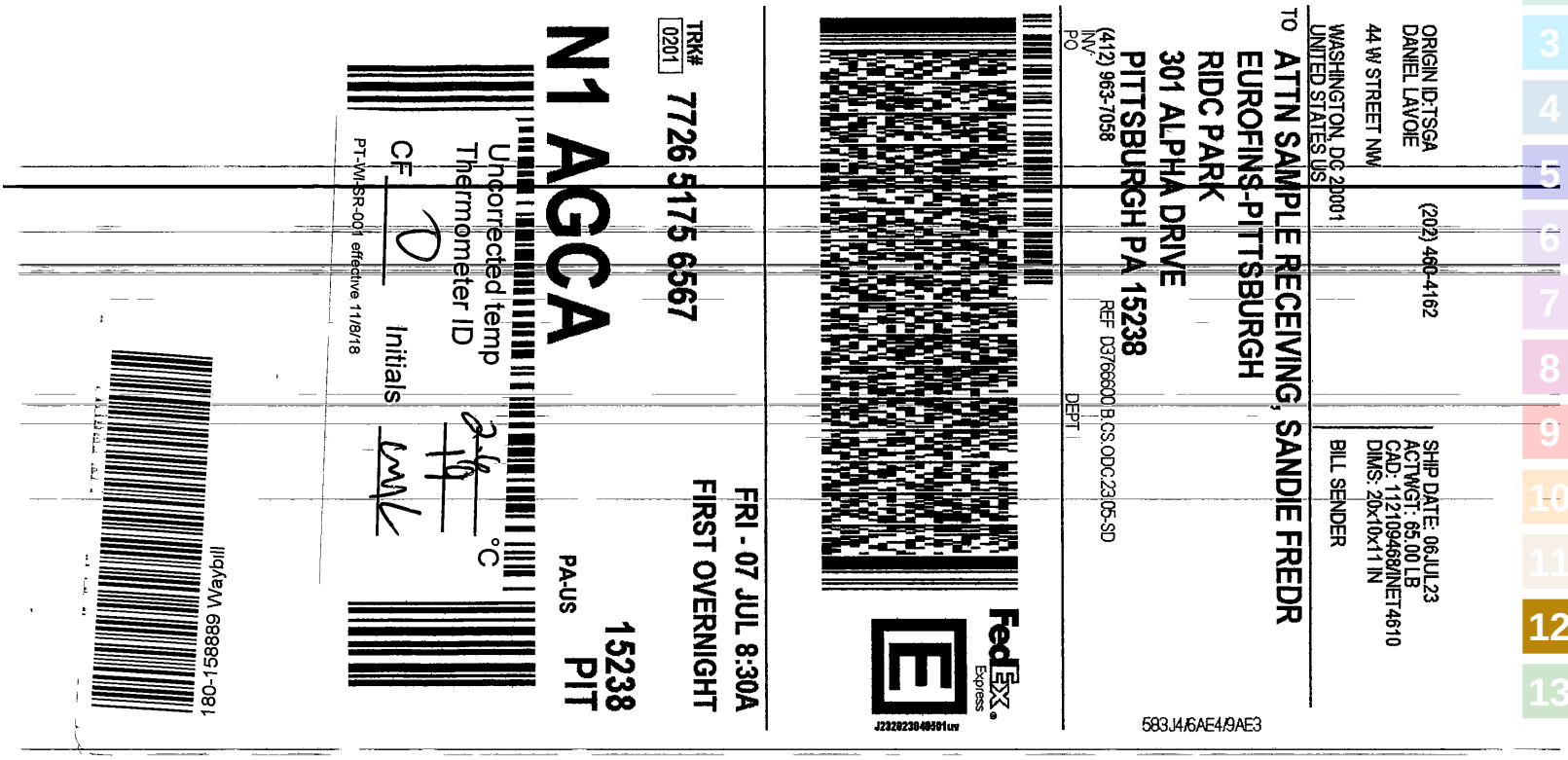
Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by.	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 7/5/2023 1545	Company	Received by:	Date/Time: 7/7/23 830	Company EAA&A
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks

Ver: 06/08/2021



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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 180-158889-1

Login Number: 158889
List Number: 1
Creator: Abernathy, Eric L

List Source: Eurofins Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Heather Ziegelbauer
Jacobs Engineering Group, Inc.
1610 N 2nd Street
Suite 201
Milwaukee, Wisconsin 53212

Generated 8/16/2023 8:13:00 AM

JOB DESCRIPTION

Tyco Sediment

JOB NUMBER

180-158967-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

PA Lab ID: 02-00416

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Pittsburgh Project Manager.

Authorization

Generated
8/16/2023 8:13:00 AM

Authorized for release by
Sandie Fredrick, Project Manager II
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

Table of Contents

Job ID: 180-158967-1

Laboratory: Eurofins Pittsburgh

Narrative

Job Narrative
180-158967-1

Comments
No additional comments.

Receipt
The samples were received on 7/8/2023 9:45 AM. Unless otherwise noted below, 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 1.7º C.

GC Semi VOA
Method Lloyd Kahn: All samples are analyzed in duplicate with the average results reported. For samples SD005B-2023-0.0/0.5' (180-158967-2), SD102-2023-0.0/0.5' (180-158967-6), SD011-2023-0.0/0.5' (180-158967-9), SD011-2023-0.0/0.5' (180-158967-9[MS]) and SD011-2023-0.0/0.5' (180-158967-9[MSD]), the % RPD of the individual result exceeded 50%. The samples were reanalyzed and the %RPD failure repeated due to the non-homogeneous nature of the sample. The results of the original analysis are reported. SD005B-2023-0.0/0.5' (180-158967-2), SD102-2023-0.0/0.5' (180-158967-6), SD011-2023-0.0/0.5' (180-158967-9), SD011-2023-0.0/0.5' (180-158967-9[MS]) and SD011-2023-0.0/0.5' (180-158967-9[MSD])

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

Metals
Method 6020B: The post digestion spike % recovery for arsenic associated with batch 180-441456 was outside of control limits. The associated samples are: SD005B-2023-0.0/0.5' (180-158967-2), SD005B-2023-0.5/1.0' (180-158967-3), SD005B-2023-1.0/1.5' (180-158967-4), SD005B-2023-1.5/1.75' (180-158967-5), SD102-2023-0.0/0.5' (180-158967-6), SD102-2023-0.0/0.5'-FD (180-158967-7), SD102-2023-0.5/0.75' (180-158967-8), SD011-2023-0.0/0.5' (180-158967-9), SD011-2023-0.0/0.5' (180-158967-9[MS]), SD011-2023-0.0/0.5' (180-158967-9[MSD]), SD011-2023-0.5/1.0' (180-158967-10), SD011-2023-1.0/1.2' (180-158967-11), (LCS 180-441194/2-A), (MB 180-441194/1-A), (180-158967-B-9-A PDS) and (180-158967-B-9-A SD ^5).

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.

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

Definitions/Glossary

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Qualifiers

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.

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: Jacobs Engineering Group, Inc. Job ID: 180-158967-1
Project/Site: Tyco Sediment

Laboratory: Eurofins Pittsburgh

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998027800	08-31-23

Laboratory: Eurofins Burlington

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	399140830	08-31-23

Sample Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-158967-1	SD011-2023-0.0/1.0' (0-12")	Sediment	07/06/23 11:30	07/08/23 09:45
180-158967-2	SD005B-2023-0.0/0.5'	Sediment	07/06/23 09:30	07/08/23 09:45
180-158967-3	SD005B-2023-0.5/1.0'	Sediment	07/06/23 09:35	07/08/23 09:45
180-158967-4	SD005B-2023-1.0/1.5'	Sediment	07/06/23 09:40	07/08/23 09:45
180-158967-5	SD005B-2023-1.5/1.75'	Sediment	07/06/23 09:45	07/08/23 09:45
180-158967-6	SD102-2023-0.0/0.5'	Sediment	07/06/23 10:40	07/08/23 09:45
180-158967-7	SD102-2023-0.0/0.5'-FD	Sediment	07/06/23 10:45	07/08/23 09:45
180-158967-8	SD102-2023-0.5/0.75'	Sediment	07/06/23 10:50	07/08/23 09:45
180-158967-9	SD011-2023-0.0/0.5'	Sediment	07/06/23 11:45	07/08/23 09:45
180-158967-10	SD011-2023-0.5/1.0'	Sediment	07/06/23 11:50	07/08/23 09:45
180-158967-11	SD011-2023-1.0/1.2'	Sediment	07/06/23 11:55	07/08/23 09:45
180-158967-12	SD009-2023-0.0/0.9' UP 0.0/1.0'	Sediment	07/04/23 12:00	07/08/23 09:45
180-158967-13	SD018-2023-0.0/0.5' (0.0-6")	Sediment	07/04/23 13:00	07/08/23 09:45
180-158967-14	SD006-2023-0.0/1.0' (0-12")	Sediment	07/04/23 11:00	07/08/23 09:45
180-158967-15	SD005-2023-0.0/1.0' (0-12")	Sediment	07/06/23 09:30	07/08/23 09:45
180-158967-16	EB03-2023-070623	Water	07/06/23 12:35	07/08/23 09:45

Method Summary

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Method	Method Description	Protocol	Laboratory
EPA 6020B	Metals (ICP/MS)	SW846	EET PIT
2540G	SM 2540G	SM22	EET PIT
EPA-Lloyd Kahn	Organic Carbon, Total (TOC)	EPA	EET PIT
D2937	Density of Soil in Place by the Drive-Cylinder Method	ASTM	EET BUR
D422	Grain Size	ASTM	EET BUR
3010A	Preparation, Total Metals	SW846	EET PIT
3050B	Preparation, Metals	SW846	EET PIT

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SM22 = Standard Methods For The Examination Of Water And Wastewater, 22nd Edition

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

Laboratory References:

EET BUR = Eurofins Burlington, 530 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

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

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD011-2023-0.0/1.0' (0-12")

Lab Sample ID: 180-158967-1
Date Collected: 07/06/23 11:30
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D2937		1			193633	07/17/23 20:21	MAP	EET BUR
	Instrument ID: NOEQUIP									
Total/NA	Analysis	D422		1			193933	07/17/23 20:30	MAP	EET BUR
	Instrument ID: D422_import									

Client Sample ID: SD005B-2023-0.0/0.5'

Lab Sample ID: 180-158967-2
Date Collected: 07/06/23 09:30
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			440031	07/11/23 10:41	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD005B-2023-0.0/0.5'

Lab Sample ID: 180-158967-2
Date Collected: 07/06/23 09:30
Matrix: Sediment
Date Received: 07/08/23 09:45
Percent Solids: 30.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.82 g	50 mL	441194	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 22:38	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1			440761	07/18/23 22:11	TLT	EET PIT
	Instrument ID: FLASHSMART									

Client Sample ID: SD005B-2023-0.5/1.0'

Lab Sample ID: 180-158967-3
Date Collected: 07/06/23 09:35
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			440031	07/11/23 10:41	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD005B-2023-0.5/1.0'

Lab Sample ID: 180-158967-3
Date Collected: 07/06/23 09:35
Matrix: Sediment
Date Received: 07/08/23 09:45
Percent Solids: 54.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.95 g	50 mL	441194	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 22:41	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD005B-2023-1.0/1.5'

Lab Sample ID: 180-158967-4
Date Collected: 07/06/23 09:40
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			440031	07/11/23 10:41	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD005B-2023-1.0/1.5'

Lab Sample ID: 180-158967-4
Date Collected: 07/06/23 09:40
Matrix: Sediment
Date Received: 07/08/23 09:45
Percent Solids: 49.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.77 g	50 mL	441194	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 22:44	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD005B-2023-1.5/1.75'

Lab Sample ID: 180-158967-5
Date Collected: 07/06/23 09:45
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			440031	07/11/23 10:41	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD005B-2023-1.5/1.75'

Lab Sample ID: 180-158967-5
Date Collected: 07/06/23 09:45
Matrix: Sediment
Date Received: 07/08/23 09:45
Percent Solids: 49.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.82 g	50 mL	441194	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 22:47	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD102-2023-0.0/0.5'

Lab Sample ID: 180-158967-6
Date Collected: 07/06/23 10:40
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			440031	07/11/23 10:41	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD102-2023-0.0/0.5'

Lab Sample ID: 180-158967-6
Date Collected: 07/06/23 10:40
Matrix: Sediment
Date Received: 07/08/23 09:45
Percent Solids: 56.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.58 g	50 mL	441194	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 22:50	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1			440761	07/18/23 22:34	TLT	EET PIT
	Instrument ID: FLASHSMART									

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD102-2023-0.0/0.5'-FD
Lab Sample ID: 180-158967-7
Date Collected: 07/06/23 10:45
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			440031	07/11/23 10:41	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD102-2023-0.0/0.5'-FD
Lab Sample ID: 180-158967-7
Date Collected: 07/06/23 10:45
Matrix: Sediment
Date Received: 07/08/23 09:45
Percent Solids: 56.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.99 g	50 mL	441194	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 22:53	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD102-2023-0.5/0.75'
Lab Sample ID: 180-158967-8
Date Collected: 07/06/23 10:50
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			440031	07/11/23 10:41	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD102-2023-0.5/0.75'
Lab Sample ID: 180-158967-8
Date Collected: 07/06/23 10:50
Matrix: Sediment
Date Received: 07/08/23 09:45
Percent Solids: 78.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.60 g	50 mL	441194	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 22:56	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD011-2023-0.0/0.5'
Lab Sample ID: 180-158967-9
Date Collected: 07/06/23 11:45
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			440039	07/11/23 11:19	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD011-2023-0.0/0.5'
Lab Sample ID: 180-158967-9
Date Collected: 07/06/23 11:45
Matrix: Sediment
Date Received: 07/08/23 09:45
Percent Solids: 33.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.85 g	50 mL	441194	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 22:16	MRG	EET PIT
	Instrument ID: NEMO									
Total/NA	Analysis	EPA-Lloyd Kahn		1	15.30 mg	15.30 mg	440761	07/18/23 22:57	TLT	EET PIT
	Instrument ID: FLASHSMART									

Client Sample ID: SD011-2023-0.5/1.0'

Lab Sample ID: 180-158967-10
Date Collected: 07/06/23 11:50
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			440031	07/11/23 10:41	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD011-2023-0.5/1.0'

Lab Sample ID: 180-158967-10
Date Collected: 07/06/23 11:50
Matrix: Sediment
Date Received: 07/08/23 09:45
Percent Solids: 44.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.65 g	50 mL	441194	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 22:59	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD011-2023-1.0/1.2'

Lab Sample ID: 180-158967-11
Date Collected: 07/06/23 11:55
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			440031	07/11/23 10:41	CMC	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SD011-2023-1.0/1.2'

Lab Sample ID: 180-158967-11
Date Collected: 07/06/23 11:55
Matrix: Sediment
Date Received: 07/08/23 09:45
Percent Solids: 49.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			0.84 g	50 mL	441194	07/24/23 11:25	S1Z	EET PIT
Total/NA	Analysis	EPA 6020B		1			441456	07/25/23 23:02	MRG	EET PIT
	Instrument ID: NEMO									

Client Sample ID: SD009-2023-0.0/0.9' UP 0.0/1.0'

Lab Sample ID: 180-158967-12
Date Collected: 07/04/23 12:00
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D2937		1			193633	07/17/23 20:21	MAP	EET BUR
	Instrument ID: NOEQUIP									
Total/NA	Analysis	D422		1			193933	07/17/23 20:43	MAP	EET BUR
	Instrument ID: D422_import									

Client Sample ID: SD018-2023-0.0/0.5' (0.0-6")

Lab Sample ID: 180-158967-13
Date Collected: 07/04/23 13:00
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D2937		1			193633	07/17/23 20:21	MAP	EET BUR
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD018-2023-0.0/0.5' (0.0-6")

Lab Sample ID: 180-158967-13
Date Collected: 07/04/23 13:00
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D422		1			193933	07/17/23 20:55	MAP	EET BUR

Client Sample ID: SD006-2023-0.0/1.0' (0-12")

Lab Sample ID: 180-158967-14
Date Collected: 07/04/23 11:00
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D2937		1			193633	07/17/23 20:21	MAP	EET BUR
	Instrument ID: NOEQUIP									
Total/NA	Analysis	D422		1			193933	07/17/23 21:06	MAP	EET BUR
	Instrument ID: D422_import									

Client Sample ID: SD005-2023-0.0/1.0' (0-12")

Lab Sample ID: 180-158967-15
Date Collected: 07/06/23 09:30
Matrix: Sediment
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D2937		1			193633	07/17/23 20:21	MAP	EET BUR
	Instrument ID: NOEQUIP									
Total/NA	Analysis	D422		1			193933	07/17/23 21:18	MAP	EET BUR
	Instrument ID: D422_import									

Client Sample ID: EB03-2023-070623

Lab Sample ID: 180-158967-16
Date Collected: 07/06/23 12:35
Matrix: Water
Date Received: 07/08/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			25 mL	25 mL	443230	08/11/23 12:30	SJM	EET PIT
Total/NA	Analysis	EPA 6020B		1			443495	08/15/23 00:05	KED	EET PIT
	Instrument ID: DORY									

Laboratory References:

EET BUR = Eurofins Burlington, 530 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

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

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Analyst References:

Lab: EET BUR
- Batch Type: Analysis
  - MAP = Mark Peterson

Lab: EET PIT
- Batch Type: Prep
  - S1Z = Sage Ziviello
  - SJM = Shannon Mueller
- Batch Type: Analysis
  - CMC = Candace California
  - KED = Katie Dacko
  - MRG = Mismel Garcia
  - TLT = Tyonah Tipton

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD011-2023-0.0/1.0' (0-12")
Date Collected: 07/06/23 11:30
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-1
Matrix: Sediment

Method: ASTM D2937 - Density of Soil in Place by the Drive-Cylinder Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
In Place Density	0.484				g/cc			07/17/23 20:21	1

Method: ASTM D422 - Grain Size

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			07/17/23 20:30	1
Sieve Size 3 inch - Percent Finer	100.0				% Passing			07/17/23 20:30	1
Sand	47.5				%			07/17/23 20:30	1
Sieve Size 2 inch - Percent Finer	100.0				% Passing			07/17/23 20:30	1
Coarse Sand	0.6				%			07/17/23 20:30	1
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing			07/17/23 20:30	1
Medium Sand	5.4				%			07/17/23 20:30	1
Sieve Size 1 inch - Percent Finer	100.0				% Passing			07/17/23 20:30	1
Fine Sand	41.5				%			07/17/23 20:30	1
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing			07/17/23 20:30	1
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing			07/17/23 20:30	1
Silt	38.6				%			07/17/23 20:30	1
Clay	13.9				%			07/17/23 20:30	1
Sieve Size #4 - Percent Finer	100.0				% Passing			07/17/23 20:30	1
Sieve Size #10 - Percent Finer	99.4				% Passing			07/17/23 20:30	1
Sieve Size #20 - Percent Finer	98.0				% Passing			07/17/23 20:30	1
Sieve Size #40 - Percent Finer	94.0				% Passing			07/17/23 20:30	1
Sieve Size #60 - Percent Finer	82.6				% Passing			07/17/23 20:30	1
Sieve Size #80 - Percent Finer	73.9				% Passing			07/17/23 20:30	1
Sieve Size #100 - Percent Finer	68.5				% Passing			07/17/23 20:30	1
Sieve Size #200 - Percent Finer	52.5				% Passing			07/17/23 20:30	1
Hydrometer Reading 1 - Percent Finer	25.0				% Passing			07/17/23 20:30	1
Hydrometer Reading 2 - Percent Finer	16.6				% Passing			07/17/23 20:30	1
Hydrometer Reading 3 - Percent Finer	15.3				% Passing			07/17/23 20:30	1
Hydrometer Reading 4 - Percent Finer	13.9				% Passing			07/17/23 20:30	1
Hydrometer Reading 5 - Percent Finer	13.9				% Passing			07/17/23 20:30	1
Hydrometer Reading 6 - Percent Finer	8.8				% Passing			07/17/23 20:30	1
Hydrometer Reading 7 - Percent Finer	8.3				% Passing			07/17/23 20:30	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD005B-2023-0.0/0.5'
Date Collected: 07/06/23 09:30
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-2
Matrix: Sediment
Percent Solids: 30.4

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14		0.20	0.12	mg/Kg	☼	07/24/23 11:25	07/25/23 22:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	61000		3300	3200	mg/Kg	☼		07/18/23 22:11	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD005B-2023-0.5/1.0'
Date Collected: 07/06/23 09:35
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-3
Matrix: Sediment
Percent Solids: 54.0

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	71		0.097	0.057	mg/Kg	☼	07/24/23 11:25	07/25/23 22:41	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD005B-2023-1.0/1.5'
Date Collected: 07/06/23 09:40
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-4
Matrix: Sediment
Percent Solids: 49.3

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	140		0.13	0.076	mg/Kg	☼	07/24/23 11:25	07/25/23 22:44	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD005B-2023-1.5/1.75'
Date Collected: 07/06/23 09:45
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-5
Matrix: Sediment
Percent Solids: 49.6

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	170		0.12	0.071	mg/Kg	☼	07/24/23 11:25	07/25/23 22:47	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD102-2023-0.0/0.5'
Date Collected: 07/06/23 10:40
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-6
Matrix: Sediment
Percent Solids: 56.3

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.8		0.15	0.089	mg/Kg	☼	07/24/23 11:25	07/25/23 22:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	22000		1800	1700	mg/Kg	☼		07/18/23 22:34	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD102-2023-0.0/0.5'-FD
Date Collected: 07/06/23 10:45
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-7
Matrix: Sediment
Percent Solids: 56.4

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10		0.089	0.052	mg/Kg	☼	07/24/23 11:25	07/25/23 22:53	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD102-2023-0.5/0.75'
Date Collected: 07/06/23 10:50
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-8
Matrix: Sediment
Percent Solids: 78.3

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.0		0.11	0.062	mg/Kg	☼	07/24/23 11:25	07/25/23 22:56	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD011-2023-0.0/0.5'
Date Collected: 07/06/23 11:45
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-9
Matrix: Sediment
Percent Solids: 33.3

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13		0.18	0.10	mg/Kg	☼	07/24/23 11:25	07/25/23 22:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates (EPA-Lloyd Kahn)	54000		3000	2900	mg/Kg	☼		07/18/23 22:57	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD011-2023-0.5/1.0'
Date Collected: 07/06/23 11:50
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-10
Matrix: Sediment
Percent Solids: 44.6

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14		0.17	0.10	mg/Kg	☼	07/24/23 11:25	07/25/23 22:59	1

Client Sample Results

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD011-2023-1.0/1.2'
Date Collected: 07/06/23 11:55
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-11
Matrix: Sediment
Percent Solids: 49.3

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	21		0.12	0.070	mg/Kg	☼	07/24/23 11:25	07/25/23 23:02	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD009-2023-0.0/0.9' UP 0.0/1.0'
Date Collected: 07/04/23 12:00
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-12
Matrix: Sediment

Method: ASTM D2937 - Density of Soil in Place by the Drive-Cylinder Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
In Place Density	0.442				g/cc			07/17/23 20:21	1

Method: ASTM D422 - Grain Size

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			07/17/23 20:43	1
Sieve Size 3 inch - Percent Finer	100.0				% Passing			07/17/23 20:43	1
Sand	15.8				%			07/17/23 20:43	1
Sieve Size 2 inch - Percent Finer	100.0				% Passing			07/17/23 20:43	1
Coarse Sand	0.0				%			07/17/23 20:43	1
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing			07/17/23 20:43	1
Medium Sand	1.0				%			07/17/23 20:43	1
Sieve Size 1 inch - Percent Finer	100.0				% Passing			07/17/23 20:43	1
Fine Sand	14.8				%			07/17/23 20:43	1
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing			07/17/23 20:43	1
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing			07/17/23 20:43	1
Silt	73.3				%			07/17/23 20:43	1
Clay	10.9				%			07/17/23 20:43	1
Sieve Size #4 - Percent Finer	100.0				% Passing			07/17/23 20:43	1
Sieve Size #10 - Percent Finer	100.0				% Passing			07/17/23 20:43	1
Sieve Size #20 - Percent Finer	99.8				% Passing			07/17/23 20:43	1
Sieve Size #40 - Percent Finer	99.0				% Passing			07/17/23 20:43	1
Sieve Size #60 - Percent Finer	97.0				% Passing			07/17/23 20:43	1
Sieve Size #80 - Percent Finer	95.5				% Passing			07/17/23 20:43	1
Sieve Size #100 - Percent Finer	94.1				% Passing			07/17/23 20:43	1
Sieve Size #200 - Percent Finer	84.2				% Passing			07/17/23 20:43	1
Hydrometer Reading 1 - Percent Finer	21.7				% Passing			07/17/23 20:43	1
Hydrometer Reading 2 - Percent Finer	19.7				% Passing			07/17/23 20:43	1
Hydrometer Reading 3 - Percent Finer	14.8				% Passing			07/17/23 20:43	1
Hydrometer Reading 4 - Percent Finer	11.8				% Passing			07/17/23 20:43	1
Hydrometer Reading 5 - Percent Finer	10.9				% Passing			07/17/23 20:43	1
Hydrometer Reading 6 - Percent Finer	8.2				% Passing			07/17/23 20:43	1
Hydrometer Reading 7 - Percent Finer	7.9				% Passing			07/17/23 20:43	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD018-2023-0.0/0.5' (0.0-6")
Date Collected: 07/04/23 13:00
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-13
Matrix: Sediment

Method: ASTM D2937 - Density of Soil in Place by the Drive-Cylinder Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
In Place Density	0.480				g/cc			07/17/23 20:21	1

Method: ASTM D422 - Grain Size

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			07/17/23 20:55	1
Sieve Size 3 inch - Percent Finer	100.0				% Passing			07/17/23 20:55	1
Sand	38.4				%			07/17/23 20:55	1
Sieve Size 2 inch - Percent Finer	100.0				% Passing			07/17/23 20:55	1
Coarse Sand	0.3				%			07/17/23 20:55	1
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing			07/17/23 20:55	1
Medium Sand	1.0				%			07/17/23 20:55	1
Sieve Size 1 inch - Percent Finer	100.0				% Passing			07/17/23 20:55	1
Fine Sand	37.1				%			07/17/23 20:55	1
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing			07/17/23 20:55	1
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing			07/17/23 20:55	1
Silt	51.8				%			07/17/23 20:55	1
Clay	9.8				%			07/17/23 20:55	1
Sieve Size #4 - Percent Finer	100.0				% Passing			07/17/23 20:55	1
Sieve Size #10 - Percent Finer	99.7				% Passing			07/17/23 20:55	1
Sieve Size #20 - Percent Finer	99.6				% Passing			07/17/23 20:55	1
Sieve Size #40 - Percent Finer	98.7				% Passing			07/17/23 20:55	1
Sieve Size #60 - Percent Finer	96.1				% Passing			07/17/23 20:55	1
Sieve Size #80 - Percent Finer	92.6				% Passing			07/17/23 20:55	1
Sieve Size #100 - Percent Finer	87.8				% Passing			07/17/23 20:55	1
Sieve Size #200 - Percent Finer	61.6				% Passing			07/17/23 20:55	1
Hydrometer Reading 1 - Percent Finer	13.1				% Passing			07/17/23 20:55	1
Hydrometer Reading 2 - Percent Finer	13.1				% Passing			07/17/23 20:55	1
Hydrometer Reading 3 - Percent Finer	10.9				% Passing			07/17/23 20:55	1
Hydrometer Reading 4 - Percent Finer	9.8				% Passing			07/17/23 20:55	1
Hydrometer Reading 5 - Percent Finer	9.8				% Passing			07/17/23 20:55	1
Hydrometer Reading 6 - Percent Finer	8.0				% Passing			07/17/23 20:55	1
Hydrometer Reading 7 - Percent Finer	6.6				% Passing			07/17/23 20:55	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD006-2023-0.0/1.0' (0-12")
Date Collected: 07/04/23 11:00
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-14
Matrix: Sediment

Method: ASTM D2937 - Density of Soil in Place by the Drive-Cylinder Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
In Place Density	0.562				g/cc			07/17/23 20:21	1

Method: ASTM D422 - Grain Size

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			07/17/23 21:06	1
Sieve Size 3 inch - Percent Finer	100.0				% Passing			07/17/23 21:06	1
Sand	24.7				%			07/17/23 21:06	1
Sieve Size 2 inch - Percent Finer	100.0				% Passing			07/17/23 21:06	1
Coarse Sand	0.0				%			07/17/23 21:06	1
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing			07/17/23 21:06	1
Medium Sand	1.7				%			07/17/23 21:06	1
Sieve Size 1 inch - Percent Finer	100.0				% Passing			07/17/23 21:06	1
Fine Sand	23.0				%			07/17/23 21:06	1
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing			07/17/23 21:06	1
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing			07/17/23 21:06	1
Silt	63.3				%			07/17/23 21:06	1
Clay	12.0				%			07/17/23 21:06	1
Sieve Size #4 - Percent Finer	100.0				% Passing			07/17/23 21:06	1
Sieve Size #10 - Percent Finer	100.0				% Passing			07/17/23 21:06	1
Sieve Size #20 - Percent Finer	99.7				% Passing			07/17/23 21:06	1
Sieve Size #40 - Percent Finer	98.3				% Passing			07/17/23 21:06	1
Sieve Size #60 - Percent Finer	95.2				% Passing			07/17/23 21:06	1
Sieve Size #80 - Percent Finer	92.6				% Passing			07/17/23 21:06	1
Sieve Size #100 - Percent Finer	90.2				% Passing			07/17/23 21:06	1
Sieve Size #200 - Percent Finer	75.3				% Passing			07/17/23 21:06	1
Hydrometer Reading 1 - Percent Finer	22.7				% Passing			07/17/23 21:06	1
Hydrometer Reading 2 - Percent Finer	16.8				% Passing			07/17/23 21:06	1
Hydrometer Reading 3 - Percent Finer	14.4				% Passing			07/17/23 21:06	1
Hydrometer Reading 4 - Percent Finer	12.0				% Passing			07/17/23 21:06	1
Hydrometer Reading 5 - Percent Finer	12.0				% Passing			07/17/23 21:06	1
Hydrometer Reading 6 - Percent Finer	7.6				% Passing			07/17/23 21:06	1
Hydrometer Reading 7 - Percent Finer	7.2				% Passing			07/17/23 21:06	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: SD005-2023-0.0/1.0' (0-12")
Date Collected: 07/06/23 09:30
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-15
Matrix: Sediment

Method: ASTM D2937 - Density of Soil in Place by the Drive-Cylinder Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
In Place Density	0.538				g/cc			07/17/23 20:21	1

Method: ASTM D422 - Grain Size

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			07/17/23 21:18	1
Sieve Size 3 inch - Percent Finer	100.0				% Passing			07/17/23 21:18	1
Sand	38.1				%			07/17/23 21:18	1
Sieve Size 2 inch - Percent Finer	100.0				% Passing			07/17/23 21:18	1
Coarse Sand	1.1				%			07/17/23 21:18	1
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing			07/17/23 21:18	1
Medium Sand	2.9				%			07/17/23 21:18	1
Sieve Size 1 inch - Percent Finer	100.0				% Passing			07/17/23 21:18	1
Fine Sand	34.1				%			07/17/23 21:18	1
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing			07/17/23 21:18	1
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing			07/17/23 21:18	1
Silt	53.7				%			07/17/23 21:18	1
Clay	8.2				%			07/17/23 21:18	1
Sieve Size #4 - Percent Finer	100.0				% Passing			07/17/23 21:18	1
Sieve Size #10 - Percent Finer	98.9				% Passing			07/17/23 21:18	1
Sieve Size #20 - Percent Finer	98.4				% Passing			07/17/23 21:18	1
Sieve Size #40 - Percent Finer	96.0				% Passing			07/17/23 21:18	1
Sieve Size #60 - Percent Finer	87.5				% Passing			07/17/23 21:18	1
Sieve Size #80 - Percent Finer	79.7				% Passing			07/17/23 21:18	1
Sieve Size #100 - Percent Finer	74.9				% Passing			07/17/23 21:18	1
Sieve Size #200 - Percent Finer	61.9				% Passing			07/17/23 21:18	1
Hydrometer Reading 1 - Percent Finer	14.4				% Passing			07/17/23 21:18	1
Hydrometer Reading 2 - Percent Finer	10.3				% Passing			07/17/23 21:18	1
Hydrometer Reading 3 - Percent Finer	10.3				% Passing			07/17/23 21:18	1
Hydrometer Reading 4 - Percent Finer	8.2				% Passing			07/17/23 21:18	1
Hydrometer Reading 5 - Percent Finer	8.2				% Passing			07/17/23 21:18	1
Hydrometer Reading 6 - Percent Finer	6.5				% Passing			07/17/23 21:18	1
Hydrometer Reading 7 - Percent Finer	5.1				% Passing			07/17/23 21:18	1

Client: Jacobs Engineering Group, Inc.
Project/Site: Tyco Sediment

Job ID: 180-158967-1

Client Sample ID: EB03-2023-070623
Date Collected: 07/06/23 12:35
Date Received: 07/08/23 09:45

Lab Sample ID: 180-158967-16
Matrix: Water

Method: SW846 EPA 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00039	J	0.0010	0.00028	mg/L		08/11/23 12:30	08/15/23 00:05	1

Particle Size of Soils by ASTM D422

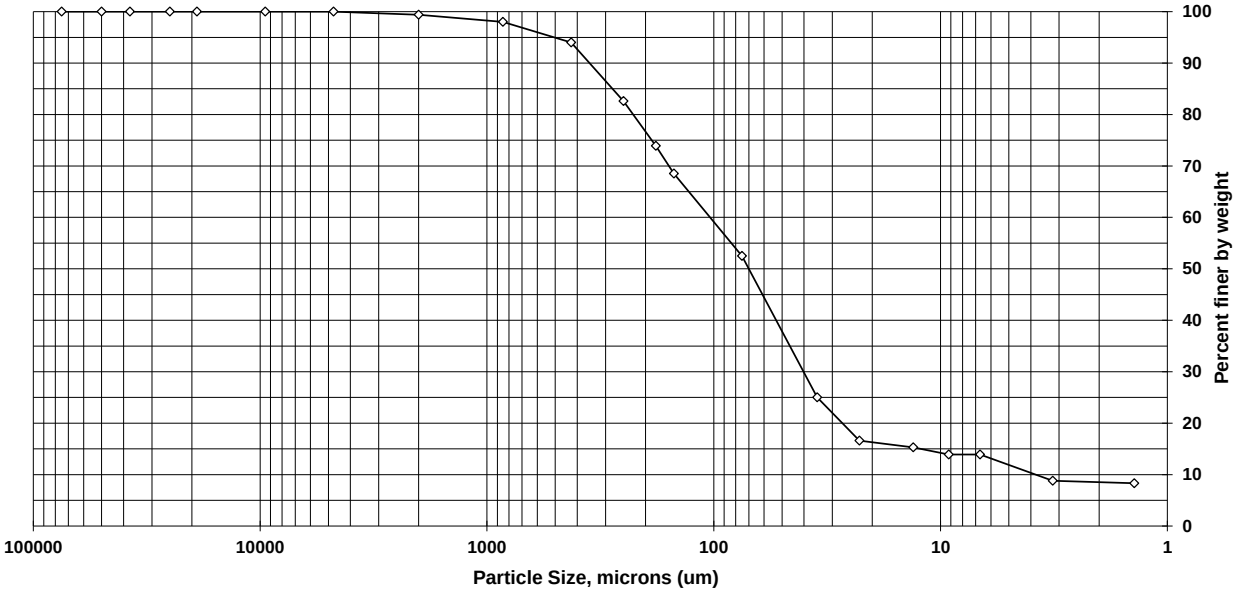
Sample ID: SD011-2023-0.0/1.0'
Lab ID: 180-158967-A-1

Percent Solids: 37.3%
Specific Gravity: 2.650

Date Received: 7/8/2023
Start Date: 7/17/2023
End Date: 7/26/2023

Shape (> #10): rounded

Non-soil material: plant, shells
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.4	0.6
#20	850	98.0	1.4
#40	425	94.0	4.0
#60	250	82.6	11.4
#80	180	73.9	8.7
#100	150	68.5	5.4
#200	75	52.5	16.0
Hyd1	35	25.0	27.5
Hyd2	22.8	16.6	8.4
Hyd3	13.2	15.3	1.3
Hyd4	9.2	13.9	1.4
Hyd5	6.7	13.9	0.0
Hyd6	3.2	8.8	5.1
Hyd7	1.4	8.3	0.5

Soil Classification	Percent of sample
Gravel	0.0
Sand	47.5
Coarse Sand	0.6
Medium Sand	5.4
Fine Sand	41.5
Silt	38.6
Clay	13.9

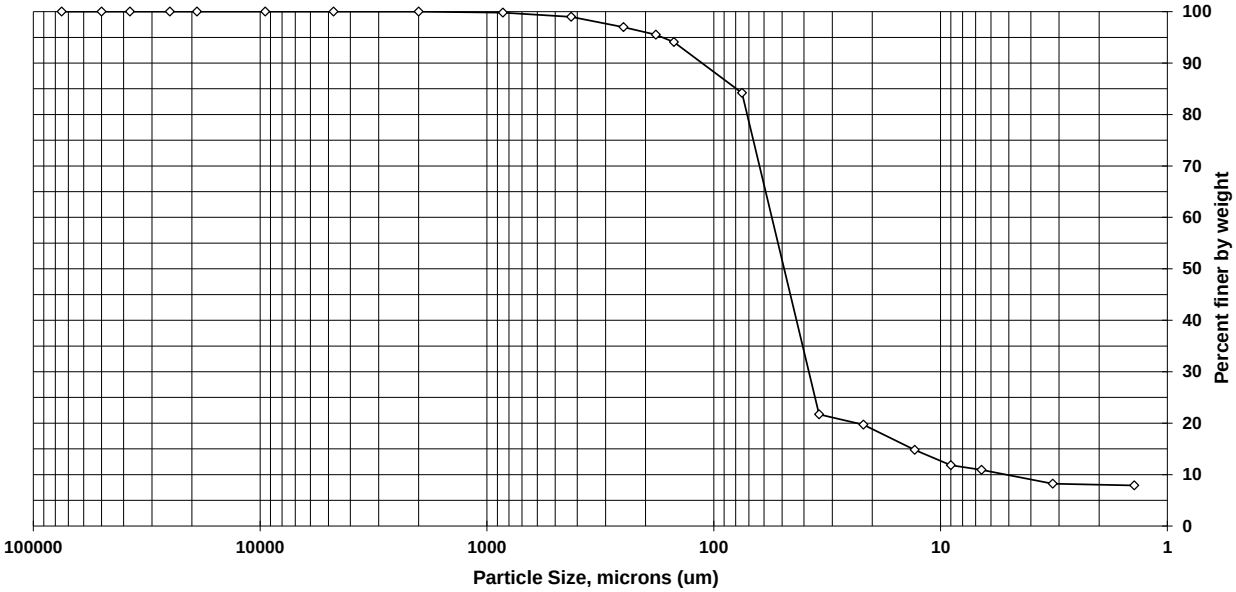
Particle Size of Soils by ASTM D422

Sample ID: SD009-2023-0.0/0.9'
Lab ID: 180-158967-B-12

Percent Solids: 54.7%
Specific Gravity: 2.650

Date Received: 7/8/2023
Start Date: 7/17/2023
End Date: 7/26/2023

Shape (> #10): na
Non-soil material: na
Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.8	0.2
#40	425	99.0	0.8
#60	250	97.0	2.0
#80	180	95.5	1.5
#100	150	94.1	1.4
#200	75	84.2	9.9
Hyd1	34.3	21.7	62.5
Hyd2	21.9	19.7	2.0
Hyd3	13	14.8	4.9
Hyd4	9	11.8	3.0
Hyd5	6.6	10.9	0.9
Hyd6	3.2	8.2	2.7
Hyd7	1.4	7.9	0.3

Soil Classification	Percent of sample
Gravel	0.0
Sand	15.8
Coarse Sand	0.0
Medium Sand	1.0
Fine Sand	14.8
Silt	73.3
Clay	10.9

Particle Size of Soils by ASTM D422

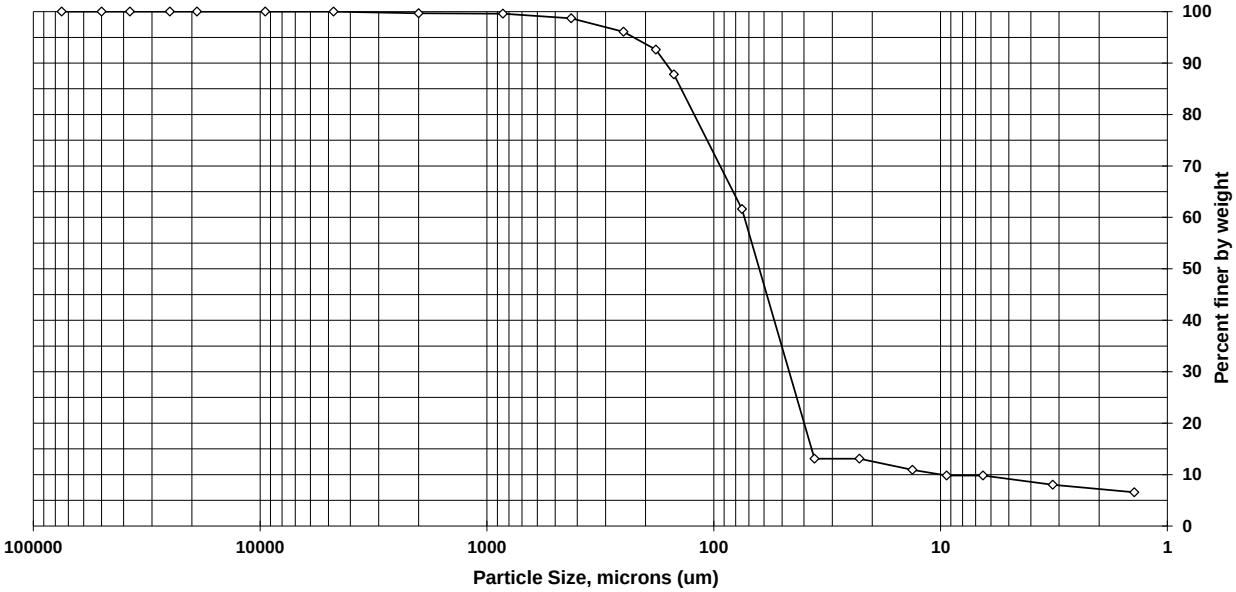
Sample ID: SD018-2023-0.0/0.5'
Lab ID: 180-158967-B-13

Percent Solids: 42.2%
Specific Gravity: 2.650

Date Received: 7/8/2023
Start Date: 7/17/2023
End Date: 7/26/2023

Shape (> #10): na

Non-soil material: shells
Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.7	0.3
#20	850	99.6	0.1
#40	425	98.7	0.9
#60	250	96.1	2.6
#80	180	92.6	3.5
#100	150	87.8	4.8
#200	75	61.6	26.2
Hyd1	36	13.1	48.5
Hyd2	22.8	13.1	0.0
Hyd3	13.3	10.9	2.2
Hyd4	9.4	9.8	1.1
Hyd5	6.5	9.8	0.0
Hyd6	3.2	8.0	1.8
Hyd7	1.4	6.6	1.5

Soil Classification	Percent of sample
Gravel	0.0
Sand	38.4
Coarse Sand	0.3
Medium Sand	1.0
Fine Sand	37.1
Silt	51.8
Clay	9.8

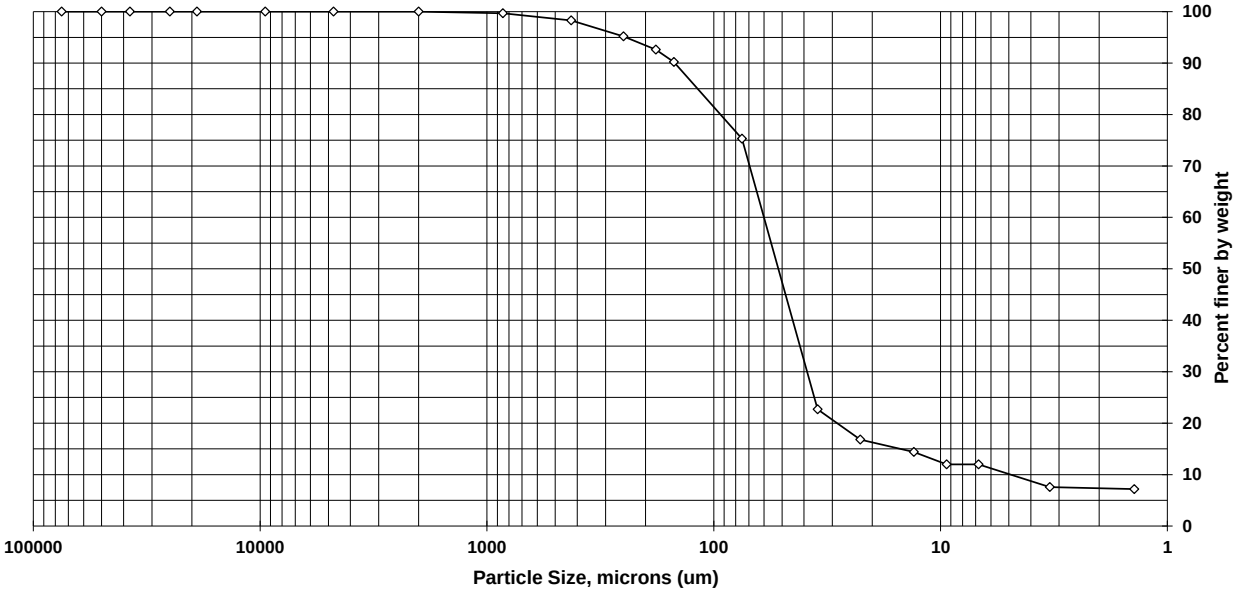
Particle Size of Soils by ASTM D422

Sample ID: SD006-2023-0.0/1.0'
Lab ID: 180-158967-A-14

Percent Solids: 47.7%
Specific Gravity: 2.650

Date Received: 7/8/2023
Start Date: 7/17/2023
End Date: 7/26/2023

Shape (> #10): na
Non-soil material: na
Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.7	0.3
#40	425	98.3	1.4
#60	250	95.2	3.1
#80	180	92.6	2.6
#100	150	90.2	2.4
#200	75	75.3	14.9
Hyd1	34.8	22.7	52.6
Hyd2	22.6	16.8	5.9
Hyd3	13.1	14.4	2.4
Hyd4	9.4	12.0	2.4
Hyd5	6.8	12.0	0.0
Hyd6	3.3	7.6	4.4
Hyd7	1.4	7.2	0.4

Soil Classification	Percent of sample
Gravel	0.0
Sand	24.7
Coarse Sand	0.0
Medium Sand	1.7
Fine Sand	23.0
Silt	63.3
Clay	12.0

Particle Size of Soils by ASTM D422

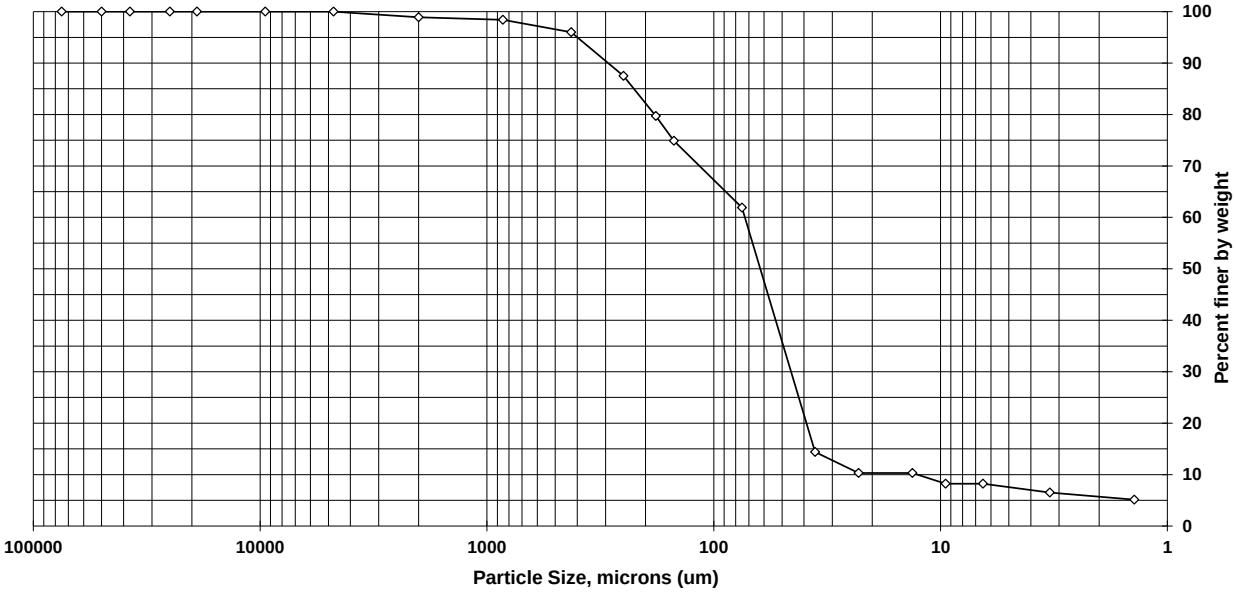
Sample ID: SD005-2023-0.0/1.0'
Lab ID: 180-158967-A-15

Percent Solids: 57.7%
Specific Gravity: 2.650

Date Received: 7/8/2023
Start Date: 7/17/2023
End Date: 7/26/2023

Shape (> #10): rounded

Non-soil material: plant, shells
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	98.9	1.1
#20	850	98.4	0.5
#40	425	96.0	2.4
#60	250	87.5	8.5
#80	180	79.7	7.8
#100	150	74.9	4.8
#200	75	61.9	13.0
Hyd1	35.7	14.4	47.5
Hyd2	23	10.3	4.1
Hyd3	13.3	10.3	0.0
Hyd4	9.5	8.2	2.1
Hyd5	6.5	8.2	0.0
Hyd6	3.3	6.5	1.7
Hyd7	1.4	5.1	1.4

Soil Classification	Percent of sample
Gravel	0.0
Sand	38.1
Coarse Sand	1.1
Medium Sand	2.9
Fine Sand	34.1
Silt	53.7
Clay	8.2

Sediment Grain Size - D422

Client	
Client Sample ID	SD011-2023-0.0/1.0'
Lab Sample ID	180-158967-A-1

Date Received	7/8/2023
Start Date	07/17/2023 20:30
End Date	07/26/2023 14:28

Dry Weight Determination

Tin Weight	1.01	g
Wet Sample + Tin	24.61	g
Dry Sample + Tin	9.81	g
% Moisture	62.71	%

Non-soil material:	plant, shells
Shape (> #10):	rounded
Hardness (> #10):	hard

Date/Time in oven	07/17/2023 20:32
Date/Time out of oven	07/18/2023 15:08

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	47.81	203.09	155.28
Sample Weight (Oven Dried)			57.9

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0.32
Sample <#10			57.6
% Passing #10			37.1

Hydrometer Data	
Serial Number	542321
Calib. Date (mm/dd/yyyy)	12/10/2021
Low Temp (C)	17.0
Reading at Low Temp	1.0035
High Temp (C)	23.0
Reading at High Temp	1.0025
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006333333
Default Soil Gravity	2.6500

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
3 inch	75000			0.00	g	100.0	Gravel	
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000	462.40	462.72	0.32	g	99.4	Sand	Coarse
#20	850	376.55	377.37	0.82	g	98.0	Sand	Medium
#40	425	365.15	367.49	2.34	g	94.0	Sand	Medium
#60	250	347.19	353.81	6.62	g	82.6	Sand	Fine
#80	180	334.77	339.78	5.01	g	73.9	Sand	Fine
#100	150	326.65	329.76	3.11	g	68.5	Sand	Fine
#200	75	311.98	321.23	9.25	g	52.5	Sand	Fine
				0.00	g	52.5		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	57.9

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0120	20.0	35	25	Silt	
5	5	1.0090	20.0	22.8	16.6	Silt	
15	15	1.0085	20.0	13.2	15.3	Silt	
30	31	1.0080	20.0	9.2	13.9	Silt	
60	59	1.0080	20.0	6.7	13.9	Silt	
250	265	1.0060	21.0	3.2	8.78	Clay	
1440	1412	1.0060	20.0	1.4	8.32	Clay	

Sediment Grain Size - D422

Client	
Client Sample ID	SD009-2023-0.0/0.9'
Lab Sample ID	180-158967-B-12

Date Received	7/8/2023
Start Date	07/17/2023 20:43
End Date	07/26/2023 14:32

Dry Weight Determination

Tin Weight	1.01	g
Wet Sample + Tin	35.31	g
Dry Sample + Tin	19.77	g
% Moisture	45.31	%

Non-soil material:	na
Shape (> #10):	na
Hardness (> #10):	na

Date/Time in oven	07/17/2023 20:45
Date/Time out of oven	07/18/2023 15:08

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	43.99	192.78	148.79
Sample Weight (Oven Dried)			81.4

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0
Sample <#10			81.4
% Passing #10			54.7

Hydrometer Data	
Serial Number	542321
Calib. Date (mm/dd/yyyy)	12/10/2021
Low Temp (C)	17.0
Reading at Low Temp	1.0035
High Temp (C)	23.0
Reading at High Temp	1.0025
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006333333
Default Soil Gravity	2.6500

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
3 inch	75000			0.00	g	100.0	Gravel	
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000			0.00	g	100.0	Sand	Coarse
#20	850	372.15	372.35	0.20	g	99.8	Sand	Medium
#40	425	352.34	352.97	0.63	g	99.0	Sand	Medium
#60	250	350.86	352.48	1.62	g	97.0	Sand	Fine
#80	180	318.27	319.52	1.25	g	95.5	Sand	Fine
#100	150	327.35	328.47	1.12	g	94.1	Sand	Fine
#200	75	313.32	321.37	8.05	g	84.2	Sand	Fine
				0.00	g	84.2		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	81.4

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0140	20.0	34.3	21.7	Silt	
5	5	1.0130	20.0	21.9	19.7	Silt	
15	15	1.0105	20.0	13	14.8	Silt	
30	32	1.0090	20.0	9	11.8	Silt	
60	60	1.0085	20.0	6.6	10.9	Silt	
250	259	1.0070	21.0	3.2	8.22	Clay	
1440	1406	1.0070	20.0	1.4	7.89	Clay	

Sediment Grain Size - D422

Client	
Client Sample ID	SD018-2023-0.0/0.5'
Lab Sample ID	180-158967-B-13

Date Received	7/8/2023
Start Date	07/17/2023 20:55
End Date	07/26/2023 14:43

Dry Weight Determination

Tin Weight	1.01	g
Wet Sample + Tin	19.18	g
Dry Sample + Tin	8.68	g
% Moisture	57.79	%

Non-soil material:	shells
Shape (> #10):	na
Hardness (> #10):	na

Date/Time in oven	07/17/2023 20:56
Date/Time out of oven	07/18/2023 15:09

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	47.46	221.48	174.02
Sample Weight (Oven Dried)			73.5

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0.25
Sample <#10			73.3
% Passing #10			42.1

Hydrometer Data	
Serial Number	542321
Calib. Date (mm/dd/yyyy)	12/10/2021
Low Temp (C)	17.0
Reading at Low Temp	1.0035
High Temp (C)	23.0
Reading at High Temp	1.0025
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006333333
Default Soil Gravity	2.6500

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
3 inch	75000			0.00	g	100.0	Gravel	
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000	462.40	462.65	0.25	g	99.7	Sand	Coarse
#20	850	376.55	376.61	0.06	g	99.6	Sand	Medium
#40	425	365.15	365.81	0.66	g	98.7	Sand	Medium
#60	250	347.19	349.12	1.93	g	96.1	Sand	Fine
#80	180	334.77	337.35	2.58	g	92.6	Sand	Fine
#100	150	326.65	330.16	3.51	g	87.8	Sand	Fine
#200	75	311.98	331.23	19.25	g	61.6	Sand	Fine
				0.00	g	61.6		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	73.5

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0090	20.0	36	13.1	Silt	
5	5	1.0090	20.0	22.8	13.1	Silt	
15	15	1.0080	20.0	13.3	10.9	Silt	
30	30	1.0075	20.0	9.4	9.83	Silt	
60	63	1.0075	20.0	6.5	9.83	Silt	
250	253	1.0065	21.0	3.2	8.01	Clay	
1440	1400	1.0060	20.0	1.4	6.56	Clay	

Sediment Grain Size - D422

Client	
Client Sample ID	SD006-2023-0.0/1.0'
Lab Sample ID	180-158967-A-14

Date Received	7/8/2023
Start Date	07/17/2023 21:06
End Date	07/26/2023 14:47

Dry Weight Determination

Tin Weight	1.00	g
Wet Sample + Tin	27.92	g
Dry Sample + Tin	13.84	g
% Moisture	52.30	%

Non-soil material:	na
Shape (> #10):	na
Hardness (> #10):	na

Date/Time in oven	07/17/2023 21:07
Date/Time out of oven	07/18/2023 15:09

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	47.81	188.55	140.74
Sample Weight (Oven Dried)			67.1

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0
Sample <#10			67.1
% Passing #10			47.7

Hydrometer Data

Serial Number	542321
Calib. Date (mm/dd/yyyy)	12/10/2021
Low Temp (C)	17.0
Reading at Low Temp	1.0035
High Temp (C)	23.0
Reading at High Temp	1.0025
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006333333
Default Soil Gravity	2.6500

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
3 inch	75000			0.00	g	100.0	Gravel	
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000			0.00	g	100.0	Sand	Coarse
#20	850	372.15	372.34	0.19	g	99.7	Sand	Medium
#40	425	352.34	353.31	0.97	g	98.3	Sand	Medium
#60	250	350.86	352.92	2.06	g	95.2	Sand	Fine
#80	180	318.27	320.00	1.73	g	92.6	Sand	Fine
#100	150	327.35	328.97	1.62	g	90.2	Sand	Fine
#200	75	313.32	323.34	10.02	g	75.3	Sand	Fine
				0.00	g	75.3		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	67.1

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0125	20.0	34.8	22.7	Silt	
5	5	1.0100	20.0	22.6	16.8	Silt	
15	15	1.0090	20.0	13.1	14.4	Silt	
30	30	1.0080	20.0	9.4	12	Silt	
60	57	1.0080	20.0	6.8	12	Silt	
250	247	1.0060	21.0	3.3	7.58	Clay	
1440	1394	1.0060	20.0	1.4	7.18	Clay	

Sediment Grain Size - D422

Client	
Client Sample ID	SD005-2023-0.0/1.0'
Lab Sample ID	180-158967-A-15

Date Received	7/8/2023
Start Date	07/17/2023 21:18
End Date	07/26/2023 14:59

Dry Weight Determination

Tin Weight	1.00	g
Wet Sample + Tin	22.69	g
Dry Sample + Tin	13.51	g
% Moisture	42.32	%

Non-soil material:	plant, shells
Shape (> #10):	rounded
Hardness (> #10):	hard

Date/Time in oven	07/17/2023 21:19
Date/Time out of oven	07/18/2023 15:10

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	47.46	183.10	135.64
Sample Weight (Oven Dried)			78.2

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0.89
Sample <#10			77.3
% Passing #10			57

Hydrometer Data	
Serial Number	542321
Calib. Date (mm/dd/yyyy)	12/10/2021
Low Temp (C)	17.0
Reading at Low Temp	1.0035
High Temp (C)	23.0
Reading at High Temp	1.0025
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006333333
Default Soil Gravity	2.6500

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
3 inch	75000			0.00	g	100.0	Gravel	
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000	462.40	463.29	0.89	g	98.9	Sand	Coarse
#20	850	376.55	376.95	0.40	g	98.4	Sand	Medium
#40	425	365.15	367.03	1.88	g	96.0	Sand	Medium
#60	250	347.19	353.83	6.64	g	87.5	Sand	Fine
#80	180	334.77	340.89	6.12	g	79.7	Sand	Fine
#100	150	326.65	330.42	3.77	g	74.9	Sand	Fine
#200	75	311.98	322.12	10.14	g	61.9	Sand	Fine
				0.00	g	61.9		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	78.2

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0100	20.0	35.7	14.4	Silt	
5	5	1.0080	20.0	23	10.3	Silt	
15	15	1.0080	20.0	13.3	10.3	Silt	
30	30	1.0070	20.0	9.5	8.22	Silt	
60	63	1.0070	20.0	6.5	8.22	Silt	
250	241	1.0060	21.0	3.3	6.5	Clay	
1440	1388	1.0055	20.0	1.4	5.13	Clay	

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 180-441194/1-A
Matrix: Sediment
Analysis Batch: 441456

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 441194

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.056		0.096	0.056	mg/Kg		07/24/23 11:25	07/25/23 22:10	1

Lab Sample ID: LCS 180-441194/2-A
Matrix: Sediment
Analysis Batch: 441456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 441194

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	96.2	105		mg/Kg		109	80 - 120

Lab Sample ID: 180-158967-9 MS
Matrix: Sediment
Analysis Batch: 441456

Client Sample ID: SD011-2023-0.0/0.5'
Prep Type: Total/NA
Prep Batch: 441194

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	13		185	205		mg/Kg	☼	103	75 - 125

Lab Sample ID: 180-158967-9 MSD
Matrix: Sediment
Analysis Batch: 441456

Client Sample ID: SD011-2023-0.0/0.5'
Prep Type: Total/NA
Prep Batch: 441194

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	13		177	189		mg/Kg	☼	99	75 - 125	8	20

Lab Sample ID: MB 180-443027/1-A
Matrix: Water
Analysis Batch: 443188

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 443027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00028		0.0010	0.00028	mg/L		08/10/23 09:09	08/11/23 01:20	1

Lab Sample ID: MB 180-443230/1-A
Matrix: Water
Analysis Batch: 443495

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 443230

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00028		0.0010	0.00028	mg/L		08/11/23 12:30	08/14/23 23:47	1

Lab Sample ID: LCS 180-443230/2-A
Matrix: Water
Analysis Batch: 443495

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 443230

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1.00	0.997		mg/L		100	80 - 120

Lab Sample ID: LCSD 180-443230/3-A
Matrix: Water
Analysis Batch: 443495

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 443230

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	1.00	0.980		mg/L		98	80 - 120	2	20

Method: EPA-Lloyd Kahn - Organic Carbon, Total (TOC)

Lab Sample ID: MB 180-440761/4
Matrix: Sediment
Analysis Batch: 440761

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	<970		1000	970	mg/Kg			07/18/23 19:02	1

Lab Sample ID: LCS 180-440761/5
Matrix: Sediment
Analysis Batch: 440761

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon - Duplicates			40000	39300		mg/Kg		98	75 - 125		

Lab Sample ID: 180-158967-9 MS
Matrix: Sediment
Analysis Batch: 440761

Client Sample ID: SD011-2023-0.0/0.5'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon - Duplicates	54000		80400	122000		mg/Kg	☼	84	75 - 125		

Lab Sample ID: 180-158967-9 MSD
Matrix: Sediment
Analysis Batch: 440761

Client Sample ID: SD011-2023-0.0/0.5'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon - Duplicates	54000		85600	126000		mg/Kg	☼	84	75 - 125	4	20

Metals

Prep Batch: 441194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158967-2	SD005B-2023-0.0/0.5'	Total/NA	Sediment	3050B	
180-158967-3	SD005B-2023-0.5/1.0'	Total/NA	Sediment	3050B	
180-158967-4	SD005B-2023-1.0/1.5'	Total/NA	Sediment	3050B	
180-158967-5	SD005B-2023-1.5/1.75'	Total/NA	Sediment	3050B	
180-158967-6	SD102-2023-0.0/0.5'	Total/NA	Sediment	3050B	
180-158967-7	SD102-2023-0.0/0.5'-FD	Total/NA	Sediment	3050B	
180-158967-8	SD102-2023-0.5/0.75'	Total/NA	Sediment	3050B	
180-158967-9	SD011-2023-0.0/0.5'	Total/NA	Sediment	3050B	
180-158967-10	SD011-2023-0.5/1.0'	Total/NA	Sediment	3050B	
180-158967-11	SD011-2023-1.0/1.2'	Total/NA	Sediment	3050B	
MB 180-441194/1-A	Method Blank	Total/NA	Sediment	3050B	
LCS 180-441194/2-A	Lab Control Sample	Total/NA	Sediment	3050B	
180-158967-9 MS	SD011-2023-0.0/0.5'	Total/NA	Sediment	3050B	
180-158967-9 MSD	SD011-2023-0.0/0.5'	Total/NA	Sediment	3050B	

Analysis Batch: 441456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158967-2	SD005B-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441194
180-158967-3	SD005B-2023-0.5/1.0'	Total/NA	Sediment	EPA 6020B	441194
180-158967-4	SD005B-2023-1.0/1.5'	Total/NA	Sediment	EPA 6020B	441194
180-158967-5	SD005B-2023-1.5/1.75'	Total/NA	Sediment	EPA 6020B	441194
180-158967-6	SD102-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441194
180-158967-7	SD102-2023-0.0/0.5'-FD	Total/NA	Sediment	EPA 6020B	441194
180-158967-8	SD102-2023-0.5/0.75'	Total/NA	Sediment	EPA 6020B	441194
180-158967-9	SD011-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441194
180-158967-10	SD011-2023-0.5/1.0'	Total/NA	Sediment	EPA 6020B	441194
180-158967-11	SD011-2023-1.0/1.2'	Total/NA	Sediment	EPA 6020B	441194
MB 180-441194/1-A	Method Blank	Total/NA	Sediment	EPA 6020B	441194
LCS 180-441194/2-A	Lab Control Sample	Total/NA	Sediment	EPA 6020B	441194
180-158967-9 MS	SD011-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441194
180-158967-9 MSD	SD011-2023-0.0/0.5'	Total/NA	Sediment	EPA 6020B	441194

Prep Batch: 443027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-443027/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 443188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-443027/1-A	Method Blank	Total/NA	Water	EPA 6020B	443027

Prep Batch: 443230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158967-16	EB03-2023-070623	Total/NA	Water	3010A	
MB 180-443230/1-A	Method Blank	Total/NA	Water	3010A	
LCS 180-443230/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 180-443230/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	

Analysis Batch: 443495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158967-16	EB03-2023-070623	Total/NA	Water	EPA 6020B	443230
MB 180-443230/1-A	Method Blank	Total/NA	Water	EPA 6020B	443230

Metals (Continued)

Analysis Batch: 443495 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-443230/2-A	Lab Control Sample	Total/NA	Water	EPA 6020B	443230
LCSD 180-443230/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 6020B	443230

General Chemistry

Analysis Batch: 440031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158967-2	SD005B-2023-0.0/0.5'	Total/NA	Sediment	2540G	
180-158967-3	SD005B-2023-0.5/1.0'	Total/NA	Sediment	2540G	
180-158967-4	SD005B-2023-1.0/1.5'	Total/NA	Sediment	2540G	
180-158967-5	SD005B-2023-1.5/1.75'	Total/NA	Sediment	2540G	
180-158967-6	SD102-2023-0.0/0.5'	Total/NA	Sediment	2540G	
180-158967-7	SD102-2023-0.0/0.5'-FD	Total/NA	Sediment	2540G	
180-158967-8	SD102-2023-0.5/0.75'	Total/NA	Sediment	2540G	
180-158967-10	SD011-2023-0.5/1.0'	Total/NA	Sediment	2540G	
180-158967-11	SD011-2023-1.0/1.2'	Total/NA	Sediment	2540G	
180-158967-10 DU	SD011-2023-0.5/1.0'	Total/NA	Sediment	2540G	

Analysis Batch: 440039

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158967-9	SD011-2023-0.0/0.5'	Total/NA	Sediment	2540G	
180-158967-9 DU	SD011-2023-0.0/0.5'	Total/NA	Sediment	2540G	

Analysis Batch: 440761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158967-2	SD005B-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158967-6	SD102-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158967-9	SD011-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	
MB 180-440761/4	Method Blank	Total/NA	Sediment	EPA-Lloyd Kahn	
LCS 180-440761/5	Lab Control Sample	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158967-9 MS	SD011-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	
180-158967-9 MSD	SD011-2023-0.0/0.5'	Total/NA	Sediment	EPA-Lloyd Kahn	

Geotechnical

Analysis Batch: 193633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158967-1	SD011-2023-0.0/1.0' (0-12")	Total/NA	Sediment	D2937	
180-158967-12	SD009-2023-0.0/0.9' UP 0.0/1.0'	Total/NA	Sediment	D2937	
180-158967-13	SD018-2023-0.0/0.5' (0.0-6")	Total/NA	Sediment	D2937	
180-158967-14	SD006-2023-0.0/1.0' (0-12")	Total/NA	Sediment	D2937	
180-158967-15	SD005-2023-0.0/1.0' (0-12")	Total/NA	Sediment	D2937	

Analysis Batch: 193933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-158967-1	SD011-2023-0.0/1.0' (0-12")	Total/NA	Sediment	D422	
180-158967-12	SD009-2023-0.0/0.9' UP 0.0/1.0'	Total/NA	Sediment	D422	
180-158967-13	SD018-2023-0.0/0.5' (0.0-6")	Total/NA	Sediment	D422	
180-158967-14	SD006-2023-0.0/1.0' (0-12")	Total/NA	Sediment	D422	
180-158967-15	SD005-2023-0.0/1.0' (0-12")	Total/NA	Sediment	D422	

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

#1

Chain of Custody Record

180-158967 Chain of Custody

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1 of 1

Client Information	Sampler: J. Tortomas / D. Lavoie	Lab PM: Fredrick, Sandie	No: -92965-17079.11
Client Contact: Heather Ziegelbauer	Phone: 262-247-5195	E-Mail: Sandra Fredrick@et eurofinsus com	State of Origin: WI	Page: Page 1 of 1
Company: Jacobs Engineering Group, Inc	PWSID:			Job #:
Address: 1610 N 2nd Street Suite 201	Due Date Requested:			
City: Milwaukee	TAT Requested (days): Std			
State, Zip: WI, 53212	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order Requested			
Email: heather ziegelbauer@jacobs.com	WO #:			
Project Name: Tyco Sediment	Project #: 18027362			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B, Moisture	Lloyd_Kahn_Mod - Lloyd Kahn TOC	6020B - Arsenic	Bulk Density, ASTM D937	Grain Size, ASTM D422	Total Number of containers	Special Instructions/Note:
Preservation Code:							N	N	D				
SD011-2023-0.0/1.0' (0-12")	7/6/2023	1130	G	Sediment						X	X	2	2 core tubes for grain size
SD005B-~~0.0~~-2023-0.0/0.5'	"	"	0930	C			X	X	X			~~2~~ 2	
SD005B-2023-0.5/1.0'	"	"	0935	C			X		X			1	
SD005B-2023-1.0/1.5'	"	"	0940	C			X		X			1	
SD005B-2023-1.5/1.75'	"	"	0945	C			X		X			1	
SD102-2023-0.0/0.5'	"	"	1040	C			X	X	X			2	
SD102-2023-0.0/0.5'-FD	"	"	1045	C			X		X			1	
SD102-2023-0.5/0.75	"	"	1050	C			X		X			1	
SD011-2023-0.0/0.5+MSD	"	"	1145	C	Water		Y X	X	X			~~2~~ 3	MS/MSD
SD011-2023 0.5/1.0	"	"	1150	C	Water		X		X			1	
SD-011-2023-1.0/1.2	"	"	1155	C	Water		X		X			1	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested. I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by.		Date:	Time:	Method of Shipment:			
Relinquished by:	Date/Time: 7/7/23 0915	Company	Received by:	Date/Time: 7/8/23 9:4	Company		
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company		
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company		

Custody Seals Intact: Δ Yes Δ No | Custody Seal No | Cooler Temperature(s) °C and Other Remarks.

Ver: 06/08/2021

8/16/2023

#2

1 of 1

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone. 412-963-7058 Fax. 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: J. Tortomasi / D. Lavoie	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 180-92965-17079.12
Client Contact: Heather Ziegelbauer	Phone: 262-247-5195	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: WI	Page: Page 1 of 1
Company: Jacobs Engineering Group, Inc.	PWSID:			Job #:
Address: 1610 N 2nd Street Suite 201	Due Date Requested:			
City: Milwaukee	TAT Requested (days): Std			
State, Zip: WI, 53212	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order Requested			
Email: heather.ziegelbauer@jacobs.com	WO #:			
Project Name: Tyco Sediment	Project #: 18027362			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B, Moisture	Lloyd_Kahn_Mod - Lloyd Kahn TOC	6020B - Arsenic	Bulk density ASTM 2937	Grain Size ASTMD422	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D				
SD009-2023-00/0.9 wl 0.0/1.0	7/4/23	12:00	G	S Water						X	X	2	2 core tubes for Geotech
SD018-2023-00/0.5'(0.0-6")	7/4/23	13:00	G	S Water						X	X	2	2 core tubes for Geotech; 1 partially full
SD006-2023-0.0/1.0'(0-12")	7/4/23	11:00	G	S Water						X	X	1	1 core tube for Geotech
SD005-2023-0.0/1.0'(0-12")	7/6/23	9:30	G	S						X	X	2	2 core tubes for Geotech
EB03-2023-070623	7/6/23	12:35	G	W					X				Equipment blank (aqueous)

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

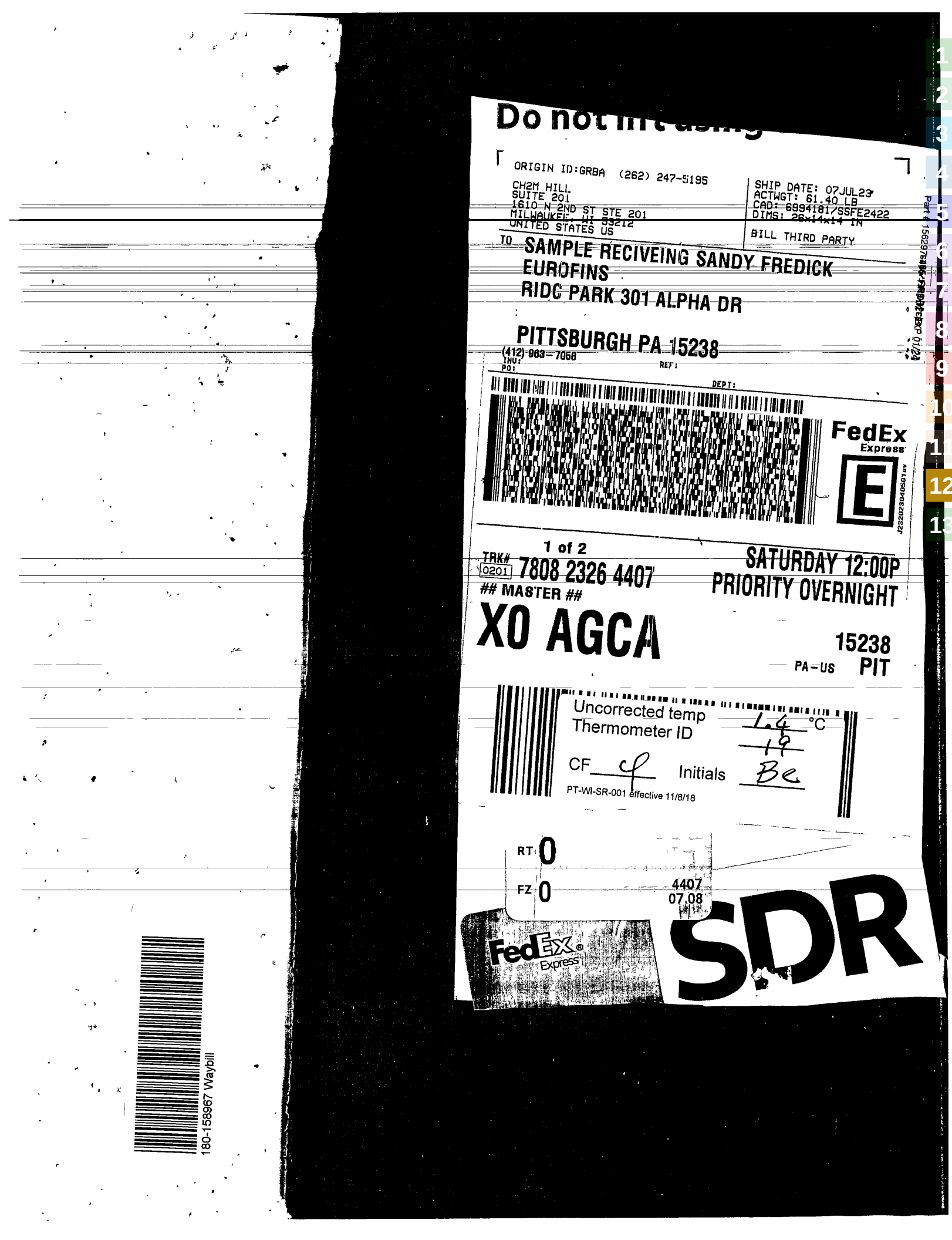
Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 7/7/23 0915	Company	Received by:	Date/Time: 7/7/23	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks

Ver: 06/08/2021

8/16/2023


Do not lift using
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CH2M HILL
SUITE 201
1610 N 2ND ST STE 201
MILWAUKEE, WI 53212
UNITED STATES US
SHIP DATE: 07JUL23
ACTWGT: 61.40 LB
CAD: 6994101/SSFE2422
DIMS: 26x14x14 IN
BILL THIRD PARTY
TO SAMPLE RECIVEING SANDY FREDICK
EUROFINS
RIDC PARK 301 ALPHA DR
PITTSBURGH PA 15238
(412) 963-7058
INV:
PO:
REF:
DEPT:
FedEx Express
1 of 2
TRK# 0201 7808 2326 4407
MASTER
XO AGCA
SATURDAY 12:00P
PRIORITY OVERNIGHT
15238
PA-US PIT
Uncorrected temp 1.4 °C
Thermometer ID 19
CF 4 Initials Be
PT-WI-SR-001 effective 11/8/18
RT 0
FZ 0
4407
07.08
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SDR
180-158967 Waybill

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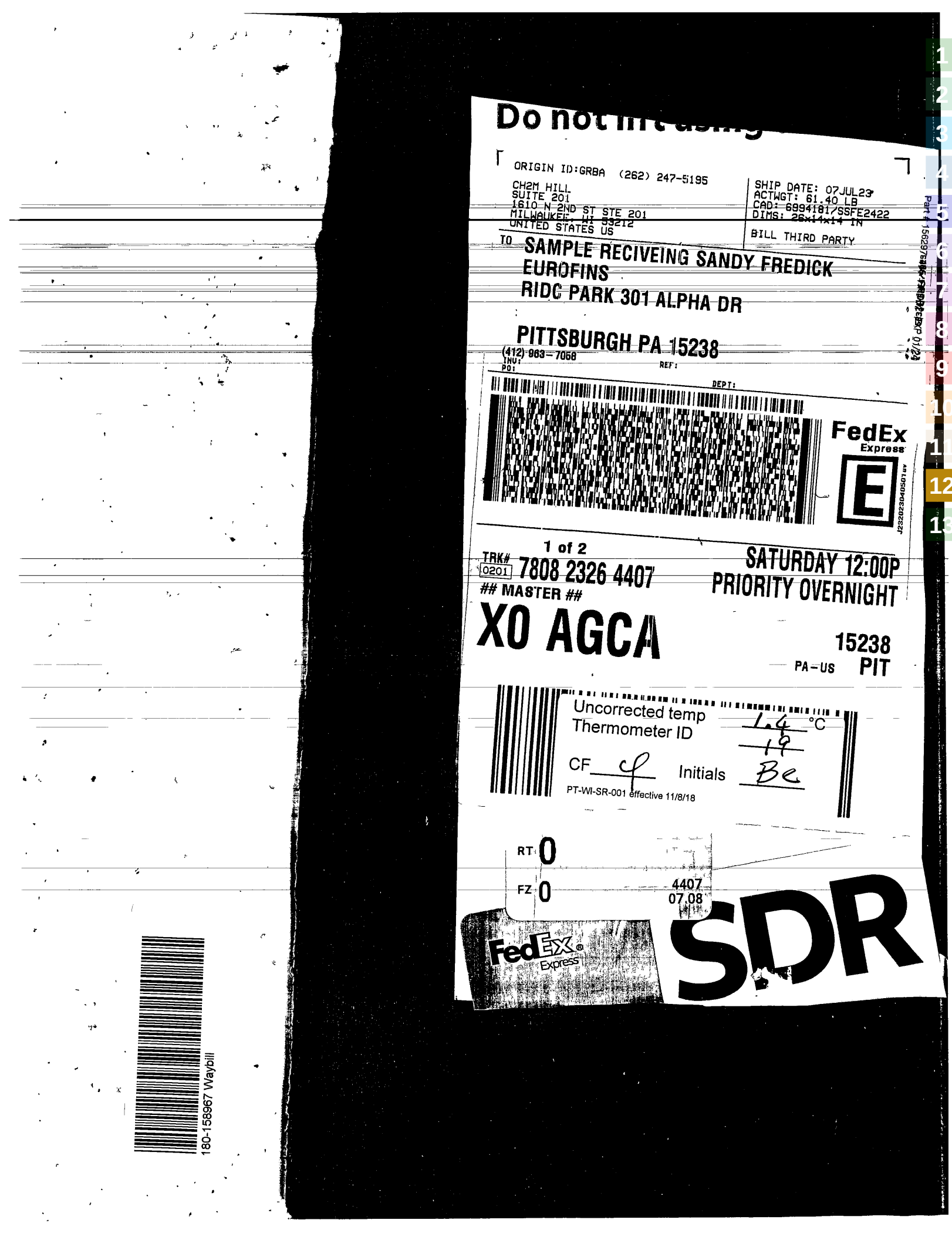
Part # 1562[illegible] REV 01/24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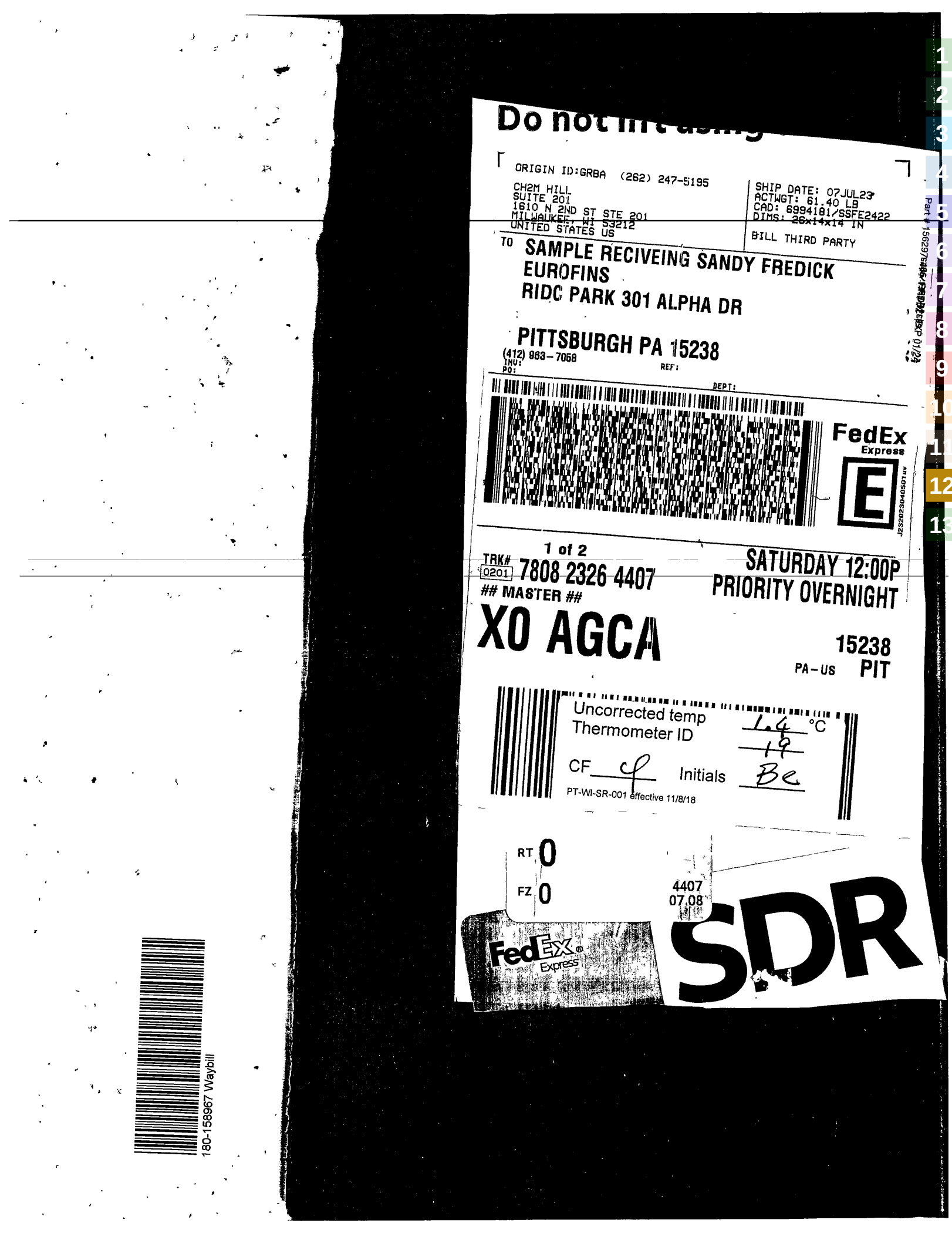
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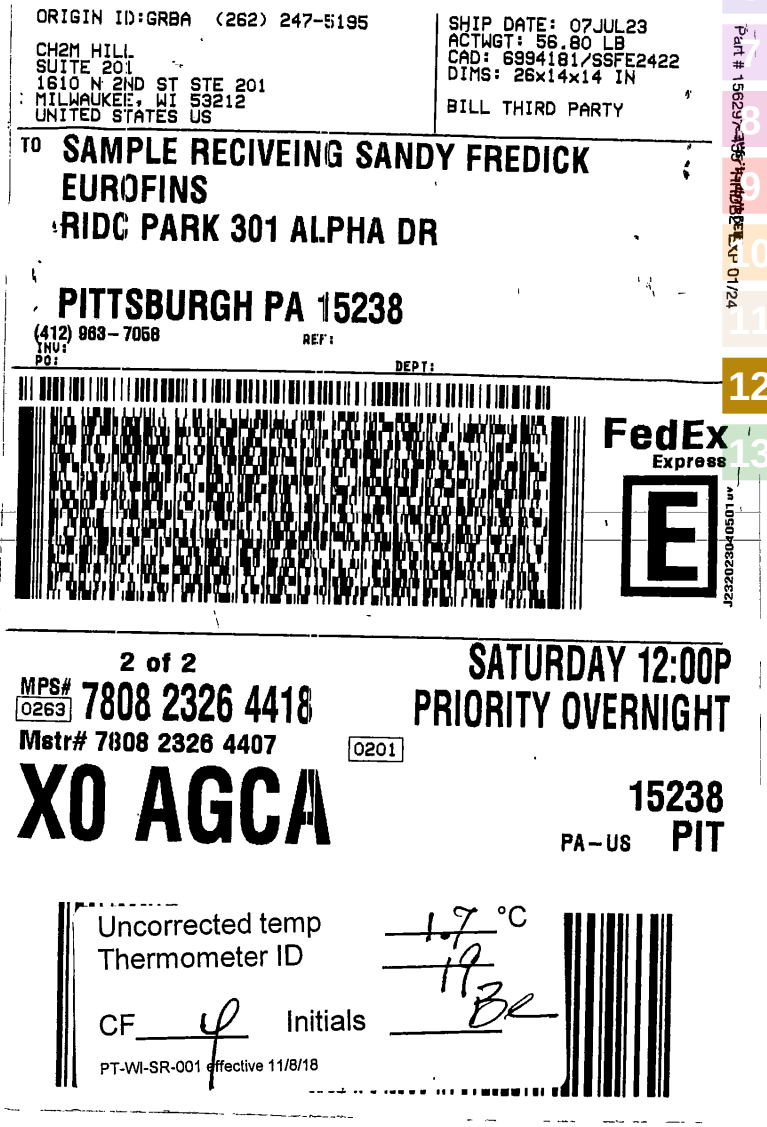

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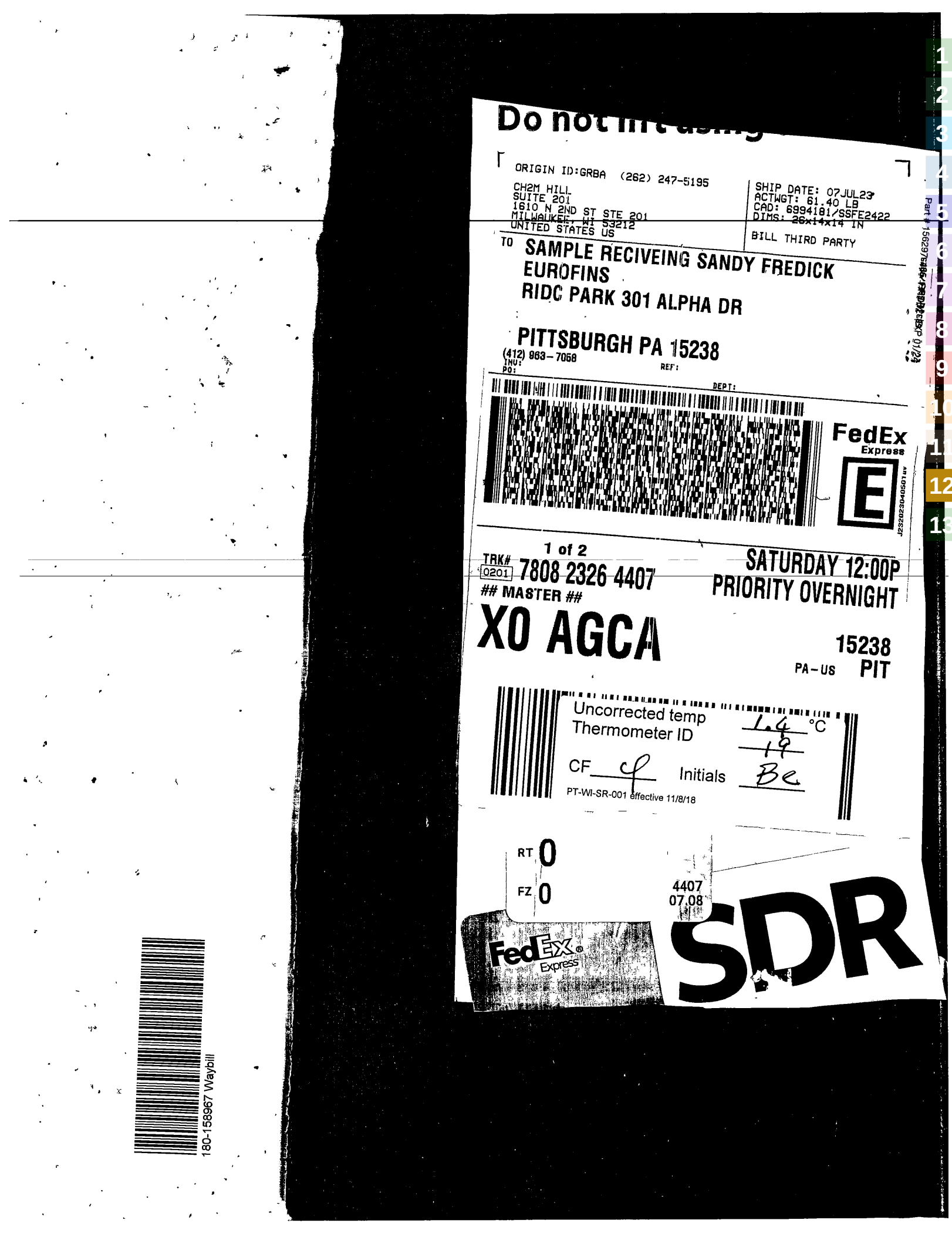
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PT-WI-SR-001 effective 11/8/18

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 180-158967-1

Login Number: 158967
List Number: 1
Creator: Abernathy, Eric L

List Source: Eurofins Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Jacobs Engineering Group, Inc.

Job Number: 180-158967-1

Login Number: 158967
List Number: 2
Creator: Campbell, Adrik

List Source: Eurofins Burlington
List Creation: 07/12/23 03:53 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.9, 2.9ºC
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	