



Environment Testing  
America



## ANALYTICAL REPORT

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Laboratory Job ID: 630-30382-1

Client Project/Site: South Jersey Port Corporation, Camden

For:

ST Hudson Engineers, Inc.  
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Attn: Paul Ferry

Authorized for release by:

5/3/2022 9:44:11 AM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Definitions/Glossary

Client: ST Hudson Engineers, Inc.  
Project/Site: South Jersey Port Corporation, Camden

Job ID: 630-30382-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

### GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

### Metals

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

### General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

## 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
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
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)

## Definitions/Glossary

Client: ST Hudson Engineers, Inc.  
Project/Site: South Jersey Port Corporation, Camden

Job ID: 630-30382-1

### Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

## Case Narrative

Client: ST Hudson Engineers, Inc.  
Project/Site: South Jersey Port Corporation, Camden

Job ID: 630-30382-1

### Job ID: 630-30382-1

Laboratory: Eurofins Environment Testing Philadelphia, LLC

#### Narrative

##### Job Narrative 630-30382-1

#### Receipt

The samples were received on 4/4/2022 12:25 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.2°C

#### Receipt Exceptions

One out of one containers for the following sample was received broken: however it was transferred to a new container with minimal volume loss: C-8 GRAB (630-30382-8).

#### GC/MS Semi VOA

Method 8270E\_LL: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 180-394252. 394252

Method 8270E\_LL: The following sample was diluted to bring the concentration of target analytes within the calibration range: D-9 DISCRETE (630-30382-9). Elevated reporting limits (RLs) are provided.

Method 8270E\_LL: The following sample was diluted due to the nature of the sample matrix: SC-4 COMPOSITE (C7+C8) (630-30382-13). As such, surrogate recoveries are below the calibration range or are not reported, and 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.

#### PCBs

Method 8082A\_LL: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 180-394406.

Method 8082A\_LL: Surrogate recovery for the following samples were outside control limits: D-9 DISCRETE (630-30382-9) and SC-4 COMPOSITE (C7+C8) (630-30382-13). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8082A\_LL: The following samples were diluted due to the abundance of target analytes: D-9 DISCRETE (630-30382-9), SC-1 COMPOSITE (C1+C2) (630-30382-10), SC-4 COMPOSITE (C7+C8) (630-30382-13), (180-136192-A-2-H), (180-136192-A-2-I MS) and (180-136192-A-2-J MSD)

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

#### Pesticides

Method 8081B\_LL: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 180-394406.

Method 8081B\_LL: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 394406 recovered outside control limits for the following analytes: Endrin aldehyde and Endrin ketone. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8081B\_LL: The following samples were diluted due to the nature of the sample matrix: D-9 DISCRETE (630-30382-9), SC-1 COMPOSITE (C1+C2) (630-30382-10) and SC-4 COMPOSITE (C7+C8) (630-30382-13) at 5x. Elevated reporting limits (RLs) are provided.

Method 8081B\_LL: Surrogate DCB Decachlorobiphenyl (Surr) recovery for the following samples were outside control limits: D-9 DISCRETE (630-30382-9), SC-1 COMPOSITE (C1+C2) (630-30382-10) and SC-4 COMPOSITE (C7+C8) (630-30382-13). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

## Case Narrative

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

### Job ID: 630-30382-1 (Continued)

#### Laboratory: Eurofins Environment Testing Philadelphia, LLC (Continued)

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

#### Metals

Method 6020B: The continuing calibration blank (CCB) associated with batch 180-396420 recovered above the upper control limit for aluminum and zinc. The samples associated with this CCB were 10X the CCB concentration for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCB 180-396420/154) and (LCS 180-396208/2-A).

Method 6020B: The continuing calibration blank (CCB) associated with batch 180-396420 recovered above the upper control limit for aluminum. The samples associated with this CCB were 10X the CCB concentration for the affected analytes; therefore, the data have been reported. The associated samples are impacted: D-9 DISCRETE (630-30382-9), SC-1 COMPOSITE (C1+C2) (630-30382-10), SC-4 COMPOSITE (C7+C8) (630-30382-13), (CCB 180-396420/165), (CCB 180-396420/176), (630-30382-B-13-H MS), (630-30382-B-13-I MSD), (630-30382-B-13-G PDS) and (630-30382-B-13-G SD ^5).

Method 6020B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 180-396208 and analytical batch 180-396420 were outside control limits for aluminum. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 6020B: The post digestion spike % recovery for barium associated with batch 180-396420 was outside of control limits. The associated sample is: SC-4 COMPOSITE (C7+C8) (630-30382-13).

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

#### General Chemistry

Method 7196A: The following samples were diluted due to the nature of the sample matrix: D-9 DISCRETE (630-30382-9) and SC-1 COMPOSITE (C1+C2) (630-30382-10). Elevated reporting limits (RLs) are provided.

Method 7196A: The following sample was diluted due to the nature of the sample matrix: SC-4 COMPOSITE (C7+C8) (630-30382-13). Elevated reporting limits (RLs) are provided.

Method 9014: The following sample was assumed to contain Sulfide due to sample matrix: D-9 DISCRETE (630-30382-9). The sulfide was treated and removed prior to distillation with 200 uL of bismuth nitrate solution.

Method 9014: Chloramine-T reagent expired as batch was started on 4/11 and finished on 4/12. Associated instrument QC was within control verifying no impact on the results.D-9 DISCRETE (630-30382-9)

Method Lloyd\_Kahn\_Mod: 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. C-1 GRAB (630-30382-1), C-2 GRAB (630-30382-2), C-3 GRAB (630-30382-3), C-7 GRAB (630-30382-7), C-8 GRAB (630-30382-8), D-9 DISCRETE (630-30382-9), SC-1 COMPOSITE (C1+C2) (630-30382-10), SC-4 COMPOSITE (C7+C8) (630-30382-13), (630-30382-A-2 MS) and (630-30382-A-2 MSD)

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

#### Geotechnical

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

# Detection Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: C-1 GRAB

## Lab Sample ID: 630-30382-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Organic Carbon - Duplicates	53000		2700	2700	mg/Kg	1	⊗	EPA-Lloyd Kahn	Total/NA
Moisture Content	182.2				%	1		D2216-90	Total/NA
Gravel	0.0				%	1		D422	Total/NA
Sieve Size 3 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sand	6.7				%	1		D422	Total/NA
Sieve Size 2 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Coarse Sand	0.1				%	1		D422	Total/NA
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Medium Sand	0.8				%	1		D422	Total/NA
Sieve Size 1 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Fine Sand	5.8				%	1		D422	Total/NA
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Silt	65.9				%	1		D422	Total/NA
Clay	27.4				%	1		D422	Total/NA
Sieve Size #4 - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size #10 - Percent Finer	99.9				% Passing	1		D422	Total/NA
Sieve Size #20 - Percent Finer	99.5				% Passing	1		D422	Total/NA
Sieve Size #40 - Percent Finer	99.1				% Passing	1		D422	Total/NA
Sieve Size #60 - Percent Finer	98.6				% Passing	1		D422	Total/NA
Sieve Size #80 - Percent Finer	98.0				% Passing	1		D422	Total/NA
Sieve Size #100 - Percent Finer	97.4				% Passing	1		D422	Total/NA
Sieve Size #200 - Percent Finer	93.3				% Passing	1		D422	Total/NA
Hydrometer Reading 1 - Percent Finer	54.4				% Passing	1		D422	Total/NA
Hydrometer Reading 2 - Percent Finer	44.6				% Passing	1		D422	Total/NA
Hydrometer Reading 3 - Percent Finer	38.5				% Passing	1		D422	Total/NA
Hydrometer Reading 4 - Percent Finer	32.3				% Passing	1		D422	Total/NA
Hydrometer Reading 5 - Percent Finer	27.4				% Passing	1		D422	Total/NA
Hydrometer Reading 6 - Percent Finer	20.1				% Passing	1		D422	Total/NA
Hydrometer Reading 7 - Percent Finer	13.7				% Passing	1		D422	Total/NA

## Client Sample ID: C-2 GRAB

## Lab Sample ID: 630-30382-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Organic Carbon - Duplicates	50000		2500	2400	mg/Kg	1	⊗	EPA-Lloyd Kahn	Total/NA
Moisture Content	157.7				%	1		D2216-90	Total/NA
Gravel	0.0				%	1		D422	Total/NA
Sieve Size 3 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sand	9.0				%	1		D422	Total/NA
Sieve Size 2 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Coarse Sand	0.4				%	1		D422	Total/NA
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Medium Sand	1.3				%	1		D422	Total/NA
Sieve Size 1 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Fine Sand	7.3				%	1		D422	Total/NA
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Silt	61.5				%	1		D422	Total/NA
Clay	29.5				%	1		D422	Total/NA
Sieve Size #4 - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size #10 - Percent Finer	99.6				% Passing	1		D422	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Environment Testing Philadelphia, LLC

# Detection Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## **Client Sample ID: C-2 GRAB (Continued)**

## **Lab Sample ID: 630-30382-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sieve Size #20 - Percent Finer	99.0				% Passing	1		D422	Total/NA
Sieve Size #40 - Percent Finer	98.3				% Passing	1		D422	Total/NA
Sieve Size #60 - Percent Finer	97.4				% Passing	1		D422	Total/NA
Sieve Size #80 - Percent Finer	96.8				% Passing	1		D422	Total/NA
Sieve Size #100 - Percent Finer	96.3				% Passing	1		D422	Total/NA
Sieve Size #200 - Percent Finer	91.0				% Passing	1		D422	Total/NA
Hydrometer Reading 1 - Percent Finer	56.1				% Passing	1		D422	Total/NA
Hydrometer Reading 2 - Percent Finer	49.7				% Passing	1		D422	Total/NA
Hydrometer Reading 3 - Percent Finer	40.9				% Passing	1		D422	Total/NA
Hydrometer Reading 4 - Percent Finer	34.6				% Passing	1		D422	Total/NA
Hydrometer Reading 5 - Percent Finer	29.5				% Passing	1		D422	Total/NA
Hydrometer Reading 6 - Percent Finer	20.7				% Passing	1		D422	Total/NA
Hydrometer Reading 7 - Percent Finer	12.9				% Passing	1		D422	Total/NA

## **Client Sample ID: C-3 GRAB**

## **Lab Sample ID: 630-30382-3**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Organic Carbon - Duplicates	42000		2300	2200	mg/Kg	1	⊗	EPA-Lloyd Kahn	Total/NA
Moisture Content	117.4				%	1		D2216-90	Total/NA
Gravel	0.0				%	1		D422	Total/NA
Sieve Size 3 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sand	13.2				%	1		D422	Total/NA
Sieve Size 2 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Coarse Sand	0.1				%	1		D422	Total/NA
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Medium Sand	1.6				%	1		D422	Total/NA
Sieve Size 1 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Fine Sand	11.5				%	1		D422	Total/NA
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Silt	58.4				%	1		D422	Total/NA
Clay	28.4				%	1		D422	Total/NA
Sieve Size #4 - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size #10 - Percent Finer	99.9				% Passing	1		D422	Total/NA
Sieve Size #20 - Percent Finer	99.3				% Passing	1		D422	Total/NA
Sieve Size #40 - Percent Finer	98.3				% Passing	1		D422	Total/NA
Sieve Size #60 - Percent Finer	97.0				% Passing	1		D422	Total/NA
Sieve Size #80 - Percent Finer	96.0				% Passing	1		D422	Total/NA
Sieve Size #100 - Percent Finer	94.6				% Passing	1		D422	Total/NA
Sieve Size #200 - Percent Finer	86.8				% Passing	1		D422	Total/NA
Hydrometer Reading 1 - Percent Finer	53.7				% Passing	1		D422	Total/NA
Hydrometer Reading 2 - Percent Finer	45.7				% Passing	1		D422	Total/NA
Hydrometer Reading 3 - Percent Finer	37.7				% Passing	1		D422	Total/NA
Hydrometer Reading 4 - Percent Finer	32.4				% Passing	1		D422	Total/NA
Hydrometer Reading 5 - Percent Finer	28.4				% Passing	1		D422	Total/NA
Hydrometer Reading 6 - Percent Finer	19.1				% Passing	1		D422	Total/NA
Hydrometer Reading 7 - Percent Finer	12.2				% Passing	1		D422	Total/NA

## **Client Sample ID: C-7 GRAB**

## **Lab Sample ID: 630-30382-7**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Organic Carbon - Duplicates	47000		2500	2500	mg/Kg	1	⊗	EPA-Lloyd Kahn	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Environment Testing Philadelphia, LLC

# Detection Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: C-7 GRAB (Continued)

## Lab Sample ID: 630-30382-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Moisture Content	152.8				%	1		D2216-90	Total/NA
Gravel	0.0				%	1		D422	Total/NA
Sieve Size 3 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sand	3.7				%	1		D422	Total/NA
Sieve Size 2 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Coarse Sand	0.1				%	1		D422	Total/NA
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Medium Sand	0.7				%	1		D422	Total/NA
Sieve Size 1 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Fine Sand	2.9				%	1		D422	Total/NA
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Silt	60.6				%	1		D422	Total/NA
Clay	35.7				%	1		D422	Total/NA
Sieve Size #4 - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size #10 - Percent Finer	99.9				% Passing	1		D422	Total/NA
Sieve Size #20 - Percent Finer	99.6				% Passing	1		D422	Total/NA
Sieve Size #40 - Percent Finer	99.2				% Passing	1		D422	Total/NA
Sieve Size #60 - Percent Finer	98.8				% Passing	1		D422	Total/NA
Sieve Size #80 - Percent Finer	98.6				% Passing	1		D422	Total/NA
Sieve Size #100 - Percent Finer	98.3				% Passing	1		D422	Total/NA
Sieve Size #200 - Percent Finer	96.3				% Passing	1		D422	Total/NA
Hydrometer Reading 1 - Percent Finer	70.8				% Passing	1		D422	Total/NA
Hydrometer Reading 2 - Percent Finer	59.1				% Passing	1		D422	Total/NA
Hydrometer Reading 3 - Percent Finer	49.1				% Passing	1		D422	Total/NA
Hydrometer Reading 4 - Percent Finer	40.7				% Passing	1		D422	Total/NA
Hydrometer Reading 5 - Percent Finer	35.7				% Passing	1		D422	Total/NA
Hydrometer Reading 6 - Percent Finer	25.7				% Passing	1		D422	Total/NA
Hydrometer Reading 7 - Percent Finer	17.0				% Passing	1		D422	Total/NA

## Client Sample ID: C-8 GRAB

## Lab Sample ID: 630-30382-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Organic Carbon - Duplicates	45000		2100	2100	mg/Kg	1	⊗	EPA-Lloyd Kahn	Total/NA
Moisture Content	108.9				%	1		D2216-90	Total/NA
Gravel	0.0				%	1		D422	Total/NA
Sieve Size 3 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sand	6.5				%	1		D422	Total/NA
Sieve Size 2 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Coarse Sand	0.4				%	1		D422	Total/NA
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Medium Sand	1.9				%	1		D422	Total/NA
Sieve Size 1 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Fine Sand	4.2				%	1		D422	Total/NA
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Silt	58.7				%	1		D422	Total/NA
Clay	34.8				%	1		D422	Total/NA
Sieve Size #4 - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size #10 - Percent Finer	99.6				% Passing	1		D422	Total/NA
Sieve Size #20 - Percent Finer	98.3				% Passing	1		D422	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Environment Testing Philadelphia, LLC

# Detection Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: C-8 GRAB (Continued)

## Lab Sample ID: 630-30382-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sieve Size #40 - Percent Finer	97.7				% Passing	1		D422	Total/NA
Sieve Size #60 - Percent Finer	97.0				% Passing	1		D422	Total/NA
Sieve Size #80 - Percent Finer	96.5				% Passing	1		D422	Total/NA
Sieve Size #100 - Percent Finer	95.9				% Passing	1		D422	Total/NA
Sieve Size #200 - Percent Finer	93.5				% Passing	1		D422	Total/NA
Hydrometer Reading 1 - Percent Finer	67.5				% Passing	1		D422	Total/NA
Hydrometer Reading 2 - Percent Finer	58.6				% Passing	1		D422	Total/NA
Hydrometer Reading 3 - Percent Finer	48.2				% Passing	1		D422	Total/NA
Hydrometer Reading 4 - Percent Finer	39.2				% Passing	1		D422	Total/NA
Hydrometer Reading 5 - Percent Finer	34.8				% Passing	1		D422	Total/NA
Hydrometer Reading 6 - Percent Finer	24.3				% Passing	1		D422	Total/NA
Hydrometer Reading 7 - Percent Finer	15.1				% Passing	1		D422	Total/NA

## Client Sample ID: D-9 DISCRETE

## Lab Sample ID: 630-30382-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	0.039	J	0.071	0.017	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Acenaphthene	0.040	J	0.071	0.020	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Acenaphthylene	0.066	J	0.071	0.015	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Anthracene	0.087		0.071	0.018	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Benzo[a]anthracene	0.25		0.071	0.032	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Benzo[b]fluoranthene	0.33		0.071	0.017	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Benzo[k]fluoranthene	0.080		0.071	0.021	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Benzo[g,h,i]perylene	0.28		0.071	0.015	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Benzo[a]pyrene	0.27		0.071	0.030	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Bis(2-ethylhexyl) phthalate	1.3	J	3.5	0.37	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Carbazole	0.028	J	0.071	0.016	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Chrysene	0.31		0.071	0.039	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Dibenz(a,h)anthracene	0.068	J	0.071	0.045	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Fluoranthene	0.32		0.071	0.019	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Fluorene	0.040	J	0.071	0.014	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Indeno[1,2,3-cd]pyrene	0.22		0.071	0.035	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Naphthalene	0.072		0.071	0.014	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Phenanthrene	0.23		0.071	0.019	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
Pyrene	0.45		0.071	0.017	mg/Kg	10	⊗	EPA 8270E LL	Total/NA
cis-Chlordane (2C)	0.0010	p	0.00044	0.00011	mg/Kg	5	⊗	EPA 8081B LL	Total/NA
4,4'-DDD (2C)	0.0060		0.00044	0.000092	mg/Kg	5	⊗	EPA 8081B LL	Total/NA
4,4'-DDE (1C)	0.017		0.00044	0.000090	mg/Kg	5	⊗	EPA 8081B LL	Total/NA
Endosulfan sulfate (2C)	0.0013		0.00044	0.000020	mg/Kg	5	⊗	EPA 8081B LL	Total/NA
Endrin (1C)	0.0017	p	0.00044	0.000082	mg/Kg	5	⊗	EPA 8081B LL	Total/NA
PCB-1248 (2C)	0.038		0.0088	0.0021	mg/Kg	10	⊗	EPA 8082A	Total/NA
PCB-1260 (2C)	0.062		0.0088	0.0025	mg/Kg	10	⊗	EPA 8082A	Total/NA
Polychlorinated biphenyls, Total	0.10		0.0088	0.0031	mg/Kg	10	PCB		Total/NA
Aluminum	12000	^2		6.4	4.5 mg/Kg	1	⊗	EPA 6020B	Total/NA
Arsenic	8.4		0.11	0.062	mg/Kg	1	⊗	EPA 6020B	Total/NA
Barium	160		1.1	0.65	mg/Kg	1	⊗	EPA 6020B	Total/NA
Antimony	0.53		0.21	0.11	mg/Kg	1	⊗	EPA 6020B	Total/NA
Beryllium	1.5		0.11	0.076	mg/Kg	1	⊗	EPA 6020B	Total/NA
Cadmium	2.0		0.11	0.059	mg/Kg	1	⊗	EPA 6020B	Total/NA
Calcium	11000		53	22	mg/Kg	1	⊗	EPA 6020B	Total/NA
Chromium	26		0.21	0.19	mg/Kg	1	⊗	EPA 6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Environment Testing Philadelphia, LLC

# Detection Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: D-9 DISCRETE (Continued)

## Lab Sample ID: 630-30382-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	15		0.053	0.038	mg/Kg	1	⊗	EPA 6020B	Total/NA
Copper	39		0.32	0.22	mg/Kg	1	⊗	EPA 6020B	Total/NA
Magnesium	4600		53	4.8	mg/Kg	1	⊗	EPA 6020B	Total/NA
Manganese	1500		0.53	0.46	mg/Kg	1	⊗	EPA 6020B	Total/NA
Iron	25000		5.3	5.1	mg/Kg	1	⊗	EPA 6020B	Total/NA
Lead	57		0.11	0.070	mg/Kg	1	⊗	EPA 6020B	Total/NA
Potassium	1200		53	15	mg/Kg	1	⊗	EPA 6020B	Total/NA
Nickel	24		0.11	0.10	mg/Kg	1	⊗	EPA 6020B	Total/NA
Selenium	0.71		0.53	0.13	mg/Kg	1	⊗	EPA 6020B	Total/NA
Sodium	120		53	27	mg/Kg	1	⊗	EPA 6020B	Total/NA
Silver	0.36		0.11	0.030	mg/Kg	1	⊗	EPA 6020B	Total/NA
Thallium	0.14		0.11	0.074	mg/Kg	1	⊗	EPA 6020B	Total/NA
Vanadium	23		0.11	0.10	mg/Kg	1	⊗	EPA 6020B	Total/NA
Zinc	310		0.53	0.51	mg/Kg	1	⊗	EPA 6020B	Total/NA
Mercury	0.19		0.032	0.021	mg/Kg	1	⊗	EPA 7471B	Total/NA
Cr (III)	26		0.50	0.21	mg/Kg	1		7196A	Total/NA
Cyanide, Total	9.2		0.42	0.32	mg/Kg	1	⊗	EPA 9014	Total/NA
Total Organic Carbon - Duplicates	38000		2100	2100	mg/Kg	1	⊗	EPA-Lloyd Kahn	Total/NA
Moisture Content	107.4			%		1		D2216-90	Total/NA
Gravel	1.6			%		1		D422	Total/NA
Sieve Size 3 inch - Percent Finer	100.0			% Passing		1		D422	Total/NA
Sand	17.6			%		1		D422	Total/NA
Sieve Size 2 inch - Percent Finer	100.0			% Passing		1		D422	Total/NA
Coarse Sand	0.7			%		1		D422	Total/NA
Sieve Size 1.5 inch - Percent Finer	100.0			% Passing		1		D422	Total/NA
Medium Sand	4.6			%		1		D422	Total/NA
Sieve Size 1 inch - Percent Finer	100.0			% Passing		1		D422	Total/NA
Fine Sand	12.3			%		1		D422	Total/NA
Sieve Size 0.75 inch - Percent Finer	100.0			% Passing		1		D422	Total/NA
Sieve Size 0.375 inch - Percent Finer	98.9			% Passing		1		D422	Total/NA
Silt	48.5			%		1		D422	Total/NA
Clay	32.3			%		1		D422	Total/NA
Sieve Size #4 - Percent Finer	98.4			% Passing		1		D422	Total/NA
Sieve Size #10 - Percent Finer	97.7			% Passing		1		D422	Total/NA
Sieve Size #20 - Percent Finer	95.6			% Passing		1		D422	Total/NA
Sieve Size #40 - Percent Finer	93.1			% Passing		1		D422	Total/NA
Sieve Size #60 - Percent Finer	90.5			% Passing		1		D422	Total/NA
Sieve Size #80 - Percent Finer	88.4			% Passing		1		D422	Total/NA
Sieve Size #100 - Percent Finer	87.1			% Passing		1		D422	Total/NA
Sieve Size #200 - Percent Finer	80.8			% Passing		1		D422	Total/NA
Hydrometer Reading 1 - Percent Finer	61.8			% Passing		1		D422	Total/NA
Hydrometer Reading 2 - Percent Finer	54.7			% Passing		1		D422	Total/NA
Hydrometer Reading 3 - Percent Finer	44.1			% Passing		1		D422	Total/NA
Hydrometer Reading 4 - Percent Finer	38.2			% Passing		1		D422	Total/NA
Hydrometer Reading 5 - Percent Finer	32.3			% Passing		1		D422	Total/NA
Hydrometer Reading 6 - Percent Finer	21.7			% Passing		1		D422	Total/NA
Hydrometer Reading 7 - Percent Finer	13.2			% Passing		1		D422	Total/NA
Gravel	1.6			%		1		D422	Total/NA
Sand	17.6			%		1		D422	Total/NA
Coarse Sand	0.7			%		1		D422	Total/NA
Medium Sand	4.6			%		1		D422	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Environment Testing Philadelphia, LLC

# Detection Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: D-9 DISCRETE (Continued)

## Lab Sample ID: 630-30382-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fine Sand	12.3			%		1		D422	Total/NA
Silt	48.5			%		1		D422	Total/NA
Clay	32.3			%		1		D422	Total/NA

## Client Sample ID: SC-1 COMPOSITE (C1+C2)

## Lab Sample ID: 630-30382-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.065	J	0.18	0.039	mg/Kg	20	⊗	EPA 8270E LL	Total/NA
Anthracene	0.095	J	0.18	0.047	mg/Kg	20	⊗	EPA 8270E LL	Total/NA
Benzo[a]anthracene	0.28		0.18	0.081	mg/Kg	20	⊗	EPA 8270E LL	Total/NA
Benzo[b]fluoranthene	0.35		0.18	0.044	mg/Kg	20	⊗	EPA 8270E LL	Total/NA
Benzo[k]fluoranthene	0.14	J	0.18	0.054	mg/Kg	20	⊗	EPA 8270E LL	Total/NA
Benzo[g,h,i]perylene	0.24		0.18	0.039	mg/Kg	20	⊗	EPA 8270E LL	Total/NA
Benzo[a]pyrene	0.28		0.18	0.078	mg/Kg	20	⊗	EPA 8270E LL	Total/NA
Chrysene	0.33		0.18	0.10	mg/Kg	20	⊗	EPA 8270E LL	Total/NA
Fluoranthene	0.50		0.18	0.048	mg/Kg	20	⊗	EPA 8270E LL	Total/NA
Fluorene	0.042	J	0.18	0.035	mg/Kg	20	⊗	EPA 8270E LL	Total/NA
Indeno[1,2,3-cd]pyrene	0.20		0.18	0.090	mg/Kg	20	⊗	EPA 8270E LL	Total/NA
Naphthalene	0.061	J	0.18	0.035	mg/Kg	20	⊗	EPA 8270E LL	Total/NA
Phenanthrene	0.13	J	0.18	0.048	mg/Kg	20	⊗	EPA 8270E LL	Total/NA
Pyrene	0.49		0.18	0.043	mg/Kg	20	⊗	EPA 8270E LL	Total/NA
Aldrin (1C)	0.00029	J p		0.00057	mg/Kg	5	⊗	EPA 8081B LL	Total/NA
cis-Chlordane (2C)	0.0011	p		0.00057	mg/Kg	5	⊗	EPA 8081B LL	Total/NA
4,4'-DDD (2C)	0.0059			0.00057	mg/Kg	5	⊗	EPA 8081B LL	Total/NA
4,4'-DDE (1C)	0.015			0.00057	mg/Kg	5	⊗	EPA 8081B LL	Total/NA
Endosulfan sulfate (1C)	0.00075			0.00057	mg/Kg	5	⊗	EPA 8081B LL	Total/NA
Endrin (1C)	0.0014	p		0.00057	mg/Kg	5	⊗	EPA 8081B LL	Total/NA
PCB-1248 (2C)	0.013		0.011	0.0027	mg/Kg	10	⊗	EPA 8082A	Total/NA
PCB-1260 (2C)	0.024		0.011	0.0032	mg/Kg	10	⊗	EPA 8082A	Total/NA
Polychlorinated biphenyls, Total	0.037		0.011	0.0040	mg/Kg	10	PCB		Total/NA
Aluminum	13000	^2	8.0	5.7	mg/Kg	1	⊗	EPA 6020B	Total/NA
Arsenic	8.6		0.13	0.077	mg/Kg	1	⊗	EPA 6020B	Total/NA
Barium	160		1.3	0.82	mg/Kg	1	⊗	EPA 6020B	Total/NA
Antimony	0.55		0.27	0.14	mg/Kg	1	⊗	EPA 6020B	Total/NA
Beryllium	1.1		0.13	0.096	mg/Kg	1	⊗	EPA 6020B	Total/NA
Cadmium	1.6		0.13	0.075	mg/Kg	1	⊗	EPA 6020B	Total/NA
Calcium	4000		67	27	mg/Kg	1	⊗	EPA 6020B	Total/NA
Chromium	33		0.27	0.24	mg/Kg	1	⊗	EPA 6020B	Total/NA
Cobalt	16		0.067	0.048	mg/Kg	1	⊗	EPA 6020B	Total/NA
Copper	41		0.40	0.27	mg/Kg	1	⊗	EPA 6020B	Total/NA
Magnesium	4000		67	6.1	mg/Kg	1	⊗	EPA 6020B	Total/NA
Manganese	1800		0.67	0.57	mg/Kg	1	⊗	EPA 6020B	Total/NA
Iron	29000		6.7	6.4	mg/Kg	1	⊗	EPA 6020B	Total/NA
Lead	60		0.13	0.088	mg/Kg	1	⊗	EPA 6020B	Total/NA
Potassium	1400		67	19	mg/Kg	1	⊗	EPA 6020B	Total/NA
Nickel	24		0.13	0.13	mg/Kg	1	⊗	EPA 6020B	Total/NA
Selenium	0.78		0.67	0.16	mg/Kg	1	⊗	EPA 6020B	Total/NA
Sodium	130		67	34	mg/Kg	1	⊗	EPA 6020B	Total/NA
Silver	0.40		0.13	0.037	mg/Kg	1	⊗	EPA 6020B	Total/NA
Thallium	0.15		0.13	0.093	mg/Kg	1	⊗	EPA 6020B	Total/NA
Vanadium	27		0.13	0.13	mg/Kg	1	⊗	EPA 6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Environment Testing Philadelphia, LLC

# Detection Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: SC-1 COMPOSITE (C1+C2) (Continued)

## Lab Sample ID: 630-30382-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	290		0.67	0.64	mg/Kg	1	⊗	EPA 6020B	Total/NA
Mercury	0.26		0.038	0.024	mg/Kg	1	⊗	EPA 7471B	Total/NA
Cr (III)	33		0.50	0.21	mg/Kg	1		7196A	Total/NA
Cyanide, Total	20		0.51	0.38	mg/Kg	1	⊗	EPA 9014	Total/NA
Total Organic Carbon - Duplicates	52000		2700	2700	mg/Kg	1	⊗	EPA-Lloyd Kahn	Total/NA
Moisture Content	167.8				%	1		D2216-90	Total/NA
Gravel	0.0				%	1		D422	Total/NA
Sieve Size 3 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sand	8.7				%	1		D422	Total/NA
Sieve Size 2 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Coarse Sand	0.4				%	1		D422	Total/NA
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Medium Sand	1.5				%	1		D422	Total/NA
Sieve Size 1 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Fine Sand	6.8				%	1		D422	Total/NA
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Silt	59.1				%	1		D422	Total/NA
Clay	32.2				%	1		D422	Total/NA
Sieve Size #4 - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size #10 - Percent Finer	99.6				% Passing	1		D422	Total/NA
Sieve Size #20 - Percent Finer	98.7				% Passing	1		D422	Total/NA
Sieve Size #40 - Percent Finer	98.1				% Passing	1		D422	Total/NA
Sieve Size #60 - Percent Finer	97.4				% Passing	1		D422	Total/NA
Sieve Size #80 - Percent Finer	96.8				% Passing	1		D422	Total/NA
Sieve Size #100 - Percent Finer	96.2				% Passing	1		D422	Total/NA
Sieve Size #200 - Percent Finer	91.3				% Passing	1		D422	Total/NA
Hydrometer Reading 1 - Percent Finer	54.5				% Passing	1		D422	Total/NA
Hydrometer Reading 2 - Percent Finer	48.2				% Passing	1		D422	Total/NA
Hydrometer Reading 3 - Percent Finer	41.8				% Passing	1		D422	Total/NA
Hydrometer Reading 4 - Percent Finer	36.5				% Passing	1		D422	Total/NA
Hydrometer Reading 5 - Percent Finer	32.2				% Passing	1		D422	Total/NA
Hydrometer Reading 6 - Percent Finer	21.6				% Passing	1		D422	Total/NA
Hydrometer Reading 7 - Percent Finer	14.0				% Passing	1		D422	Total/NA
Gravel	0.0				%	1		D422	Total/NA
Sand	8.7				%	1		D422	Total/NA
Coarse Sand	0.4				%	1		D422	Total/NA
Medium Sand	1.5				%	1		D422	Total/NA
Fine Sand	6.8				%	1		D422	Total/NA
Silt	59.1				%	1		D422	Total/NA
Clay	32.2				%	1		D422	Total/NA

## Client Sample ID: SC-4 COMPOSITE (C7+C8)

## Lab Sample ID: 630-30382-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	0.064	J	0.19	0.045	mg/Kg	25	⊗	EPA 8270E LL	Total/NA
Acenaphthylene	0.060	J	0.19	0.041	mg/Kg	25	⊗	EPA 8270E LL	Total/NA
Anthracene	0.079	J	0.19	0.049	mg/Kg	25	⊗	EPA 8270E LL	Total/NA
Benzo[a]anthracene	0.27		0.19	0.084	mg/Kg	25	⊗	EPA 8270E LL	Total/NA
Benzo[b]fluoranthene	0.35		0.19	0.046	mg/Kg	25	⊗	EPA 8270E LL	Total/NA
Benzo[k]fluoranthene	0.12	J	0.19	0.056	mg/Kg	25	⊗	EPA 8270E LL	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Environment Testing Philadelphia, LLC

# Detection Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: SC-4 COMPOSITE (C7+C8) (Continued)

## Lab Sample ID: 630-30382-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[g,h,i]perylene	0.21		0.19	0.040	mg/Kg	25	⊗	EPA 8270E LL	Total/NA
Benzo[a]pyrene	0.27		0.19	0.081	mg/Kg	25	⊗	EPA 8270E LL	Total/NA
Chrysene	0.30		0.19	0.10	mg/Kg	25	⊗	EPA 8270E LL	Total/NA
Fluoranthene	0.47		0.19	0.049	mg/Kg	25	⊗	EPA 8270E LL	Total/NA
Fluorene	0.054 J		0.19	0.037	mg/Kg	25	⊗	EPA 8270E LL	Total/NA
Indeno[1,2,3-cd]pyrene	0.17 J		0.19	0.093	mg/Kg	25	⊗	EPA 8270E LL	Total/NA
Naphthalene	0.097 J		0.19	0.036	mg/Kg	25	⊗	EPA 8270E LL	Total/NA
Phenanthrene	0.10 J		0.19	0.050	mg/Kg	25	⊗	EPA 8270E LL	Total/NA
Pyrene	0.48		0.19	0.044	mg/Kg	25	⊗	EPA 8270E LL	Total/NA
cis-Chlordane (2C)	0.0011 p		0.00047	0.00012	mg/Kg	5	⊗	EPA 8081B LL	Total/NA
4,4'-DDE (1C)	0.029		0.00047	0.000095	mg/Kg	5	⊗	EPA 8081B LL	Total/NA
Heptachlor epoxide (2C)	0.00054 p		0.00047	0.00012	mg/Kg	5	⊗	EPA 8081B LL	Total/NA
4,4'-DDD (2C) - RA	0.0049 p		0.00047	0.000098	mg/Kg	5	⊗	EPA 8081B LL	Total/NA
PCB-1248 (2C)	0.017		0.0094	0.0023	mg/Kg	10	⊗	EPA 8082A	Total/NA
PCB-1260 (2C)	0.036		0.0094	0.0027	mg/Kg	10	⊗	EPA 8082A	Total/NA
Polychlorinated biphenyls, Total	0.053		0.0094	0.0033	mg/Kg	10	PCB		Total/NA
Aluminum	12000 ^2		6.7	4.8	mg/Kg	1	⊗	EPA 6020B	Total/NA
Arsenic	9.6 F1		0.11	0.065	mg/Kg	1	⊗	EPA 6020B	Total/NA
Barium	150		1.1	0.69	mg/Kg	1	⊗	EPA 6020B	Total/NA
Antimony	0.84 F1		0.22	0.12	mg/Kg	1	⊗	EPA 6020B	Total/NA
Beryllium	1.1 F1		0.11	0.081	mg/Kg	1	⊗	EPA 6020B	Total/NA
Cadmium	2.1 F1		0.11	0.063	mg/Kg	1	⊗	EPA 6020B	Total/NA
Calcium	3300 F1		56	23	mg/Kg	1	⊗	EPA 6020B	Total/NA
Chromium	40 F1		0.22	0.20	mg/Kg	1	⊗	EPA 6020B	Total/NA
Cobalt	15 F1		0.056	0.040	mg/Kg	1	⊗	EPA 6020B	Total/NA
Copper	51 F1		0.34	0.23	mg/Kg	1	⊗	EPA 6020B	Total/NA
Magnesium	3700 F1		56	5.1	mg/Kg	1	⊗	EPA 6020B	Total/NA
Manganese	1200		0.56	0.48	mg/Kg	1	⊗	EPA 6020B	Total/NA
Iron	27000		5.6	5.4	mg/Kg	1	⊗	EPA 6020B	Total/NA
Lead	80 F1		0.11	0.074	mg/Kg	1	⊗	EPA 6020B	Total/NA
Potassium	1400 F1		56	16	mg/Kg	1	⊗	EPA 6020B	Total/NA
Nickel	25 F1		0.11	0.11	mg/Kg	1	⊗	EPA 6020B	Total/NA
Selenium	0.80 F1		0.56	0.14	mg/Kg	1	⊗	EPA 6020B	Total/NA
Sodium	110 F1		56	29	mg/Kg	1	⊗	EPA 6020B	Total/NA
Silver	0.83 F1		0.11	0.031	mg/Kg	1	⊗	EPA 6020B	Total/NA
Thallium	0.17		0.11	0.079	mg/Kg	1	⊗	EPA 6020B	Total/NA
Vanadium	32 F1		0.11	0.11	mg/Kg	1	⊗	EPA 6020B	Total/NA
Zinc	350		0.56	0.54	mg/Kg	1	⊗	EPA 6020B	Total/NA
Mercury	0.27		0.037	0.024	mg/Kg	1	⊗	EPA 7471B	Total/NA
Cr (III)	40		0.50	0.21	mg/Kg	1	7196A		Total/NA
Cyanide, Total	6.3		0.45	0.34	mg/Kg	1	⊗	EPA 9014	Total/NA
Total Organic Carbon - Duplicates	45000		2300	2200	mg/Kg	1	⊗	EPA-Lloyd Kahn	Total/NA
Moisture Content	127.6			%		1		D2216-90	Total/NA
Gravel	0.0			%		1		D422	Total/NA
Sieve Size 3 inch - Percent Finer	100.0			% Passing		1		D422	Total/NA
Sand	5.0			%		1		D422	Total/NA
Sieve Size 2 inch - Percent Finer	100.0			% Passing		1		D422	Total/NA
Coarse Sand	0.4			%		1		D422	Total/NA
Sieve Size 1.5 inch - Percent Finer	100.0			% Passing		1		D422	Total/NA
Medium Sand	1.0			%		1		D422	Total/NA
Sieve Size 1 inch - Percent Finer	100.0			% Passing		1		D422	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Environment Testing Philadelphia, LLC

# Detection Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: SC-4 COMPOSITE (C7+C8) (Continued)

## Lab Sample ID: 630-30382-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fine Sand	3.6				%	1	D	D422	Total/NA
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing	1	D	D422	Total/NA
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing	1	D	D422	Total/NA
Silt	57.4				%	1	D	D422	Total/NA
Clay	37.6				%	1	D	D422	Total/NA
Sieve Size #4 - Percent Finer	100.0				% Passing	1	D	D422	Total/NA
Sieve Size #10 - Percent Finer	99.6				% Passing	1	D	D422	Total/NA
Sieve Size #20 - Percent Finer	99.1				% Passing	1	D	D422	Total/NA
Sieve Size #40 - Percent Finer	98.6				% Passing	1	D	D422	Total/NA
Sieve Size #60 - Percent Finer	97.9				% Passing	1	D	D422	Total/NA
Sieve Size #80 - Percent Finer	97.4				% Passing	1	D	D422	Total/NA
Sieve Size #100 - Percent Finer	97.1				% Passing	1	D	D422	Total/NA
Sieve Size #200 - Percent Finer	95.0				% Passing	1	D	D422	Total/NA
Hydrometer Reading 1 - Percent Finer	72.8				% Passing	1	D	D422	Total/NA
Hydrometer Reading 2 - Percent Finer	64.0				% Passing	1	D	D422	Total/NA
Hydrometer Reading 3 - Percent Finer	53.4				% Passing	1	D	D422	Total/NA
Hydrometer Reading 4 - Percent Finer	44.6				% Passing	1	D	D422	Total/NA
Hydrometer Reading 5 - Percent Finer	37.6				% Passing	1	D	D422	Total/NA
Hydrometer Reading 6 - Percent Finer	28.8				% Passing	1	D	D422	Total/NA
Hydrometer Reading 7 - Percent Finer	17.9				% Passing	1	D	D422	Total/NA
Gravel	0.0				%	1	D	D422	Total/NA
Sand	5.0				%	1	D	D422	Total/NA
Coarse Sand	0.4				%	1	D	D422	Total/NA
Medium Sand	1.0				%	1	D	D422	Total/NA
Fine Sand	3.6				%	1	D	D422	Total/NA
Silt	57.4				%	1	D	D422	Total/NA
Clay	37.6				%	1	D	D422	Total/NA

## Client Sample ID: FIELD BLANK

## Lab Sample ID: 630-30382-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	0.00010	J H	0.00018	0.000093	mg/L	1	D	EPA 8270E LL	Total/NA
Benzo[k]fluoranthene	0.000098	J H	0.00018	0.000085	mg/L	1	D	EPA 8270E LL	Total/NA
Butyl benzyl phthalate	0.00092	J H	0.00096	0.00044	mg/L	1	D	EPA 8270E LL	Total/NA
Caprolactam	0.0020	J H	0.0048	0.00045	mg/L	1	D	EPA 8270E LL	Total/NA
Dibenz(a,h)anthracene	0.000074	J H	0.00018	0.000069	mg/L	1	D	EPA 8270E LL	Total/NA
Di-n-butyl phthalate	0.0064	H	0.00096	0.00071	mg/L	1	D	EPA 8270E LL	Total/NA
Diethyl phthalate	0.00068	J H	0.00096	0.00055	mg/L	1	D	EPA 8270E LL	Total/NA
Phenanthrene	0.00014	J H	0.00018	0.000053	mg/L	1	D	EPA 8270E LL	Total/NA
Pyridine	0.00090	J H		0.0019	0.00052	mg/L	1	EPA 8270E LL	Total/NA
Benzyl alcohol	0.0010	H	0.00096	0.00016	mg/L	1	D	EPA 8270E LL	Total/NA
Iron	0.035	J	0.050	0.028	mg/L	1	D	EPA 6020B	Total Recoverable
Sodium	0.28	J	0.50	0.18	mg/L	1	D	EPA 6020B	Total Recoverable
Zinc	0.0040	J	0.0050	0.0029	mg/L	1	D	EPA 6020B	Total Recoverable

## Client Sample ID: SITE WATER

## Lab Sample ID: 630-30382-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Butyl benzyl phthalate	0.00084	J H	0.00093	0.00043	mg/L	1	D	EPA 8270E LL	Total/NA
Caprolactam	0.00096	J H	0.0046	0.00044	mg/L	1	D	EPA 8270E LL	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Environment Testing Philadelphia, LLC

## Detection Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

### Client Sample ID: SITE WATER (Continued)

### Lab Sample ID: 630-30382-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Di-n-butyl phthalate	0.0051	H	0.00093	0.00069	mg/L	1		EPA 8270E LL	Total/NA
Phenanthrene	0.00013	J H	0.00018	0.000051	mg/L	1		EPA 8270E LL	Total/NA
Benzyl alcohol	0.0011	H	0.00093	0.00015	mg/L	1		EPA 8270E LL	Total/NA
Aluminum	0.086		0.030	0.016	mg/L	1		EPA 6020B	Total Recoverable
Arsenic	0.00029	J	0.0010	0.00028	mg/L	1		EPA 6020B	Total Recoverable
Barium	0.026		0.010	0.0031	mg/L	1		EPA 6020B	Total Recoverable
Calcium	14		0.50	0.13	mg/L	1		EPA 6020B	Total Recoverable
Copper	0.0020		0.0020	0.0011	mg/L	1		EPA 6020B	Total Recoverable
Magnesium	4.2		0.50	0.050	mg/L	1		EPA 6020B	Total Recoverable
Manganese	0.031		0.0050	0.0013	mg/L	1		EPA 6020B	Total Recoverable
Iron	0.34		0.050	0.028	mg/L	1		EPA 6020B	Total Recoverable
Lead	0.00093	J	0.0010	0.00017	mg/L	1		EPA 6020B	Total Recoverable
Potassium	1.7		0.50	0.16	mg/L	1		EPA 6020B	Total Recoverable
Nickel	0.00093	J	0.0010	0.00052	mg/L	1		EPA 6020B	Total Recoverable
Sodium	21		0.50	0.18	mg/L	1		EPA 6020B	Total Recoverable
Zinc	0.016		0.0050	0.0029	mg/L	1		EPA 6020B	Total Recoverable
Hardness as calcium carbonate	52		3.3	0.52	mg/L	1		SM 2340B	Total Recoverable
Calcium hardness as calcium carbonate	35		1.3	0.32	mg/L	1		SM 2340B	Total Recoverable
Magnesium hardness as calcium carbonate	17		2.1	0.21	mg/L	1		SM 2340B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Environment Testing Philadelphia, LLC

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: C-1 GRAB

Date Collected: 03/30/22 08:52

Lab Sample ID: 630-30382-1

Date Received: 04/04/22 12:25

Matrix: Sediment

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	63.6		0.1	0.1	%			04/07/22 17:24	1
Percent Solids	36.4		0.1	0.1	%			04/07/22 17:24	1

### Method: D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	182.2				%			04/08/22 17:35	1

### Method: D422 - Grain Size

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			04/08/22 17:37	1
Sieve Size 3 inch - Percent Finer	100.0				% Passing			04/08/22 17:37	1
Sand	6.7				%			04/08/22 17:37	1
Sieve Size 2 inch - Percent Finer	100.0				% Passing			04/08/22 17:37	1
Coarse Sand	0.1				%			04/08/22 17:37	1
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing			04/08/22 17:37	1
Medium Sand	0.8				%			04/08/22 17:37	1
Sieve Size 1 inch - Percent Finer	100.0				% Passing			04/08/22 17:37	1
Fine Sand	5.8				%			04/08/22 17:37	1
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing			04/08/22 17:37	1
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing			04/08/22 17:37	1
Silt	65.9				%			04/08/22 17:37	1
Clay	27.4				%			04/08/22 17:37	1
Sieve Size #4 - Percent Finer	100.0				% Passing			04/08/22 17:37	1
Sieve Size #10 - Percent Finer	99.9				% Passing			04/08/22 17:37	1
Sieve Size #20 - Percent Finer	99.5				% Passing			04/08/22 17:37	1
Sieve Size #40 - Percent Finer	99.1				% Passing			04/08/22 17:37	1
Sieve Size #60 - Percent Finer	98.6				% Passing			04/08/22 17:37	1
Sieve Size #80 - Percent Finer	98.0				% Passing			04/08/22 17:37	1
Sieve Size #100 - Percent Finer	97.4				% Passing			04/08/22 17:37	1
Sieve Size #200 - Percent Finer	93.3				% Passing			04/08/22 17:37	1
Hydrometer Reading 1 - Percent Finer	54.4				% Passing			04/08/22 17:37	1
Hydrometer Reading 2 - Percent Finer	44.6				% Passing			04/08/22 17:37	1
Hydrometer Reading 3 - Percent Finer	38.5				% Passing			04/08/22 17:37	1
Hydrometer Reading 4 - Percent Finer	32.3				% Passing			04/08/22 17:37	1
Hydrometer Reading 5 - Percent Finer	27.4				% Passing			04/08/22 17:37	1
Hydrometer Reading 6 - Percent Finer	20.1				% Passing			04/08/22 17:37	1
Hydrometer Reading 7 - Percent Finer	13.7				% Passing			04/08/22 17:37	1

# Client Sample Results

Client: ST Hudson Engineers, Inc.  
Project/Site: South Jersey Port Corporation, Camden

Job ID: 630-30382-1

## Client Sample ID: C-1 GRAB

Date Collected: 03/30/22 08:52  
Date Received: 04/04/22 12:25

## Lab Sample ID: 630-30382-1

Matrix: Sediment  
Percent Solids: 36.4

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	53000		2700	2700	mg/Kg	⊗		04/06/22 18:24	1

## Client Sample ID: C-2 GRAB

Date Collected: 03/30/22 09:25  
Date Received: 04/04/22 12:25

## Lab Sample ID: 630-30382-2

Matrix: Sediment

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	59.2		0.1	0.1	%			04/07/22 17:24	1
Percent Solids	40.8		0.1	0.1	%			04/07/22 17:24	1

### Method: D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	157.7				%			04/08/22 17:35	1

### Method: D422 - Grain Size

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			04/08/22 17:39	1
Sieve Size 3 inch - Percent Finer	100.0				% Passing			04/08/22 17:39	1
Sand	9.0				%			04/08/22 17:39	1
Sieve Size 2 inch - Percent Finer	100.0				% Passing			04/08/22 17:39	1
Coarse Sand	0.4				%			04/08/22 17:39	1
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing			04/08/22 17:39	1
Medium Sand	1.3				%			04/08/22 17:39	1
Sieve Size 1 inch - Percent Finer	100.0				% Passing			04/08/22 17:39	1
Fine Sand	7.3				%			04/08/22 17:39	1
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing			04/08/22 17:39	1
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing			04/08/22 17:39	1
Silt	61.5				%			04/08/22 17:39	1
Clay	29.5				%			04/08/22 17:39	1
Sieve Size #4 - Percent Finer	100.0				% Passing			04/08/22 17:39	1
Sieve Size #10 - Percent Finer	99.6				% Passing			04/08/22 17:39	1
Sieve Size #20 - Percent Finer	99.0				% Passing			04/08/22 17:39	1
Sieve Size #40 - Percent Finer	98.3				% Passing			04/08/22 17:39	1
Sieve Size #60 - Percent Finer	97.4				% Passing			04/08/22 17:39	1
Sieve Size #80 - Percent Finer	96.8				% Passing			04/08/22 17:39	1
Sieve Size #100 - Percent Finer	96.3				% Passing			04/08/22 17:39	1
Sieve Size #200 - Percent Finer	91.0				% Passing			04/08/22 17:39	1
Hydrometer Reading 1 - Percent Finer	56.1				% Passing			04/08/22 17:39	1
Hydrometer Reading 2 - Percent Finer	49.7				% Passing			04/08/22 17:39	1
Hydrometer Reading 3 - Percent Finer	40.9				% Passing			04/08/22 17:39	1
Hydrometer Reading 4 - Percent Finer	34.6				% Passing			04/08/22 17:39	1
Hydrometer Reading 5 - Percent Finer	29.5				% Passing			04/08/22 17:39	1
Hydrometer Reading 6 - Percent Finer	20.7				% Passing			04/08/22 17:39	1

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## **Client Sample ID: C-2 GRAB**

**Lab Sample ID: 630-30382-2**

**Matrix: Sediment**

Date Collected: 03/30/22 09:25

Date Received: 04/04/22 12:25

### **Method: D422 - Grain Size (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrometer Reading 7 - Percent Finer	12.9				% Passing			04/08/22 17:39	1

## **Client Sample ID: C-2 GRAB**

**Lab Sample ID: 630-30382-2**

**Matrix: Sediment**

Date Collected: 03/30/22 09:25

**Percent Solids: 40.8**

Date Received: 04/04/22 12:25

### **General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	50000		2500	2400	mg/Kg	☀		04/06/22 18:57	1

## **Client Sample ID: C-3 GRAB**

**Lab Sample ID: 630-30382-3**

**Matrix: Sediment**

Date Collected: 03/30/22 10:25

Date Received: 04/04/22 12:25

### **General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	56.0		0.1	0.1	%			04/07/22 17:24	1
Percent Solids	44.0		0.1	0.1	%			04/07/22 17:24	1

### **Method: D2216-90 - Water (Moisture) Content**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	117.4				%			04/08/22 17:35	1

### **Method: D422 - Grain Size**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			04/08/22 17:41	1
Sieve Size 3 inch - Percent Finer	100.0				% Passing			04/08/22 17:41	1
Sand	13.2				%			04/08/22 17:41	1
Sieve Size 2 inch - Percent Finer	100.0				% Passing			04/08/22 17:41	1
Coarse Sand	0.1				%			04/08/22 17:41	1
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing			04/08/22 17:41	1
Medium Sand	1.6				%			04/08/22 17:41	1
Sieve Size 1 inch - Percent Finer	100.0				% Passing			04/08/22 17:41	1
Fine Sand	11.5				%			04/08/22 17:41	1
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing			04/08/22 17:41	1
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing			04/08/22 17:41	1
Silt	58.4				%			04/08/22 17:41	1
Clay	28.4				%			04/08/22 17:41	1
Sieve Size #4 - Percent Finer	100.0				% Passing			04/08/22 17:41	1
Sieve Size #10 - Percent Finer	99.9				% Passing			04/08/22 17:41	1
Sieve Size #20 - Percent Finer	99.3				% Passing			04/08/22 17:41	1
Sieve Size #40 - Percent Finer	98.3				% Passing			04/08/22 17:41	1
Sieve Size #60 - Percent Finer	97.0				% Passing			04/08/22 17:41	1
Sieve Size #80 - Percent Finer	96.0				% Passing			04/08/22 17:41	1
Sieve Size #100 - Percent Finer	94.6				% Passing			04/08/22 17:41	1
Sieve Size #200 - Percent Finer	86.8				% Passing			04/08/22 17:41	1
Hydrometer Reading 1 - Percent Finer	53.7				% Passing			04/08/22 17:41	1

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## **Client Sample ID: C-3 GRAB**

**Lab Sample ID: 630-30382-3**

**Matrix: Sediment**

Date Collected: 03/30/22 10:25

Date Received: 04/04/22 12:25

### **Method: D422 - Grain Size (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrometer Reading 2 - Percent Finer	45.7				% Passing			04/08/22 17:41	1
Hydrometer Reading 3 - Percent Finer	37.7				% Passing			04/08/22 17:41	1
Hydrometer Reading 4 - Percent Finer	32.4				% Passing			04/08/22 17:41	1
Hydrometer Reading 5 - Percent Finer	28.4				% Passing			04/08/22 17:41	1
Hydrometer Reading 6 - Percent Finer	19.1				% Passing			04/08/22 17:41	1
Hydrometer Reading 7 - Percent Finer	12.2				% Passing			04/08/22 17:41	1

## **Client Sample ID: C-3 GRAB**

**Lab Sample ID: 630-30382-3**

**Matrix: Sediment**

Date Collected: 03/30/22 10:25

Date Received: 04/04/22 12:25

### **General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	42000		2300	2200	mg/Kg	☀		04/06/22 19:48	1

## **Client Sample ID: C-7 GRAB**

**Lab Sample ID: 630-30382-7**

**Matrix: Sediment**

Date Collected: 03/30/22 11:50

Date Received: 04/04/22 12:25

### **General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	60.4		0.1	0.1	%			04/07/22 17:24	1
Percent Solids	39.6		0.1	0.1	%			04/07/22 17:24	1

### **Method: D2216-90 - Water (Moisture) Content**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	152.8				%			04/08/22 17:35	1

### **Method: D422 - Grain Size**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			04/08/22 17:43	1
Sieve Size 3 inch - Percent Finer	100.0				% Passing			04/08/22 17:43	1
Sand	3.7				%			04/08/22 17:43	1
Sieve Size 2 inch - Percent Finer	100.0				% Passing			04/08/22 17:43	1
Coarse Sand	0.1				%			04/08/22 17:43	1
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing			04/08/22 17:43	1
Medium Sand	0.7				%			04/08/22 17:43	1
Sieve Size 1 inch - Percent Finer	100.0				% Passing			04/08/22 17:43	1
Fine Sand	2.9				%			04/08/22 17:43	1
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing			04/08/22 17:43	1
Finer									
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing			04/08/22 17:43	1
Finer									
Silt	60.6				%			04/08/22 17:43	1
Clay	35.7				%			04/08/22 17:43	1
Sieve Size #4 - Percent Finer	100.0				% Passing			04/08/22 17:43	1
Sieve Size #10 - Percent Finer	99.9				% Passing			04/08/22 17:43	1

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## **Client Sample ID: C-7 GRAB**

**Lab Sample ID: 630-30382-7**

**Matrix: Sediment**

Date Collected: 03/30/22 11:50

Date Received: 04/04/22 12:25

### **Method: D422 - Grain Size (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sieve Size #20 - Percent Finer	99.6				% Passing			04/08/22 17:43	1
Sieve Size #40 - Percent Finer	99.2				% Passing			04/08/22 17:43	1
Sieve Size #60 - Percent Finer	98.8				% Passing			04/08/22 17:43	1
Sieve Size #80 - Percent Finer	98.6				% Passing			04/08/22 17:43	1
Sieve Size #100 - Percent Finer	98.3				% Passing			04/08/22 17:43	1
Sieve Size #200 - Percent Finer	96.3				% Passing			04/08/22 17:43	1
Hydrometer Reading 1 - Percent Finer	70.8				% Passing			04/08/22 17:43	1
Hydrometer Reading 2 - Percent Finer	59.1				% Passing			04/08/22 17:43	1
Hydrometer Reading 3 - Percent Finer	49.1				% Passing			04/08/22 17:43	1
Hydrometer Reading 4 - Percent Finer	40.7				% Passing			04/08/22 17:43	1
Hydrometer Reading 5 - Percent Finer	35.7				% Passing			04/08/22 17:43	1
Hydrometer Reading 6 - Percent Finer	25.7				% Passing			04/08/22 17:43	1
Hydrometer Reading 7 - Percent Finer	17.0				% Passing			04/08/22 17:43	1

## **Client Sample ID: C-7 GRAB**

**Lab Sample ID: 630-30382-7**

**Matrix: Sediment**

Date Collected: 03/30/22 11:50

Date Received: 04/04/22 12:25

### **General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	47000		2500	2500	mg/Kg	*		04/06/22 20:04	1

## **Client Sample ID: C-8 GRAB**

**Lab Sample ID: 630-30382-8**

**Matrix: Sediment**

Date Collected: 03/30/22 12:24

Date Received: 04/04/22 12:25

### **General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	53.4		0.1	0.1	%			04/07/22 17:24	1
Percent Solids	46.6		0.1	0.1	%			04/07/22 17:24	1

### **Method: D2216-90 - Water (Moisture) Content**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	108.9				%			04/08/22 17:35	1

### **Method: D422 - Grain Size**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			04/08/22 17:45	1
Sieve Size 3 inch - Percent Finer	100.0				% Passing			04/08/22 17:45	1
Sand	6.5				%			04/08/22 17:45	1
Sieve Size 2 inch - Percent Finer	100.0				% Passing			04/08/22 17:45	1
Coarse Sand	0.4				%			04/08/22 17:45	1
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing			04/08/22 17:45	1
Medium Sand	1.9				%			04/08/22 17:45	1
Sieve Size 1 inch - Percent Finer	100.0				% Passing			04/08/22 17:45	1
Fine Sand	4.2				%			04/08/22 17:45	1

# Client Sample Results

Client: ST Hudson Engineers, Inc.  
Project/Site: South Jersey Port Corporation, Camden

Job ID: 630-30382-1

## Client Sample ID: C-8 GRAB

Date Collected: 03/30/22 12:24  
Date Received: 04/04/22 12:25

## Lab Sample ID: 630-30382-8

Matrix: Sediment

### Method: D422 - Grain Size (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing			04/08/22 17:45	1
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing			04/08/22 17:45	1
Silt	58.7				%			04/08/22 17:45	1
Clay	34.8				%			04/08/22 17:45	1
Sieve Size #4 - Percent Finer	100.0				% Passing			04/08/22 17:45	1
Sieve Size #10 - Percent Finer	99.6				% Passing			04/08/22 17:45	1
Sieve Size #20 - Percent Finer	98.3				% Passing			04/08/22 17:45	1
Sieve Size #40 - Percent Finer	97.7				% Passing			04/08/22 17:45	1
Sieve Size #60 - Percent Finer	97.0				% Passing			04/08/22 17:45	1
Sieve Size #80 - Percent Finer	96.5				% Passing			04/08/22 17:45	1
Sieve Size #100 - Percent Finer	95.9				% Passing			04/08/22 17:45	1
Sieve Size #200 - Percent Finer	93.5				% Passing			04/08/22 17:45	1
Hydrometer Reading 1 - Percent Finer	67.5				% Passing			04/08/22 17:45	1
Hydrometer Reading 2 - Percent Finer	58.6				% Passing			04/08/22 17:45	1
Hydrometer Reading 3 - Percent Finer	48.2				% Passing			04/08/22 17:45	1
Hydrometer Reading 4 - Percent Finer	39.2				% Passing			04/08/22 17:45	1
Hydrometer Reading 5 - Percent Finer	34.8				% Passing			04/08/22 17:45	1
Hydrometer Reading 6 - Percent Finer	24.3				% Passing			04/08/22 17:45	1
Hydrometer Reading 7 - Percent Finer	15.1				% Passing			04/08/22 17:45	1

## Client Sample ID: C-8 GRAB

Date Collected: 03/30/22 12:24  
Date Received: 04/04/22 12:25

## Lab Sample ID: 630-30382-8

Matrix: Sediment  
Percent Solids: 46.6

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	45000		2100	2100	mg/Kg	☀		04/06/22 20:27	1

## Client Sample ID: D-9 DISCRETE

Date Collected: 03/30/22 11:19  
Date Received: 04/04/22 12:25

## Lab Sample ID: 630-30382-9

Matrix: Sediment  
Percent Solids: 46.9

### Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.35	U	0.35	0.13	mg/Kg	☀	04/12/22 09:40	04/15/22 23:05	10
1,2-Dichlorobenzene	0.35	U	0.35	0.11	mg/Kg	☀	04/12/22 09:40	04/15/22 23:05	10
1,2,4,5-Tetrachlorobenzene	350	U	350	140	ug/Kg	☀	04/12/22 09:40	04/15/22 23:05	10
1,3-Dichlorobenzene	0.35	U	0.35	0.12	mg/Kg	☀	04/12/22 09:40	04/15/22 23:05	10
1,4-Dichlorobenzene	0.35	U	0.35	0.13	mg/Kg	☀	04/12/22 09:40	04/15/22 23:05	10
1,4-Dioxane	0.70	U	0.70	0.11	mg/Kg	☀	04/12/22 09:40	04/15/22 23:05	10
1,2-Diphenylhydrazine(as Azobenzene)	0.35	U	0.35	0.16	mg/Kg	☀	04/12/22 09:40	04/15/22 23:05	10
1,2,4-Trichlorobenzene	0.35	U	0.35	0.11	mg/Kg	☀	04/12/22 09:40	04/15/22 23:05	10
2-Chloronaphthalene	0.071	U	0.071	0.016	mg/Kg	☀	04/12/22 09:40	04/15/22 23:05	10

Eurofins Environment Testing Philadelphia, LLC

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: D-9 DISCRETE

Date Collected: 03/30/22 11:19

Lab Sample ID: 630-30382-9

Date Received: 04/04/22 12:25

Matrix: Sediment

Percent Solids: 46.9

### Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	0.35	U	0.35	0.13	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
2,3,4,6-Tetrachlorophenol	350	U	350	150	ug/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
2,4-Dichlorophenol	0.071	U	0.071	0.027	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
2,4-Dimethylphenol	0.35	U	0.35	0.12	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
2,4-Dinitrophenol	3.5	U	3.5	2.2	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
2,4-Dinitrotoluene	0.35	U	0.35	0.21	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
2,6-Dinitrotoluene	0.35	U	0.35	0.14	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>2-Methylnaphthalene</b>	<b>0.039</b>	<b>J</b>	0.071	0.017	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
2-Methylphenol	0.35	U	0.35	0.10	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Methylphenol, 3 & 4	0.35	U	0.35	0.10	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
2-Nitroaniline	1.8	U	1.8	0.16	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
3-Nitroaniline	1.8	U	1.8	0.089	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
4-Nitroaniline	1.8	U	1.8	0.13	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
2-Nitrophenol	0.35	U	0.35	0.13	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
4-Nitrophenol	1.8	U	1.8	0.25	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
2,2'-oxybis[1-chloropropane]	0.071	U	0.071	0.026	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
2,4,5-Trichlorophenol	0.35	U	0.35	0.12	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
2,4,6-Trichlorophenol	0.35	U	0.35	0.12	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
4-Chloro-3-methylphenol	0.35	U	0.35	0.12	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
4-Chlorophenyl phenyl ether	0.35	U	0.35	0.12	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
4,6-Dinitro-2-methylphenol	1.8	U	1.8	0.61	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Cresols, Total	0.70	U	0.70	0.20	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Acenaphthene</b>	<b>0.040</b>	<b>J</b>	0.071	0.020	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Acenaphthylene</b>	<b>0.066</b>	<b>J</b>	0.071	0.015	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Acetophenone	0.71	U	0.71	0.12	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Aniline	0.35	U	0.35	0.091	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Anthracene</b>	<b>0.087</b>		0.071	0.018	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Atrazine	0.71	U	0.71	0.15	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Benzaldehyde	0.71	U	0.71	0.044	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Benzidine	7.1	U	7.1	2.7	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Benzo[a]anthracene</b>	<b>0.25</b>		0.071	0.032	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Benzo[b]fluoranthene</b>	<b>0.33</b>		0.071	0.017	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Benzo[k]fluoranthene</b>	<b>0.080</b>		0.071	0.021	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Benzoic acid	1.8	U	1.8	0.78	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Benzo[g,h,i]perylene</b>	<b>0.28</b>		0.071	0.015	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Benzo[a]pyrene</b>	<b>0.27</b>		0.071	0.030	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Bis(2-chloroethoxy)methane	0.35	U	0.35	0.13	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Bis(2-chloroethyl)ether	0.071	U	0.071	0.013	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Bis(2-ethylhexyl) phthalate</b>	<b>1.3</b>	<b>J</b>	3.5	0.37	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
4-Bromophenyl phenyl ether	0.35	U	0.35	0.15	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Butyl benzyl phthalate	0.35	U	0.35	0.24	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Caprolactam	1.8	U	1.8	0.23	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Carbazole</b>	<b>0.028</b>	<b>J</b>	0.071	0.016	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
4-Chloroaniline	0.35	U	0.35	0.092	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Chrysene</b>	<b>0.31</b>		0.071	0.039	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Dibenz(a,h)anthracene</b>	<b>0.068</b>	<b>J</b>	0.071	0.045	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Dibenzofuran	0.35	U	0.35	0.13	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Di-n-butyl phthalate	0.35	U	0.35	0.15	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Di-n-octyl phthalate	0.35	U	0.35	0.20	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10

Eurofins Environment Testing Philadelphia, LLC

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: D-9 DISCRETE

Date Collected: 03/30/22 11:19

Lab Sample ID: 630-30382-9

Date Received: 04/04/22 12:25

Matrix: Sediment

Percent Solids: 46.9

### Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diethyl phthalate	0.35	U	0.35	0.12	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Dimethyl phthalate	0.35	U	0.35	0.14	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Fluoranthene</b>	<b>0.32</b>		0.071	0.019	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Fluorene</b>	<b>0.040 J</b>		0.071	0.014	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Hexachlorobenzene	0.071	U	0.071	0.025	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Hexachlorobutadiene	0.071	U	0.071	0.021	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Hexachlorocyclopentadiene	0.35	U	0.35	0.036	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Hexachloroethane	0.35	U	0.35	0.12	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.22</b>		0.071	0.035	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Isophorone	0.35	U	0.35	0.13	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Naphthalene</b>	<b>0.072</b>		0.071	0.014	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Nitrobenzene	0.70	U	0.70	0.13	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
N-Nitrosodimethylamine	0.35	U	0.35	0.13	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
N-Nitrosodiphenylamine	0.35	U	0.35	0.12	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
N-Nitrosodi-n-propylamine	0.071	U	0.071	0.024	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Pentachlorophenol	1.8	U	1.8	0.56	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Phenanthrene</b>	<b>0.23</b>		0.071	0.019	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Phenol	0.35	U	0.35	0.11	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Pyrene</b>	<b>0.45</b>		0.071	0.017	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Pyridine	0.71	U	0.71	0.19	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
Benzyl alcohol	0.35	U	0.35	0.024	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
3,3'-Dichlorobenzidine	0.35	U	0.35	0.33	mg/Kg	⊗	04/12/22 09:40	04/15/22 23:05	10
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	54		35 - 105				04/12/22 09:40	04/15/22 23:05	10
2-Fluorophenol (Surr)	67		32 - 105				04/12/22 09:40	04/15/22 23:05	10
2,4,6-Tribromophenol (Surr)	39		20 - 119				04/12/22 09:40	04/15/22 23:05	10
Nitrobenzene-d5 (Surr)	51		34 - 109				04/12/22 09:40	04/15/22 23:05	10
Phenol-d5 (Surr)	62		34 - 105				04/12/22 09:40	04/15/22 23:05	10
Terphenyl-d14 (Surr)	57		20 - 117				04/12/22 09:40	04/15/22 23:05	10

### Method: EPA 8081B LL - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin (2C)	0.00044	U	0.00044	0.00014	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
alpha-BHC (2C)	0.00044	U	0.00044	0.00011	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
beta-BHC (2C)	0.00044	U	0.00044	0.00012	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
delta-BHC (2C)	0.00044	U	0.00044	0.00014	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
gamma-BHC (Lindane) (2C)	0.00044	U	0.00044	0.00011	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
<b>cis-Chlordane (2C)</b>	<b>0.0010 p</b>		0.00044	0.00011	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
trans-Chlordane (2C)	0.00044	U	0.00044	0.00010	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
Chlordane (technical) (2C)	0.0044	U	0.0044	0.0019	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
<b>4,4'-DDD (2C)</b>	<b>0.0060</b>		0.00044	0.000092	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
<b>4,4'-DDE (1C)</b>	<b>0.017</b>		0.00044	0.000090	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
4,4'-DDT (2C)	0.00044	U	0.00044	0.000032	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
Dieldrin (2C)	0.00044	U	0.00044	0.00011	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
Endosulfan I (2C)	0.00044	U	0.00044	0.00012	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
Endosulfan II (2C)	0.00044	U	0.00044	0.000097	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
<b>Endosulfan sulfate (2C)</b>	<b>0.0013</b>		0.00044	0.000020	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
<b>Endrin (1C)</b>	<b>0.0017 p</b>		0.00044	0.000082	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
Endrin aldehyde (2C)	0.00044	U	0.00044	0.00016	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5

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# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: D-9 DISCRETE

Date Collected: 03/30/22 11:19

Lab Sample ID: 630-30382-9

Date Received: 04/04/22 12:25

Matrix: Sediment

Percent Solids: 46.9

### Method: EPA 8081B LL - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin ketone (2C)	0.00044	U	0.00044	0.000061	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
Heptachlor (2C)	0.00044	U	0.00044	0.00014	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
Heptachlor epoxide (2C)	0.00044	U	0.00044	0.00011	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
Methoxychlor (2C)	0.00044	U	0.00044	0.00017	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
Mirex (2C)	0.00044	U	0.00044	0.000082	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
Toxaphene (2C)	0.018	U	0.018	0.012	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
Endosulfan, Total (2C)	0.88	U	0.88	0.22	ug/Kg	⊗	04/11/22 16:41	04/29/22 20:16	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr) (1C)	40		10 - 105				04/11/22 16:41	04/29/22 20:16	5
Tetrachloro-m-xylene (Surr) (2C)	30		10 - 105				04/11/22 16:41	04/29/22 20:16	5
DCB Decachlorobiphenyl (Surr) (1C)	132	S1+	25 - 107				04/11/22 16:41	04/29/22 20:16	5
DCB Decachlorobiphenyl (Surr) (2C)	114	S1+	25 - 107				04/11/22 16:41	04/29/22 20:16	5

### Method: EPA 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016 (1C)	0.0088	U	0.0088	0.0029	mg/Kg	⊗	04/11/22 17:17	04/16/22 11:55	10
PCB-1221 (1C)	0.0088	U	0.0088	0.0031	mg/Kg	⊗	04/11/22 17:17	04/16/22 11:55	10
PCB-1232 (1C)	0.0088	U	0.0088	0.0022	mg/Kg	⊗	04/11/22 17:17	04/16/22 11:55	10
PCB-1242 (1C)	0.0088	U	0.0088	0.0013	mg/Kg	⊗	04/11/22 17:17	04/16/22 11:55	10
<b>PCB-1248 (2C)</b>	<b>0.038</b>		0.0088	0.0021	mg/Kg	⊗	04/11/22 17:17	04/16/22 11:55	10
PCB-1254 (1C)	0.0088	U	0.0088	0.0027	mg/Kg	⊗	04/11/22 17:17	04/16/22 11:55	10
<b>PCB-1260 (2C)</b>	<b>0.062</b>		0.0088	0.0025	mg/Kg	⊗	04/11/22 17:17	04/16/22 11:55	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr) (1C)	83		33 - 126				04/11/22 17:17	04/16/22 11:55	10
Tetrachloro-m-xylene (Surr) (2C)	78		33 - 126				04/11/22 17:17	04/16/22 11:55	10
DCB Decachlorobiphenyl (Surr) (1C)	313	S1+	26 - 170				04/11/22 17:17	04/16/22 11:55	10
DCB Decachlorobiphenyl (Surr) (2C)	328	S1+	26 - 170				04/11/22 17:17	04/16/22 11:55	10

### Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	0.10		0.0088	0.0031	mg/Kg		04/11/22 17:17		10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	12000	^2	6.4	4.5	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Arsenic	8.4		0.11	0.062	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Barium	160		1.1	0.65	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Antimony	0.53		0.21	0.11	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Beryllium	1.5		0.11	0.076	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Cadmium	2.0		0.11	0.059	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Calcium	11000		53	22	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Chromium	26		0.21	0.19	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Cobalt	15		0.053	0.038	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Copper	39		0.32	0.22	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Magnesium	4600		53	4.8	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Manganese	1500		0.53	0.46	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Iron	25000		5.3	5.1	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Lead	57		0.11	0.070	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Potassium	1200		53	15	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1

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# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: D-9 DISCRETE

Date Collected: 03/30/22 11:19

Lab Sample ID: 630-30382-9

Date Received: 04/04/22 12:25

Matrix: Sediment

Percent Solids: 46.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	24		0.11	0.10	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Selenium	0.71		0.53	0.13	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Sodium	120		53	27	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Silver	0.36		0.11	0.030	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Thallium	0.14		0.11	0.074	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Vanadium	23		0.11	0.10	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1
Zinc	310		0.53	0.51	mg/Kg	⊗	04/21/22 11:10	04/22/22 20:31	1

### Method: EPA 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.19		0.032	0.021	mg/Kg	⊗	04/27/22 06:39	04/27/22 11:19	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	53.1		0.1	0.1	%			04/06/22 18:44	1
Percent Solids	46.9		0.1	0.1	%			04/06/22 18:44	1
Cr (III)	26		0.50	0.21	mg/Kg			05/02/22 13:58	1
Cr (VI)	4.3	U	4.3	2.3	mg/Kg	⊗	04/19/22 10:26	04/22/22 12:33	5
Cyanide, Total	9.2		0.42	0.32	mg/Kg	⊗	04/11/22 22:00	04/12/22 00:58	1
Total Organic Carbon - Duplicates	38000		2100	2100	mg/Kg	⊗		04/06/22 21:00	1

### Method: D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	107.4				%			04/08/22 17:35	1

### Method: D422 - Grain Size

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	1.6				%			04/08/22 17:47	1
Sieve Size 3 inch - Percent Finer	100.0				% Passing			04/08/22 17:47	1
Sand	17.6				%			04/08/22 17:47	1
Sieve Size 2 inch - Percent Finer	100.0				% Passing			04/08/22 17:47	1
Coarse Sand	0.7				%			04/08/22 17:47	1
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing			04/08/22 17:47	1
Medium Sand	4.6				%			04/08/22 17:47	1
Sieve Size 1 inch - Percent Finer	100.0				% Passing			04/08/22 17:47	1
Fine Sand	12.3				%			04/08/22 17:47	1
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing			04/08/22 17:47	1
Finer									
Sieve Size 0.375 inch - Percent Finer	98.9				% Passing			04/08/22 17:47	1
Silt	48.5				%			04/08/22 17:47	1
Clay	32.3				%			04/08/22 17:47	1
Sieve Size #4 - Percent Finer	98.4				% Passing			04/08/22 17:47	1
Sieve Size #10 - Percent Finer	97.7				% Passing			04/08/22 17:47	1
Sieve Size #20 - Percent Finer	95.6				% Passing			04/08/22 17:47	1
Sieve Size #40 - Percent Finer	93.1				% Passing			04/08/22 17:47	1
Sieve Size #60 - Percent Finer	90.5				% Passing			04/08/22 17:47	1
Sieve Size #80 - Percent Finer	88.4				% Passing			04/08/22 17:47	1
Sieve Size #100 - Percent Finer	87.1				% Passing			04/08/22 17:47	1
Sieve Size #200 - Percent Finer	80.8				% Passing			04/08/22 17:47	1

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: D-9 DISCRETE

Date Collected: 03/30/22 11:19

Lab Sample ID: 630-30382-9

Date Received: 04/04/22 12:25

Matrix: Sediment

Percent Solids: 46.9

### Method: D422 - Grain Size (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrometer Reading 1 - Percent	61.8				% Passing		04/08/22 17:47		1
Finer									
Hydrometer Reading 2 - Percent	54.7				% Passing		04/08/22 17:47		1
Finer									
Hydrometer Reading 3 - Percent	44.1				% Passing		04/08/22 17:47		1
Finer									
Hydrometer Reading 4 - Percent	38.2				% Passing		04/08/22 17:47		1
Finer									
Hydrometer Reading 5 - Percent	32.3				% Passing		04/08/22 17:47		1
Finer									
Hydrometer Reading 6 - Percent	21.7				% Passing		04/08/22 17:47		1
Finer									
Hydrometer Reading 7 - Percent	13.2				% Passing		04/08/22 17:47		1
Finer									
Gravel	1.6				%		04/08/22 17:47		1
Sand	17.6				%		04/08/22 17:47		1
Coarse Sand	0.7				%		04/08/22 17:47		1
Medium Sand	4.6				%		04/08/22 17:47		1
Fine Sand	12.3				%		04/08/22 17:47		1
Silt	48.5				%		04/08/22 17:47		1
Clay	32.3				%		04/08/22 17:47		1

## Client Sample ID: SC-1 COMPOSITE (C1+C2)

Date Collected: 04/04/22 12:05

Lab Sample ID: 630-30382-10

Date Received: 04/04/22 12:25

Matrix: Sediment

Percent Solids: 36.6

### Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.89	U	0.89	0.33	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
1,2-Dichlorobenzene	0.89	U	0.89	0.29	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
1,2,4,5-Tetrachlorobenzene	890	U	890	360	ug/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
1,3-Dichlorobenzene	0.89	U	0.89	0.30	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
1,4-Dichlorobenzene	0.89	U	0.89	0.33	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
1,4-Dioxane	1.8	U	1.8	0.28	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
1,2-Diphenylhydrazine(as Azobenzene)	0.89	U	0.89	0.40	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
1,2,4-Trichlorobenzene	0.89	U	0.89	0.27	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
2-Chloronaphthalene	0.18	U	0.18	0.041	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
2-Chlorophenol	0.89	U	0.89	0.33	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
2,3,4,6-Tetrachlorophenol	890	U	890	380	ug/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
2,4-Dichlorophenol	0.18	U	0.18	0.070	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
2,4-Dimethylphenol	0.89	U	0.89	0.30	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
2,4-Dinitrophenol	8.9	U	8.9	5.6	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
2,4-Dinitrotoluene	0.89	U	0.89	0.54	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
2,6-Dinitrotoluene	0.89	U	0.89	0.35	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
2-Methylnaphthalene	0.18	U	0.18	0.043	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
2-Methylphenol	0.89	U	0.89	0.26	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
Methylphenol, 3 & 4	0.89	U	0.89	0.26	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
2-Nitroaniline	4.6	U	4.6	0.41	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
3-Nitroaniline	4.6	U	4.6	0.23	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
4-Nitroaniline	4.6	U	4.6	0.33	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20
2-Nitrophenol	0.89	U	0.89	0.33	mg/Kg	✉	04/14/22 11:26	04/19/22 21:50	20

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: SC-1 COMPOSITE (C1+C2)

## Lab Sample ID: 630-30382-10

Date Collected: 04/04/22 12:05

Matrix: Sediment

Date Received: 04/04/22 12:25

Percent Solids: 36.6

### Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	4.6	U	4.6	0.63	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
2,2'-oxybis[1-chloropropane]	0.18	U	0.18	0.067	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
2,4,5-Trichlorophenol	0.89	U	0.89	0.31	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
2,4,6-Trichlorophenol	0.89	U	0.89	0.30	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
4-Chloro-3-methylphenol	0.89	U	0.89	0.32	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
4-Chlorophenyl phenyl ether	0.89	U	0.89	0.30	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
4,6-Dinitro-2-methylphenol	4.6	U	4.6	1.6	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Cresols, Total	1.8	U	1.8	0.51	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Acenaphthene	0.18	U	0.18	0.052	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
<b>Acenaphthylene</b>	<b>0.065 J</b>		0.18	0.039	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Acetophenone	1.8	U	1.8	0.32	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Aniline	0.89	U	0.89	0.23	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
<b>Anthracene</b>	<b>0.095 J</b>		0.18	0.047	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Atrazine	1.8	U	1.8	0.39	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Benzaldehyde	1.8	U	1.8	0.11	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Benzidine	18	U	18	6.8	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
<b>Benzo[a]anthracene</b>	<b>0.28</b>		0.18	0.081	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
<b>Benzo[b]fluoranthene</b>	<b>0.35</b>		0.18	0.044	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
<b>Benzo[k]fluoranthene</b>	<b>0.14 J</b>		0.18	0.054	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Benzoic acid	4.6	U	4.6	2.0	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
<b>Benzo[g,h,i]perylene</b>	<b>0.24</b>		0.18	0.039	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
<b>Benzo[a]pyrene</b>	<b>0.28</b>		0.18	0.078	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Bis(2-chloroethoxy)methane	0.89	U	0.89	0.33	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Bis(2-chloroethyl)ether	0.18	U	0.18	0.033	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Bis(2-ethylhexyl) phthalate	8.9	U	8.9	0.96	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
4-Bromophenyl phenyl ether	0.89	U	0.89	0.38	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Butyl benzyl phthalate	0.89	U	0.89	0.62	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Caprolactam	4.6	U	4.6	0.59	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Carbazole	0.18	U	0.18	0.042	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
4-Chloroaniline	0.89	U	0.89	0.24	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
<b>Chrysene</b>	<b>0.33</b>		0.18	0.10	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Dibenz(a,h)anthracene	0.18	U	0.18	0.12	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Dibenzofuran	0.89	U	0.89	0.33	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Di-n-butyl phthalate	0.89	U	0.89	0.39	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Di-n-octyl phthalate	0.89	U	0.89	0.52	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Diethyl phthalate	0.89	U	0.89	0.32	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Dimethyl phthalate	0.89	U	0.89	0.35	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
<b>Fluoranthene</b>	<b>0.50</b>		0.18	0.048	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
<b>Fluorene</b>	<b>0.042 J</b>		0.18	0.035	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Hexachlorobenzene	0.18	U	0.18	0.065	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Hexachlorobutadiene	0.18	U	0.18	0.053	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Hexachlorocyclopentadiene	0.89	U	0.89	0.092	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Hexachloroethane	0.89	U	0.89	0.32	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.20</b>		0.18	0.090	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Isophorone	0.89	U	0.89	0.34	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
<b>Naphthalene</b>	<b>0.061 J</b>		0.18	0.035	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Nitrobenzene	1.8	U	1.8	0.33	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
N-Nitrosodimethylamine	0.89	U	0.89	0.34	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
N-Nitrosodiphenylamine	0.89	U	0.89	0.30	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: SC-1 COMPOSITE (C1+C2)

## Lab Sample ID: 630-30382-10

Date Collected: 04/04/22 12:05

Matrix: Sediment

Date Received: 04/04/22 12:25

Percent Solids: 36.6

### Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	0.18	U	0.18	0.061	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Pentachlorophenol	4.6	U	4.6	1.4	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
<b>Phenanthrene</b>	<b>0.13</b>	<b>J</b>	0.18	0.048	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Phenol	0.89	U	0.89	0.27	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
<b>Pyrene</b>	<b>0.49</b>		0.18	0.043	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Pyridine	1.8	U	1.8	0.49	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
Benzyl alcohol	0.89	U	0.89	0.061	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
3,3'-Dichlorobenzidine	0.89	U	0.89	0.84	mg/Kg	⊗	04/14/22 11:26	04/19/22 21:50	20
<b>Surrogate</b>		%Recovery	Qualifier	<b>Limits</b>			Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	63			35 - 105			04/14/22 11:26	04/19/22 21:50	20
2-Fluorophenol (Surr)	39			32 - 105			04/14/22 11:26	04/19/22 21:50	20
2,4,6-Tribromophenol (Surr)	51			20 - 119			04/14/22 11:26	04/19/22 21:50	20
Nitrobenzene-d5 (Surr)	55			34 - 109			04/14/22 11:26	04/19/22 21:50	20
Phenol-d5 (Surr)	58			34 - 105			04/14/22 11:26	04/19/22 21:50	20
Terphenyl-d14 (Surr)	59			20 - 117			04/14/22 11:26	04/19/22 21:50	20

### Method: EPA 8081B LL - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Aldrin (1C)</b>	<b>0.00029</b>	<b>J p</b>	0.00057	0.00018	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
alpha-BHC (2C)	0.00057	U	0.00057	0.00014	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
beta-BHC (2C)	0.00057	U	0.00057	0.00016	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
delta-BHC (2C)	0.00057	U	0.00057	0.00018	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
gamma-BHC (Lindane) (2C)	0.00057	U	0.00057	0.00015	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
<b>cis-Chlordane (2C)</b>	<b>0.0011</b>	<b>p</b>	0.00057	0.00014	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
trans-Chlordane (2C)	0.00057	U	0.00057	0.00013	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
Chlordane (technical) (2C)	0.0057	U	0.0057	0.0024	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
<b>4,4'-DDD (2C)</b>	<b>0.0059</b>		0.00057	0.00012	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
<b>4,4'-DDE (1C)</b>	<b>0.015</b>		0.00057	0.00012	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
4,4'-DDT (2C)	0.00057	U	0.00057	0.00041	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
Dieldrin (2C)	0.00057	U	0.00057	0.00014	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
Endosulfan I (2C)	0.00057	U	0.00057	0.00015	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
Endosulfan II (2C)	0.00057	U	0.00057	0.00012	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
<b>Endosulfan sulfate (1C)</b>	<b>0.00075</b>		0.00057	0.00026	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
<b>Endrin (1C)</b>	<b>0.0014</b>	<b>p</b>	0.00057	0.00011	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
Endrin aldehyde (2C)	0.00057	U	0.00057	0.00020	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
Endrin ketone (2C)	0.00057	U	0.00057	0.000078	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
Heptachlor (2C)	0.00057	U	0.00057	0.00018	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
Heptachlor epoxide (2C)	0.00057	U	0.00057	0.00014	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
Methoxychlor (2C)	0.00057	U	0.00057	0.00022	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
Mirex (2C)	0.00057	U	0.00057	0.00011	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
Toxaphene (2C)	0.023	U	0.023	0.015	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
Endosulfan, Total (2C)	1.1	U	1.1	0.28	ug/Kg	⊗	04/11/22 16:41	04/29/22 20:32	5
<b>Surrogate</b>		%Recovery	Qualifier	<b>Limits</b>			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr) (1C)	39			10 - 105			04/11/22 16:41	04/29/22 20:32	5
Tetrachloro-m-xylene (Surr) (2C)	28			10 - 105			04/11/22 16:41	04/29/22 20:32	5
DCB Decachlorobiphenyl (Surr) (1C)	122	S1+		25 - 107			04/11/22 16:41	04/29/22 20:32	5
DCB Decachlorobiphenyl (Surr) (2C)	122	S1+		25 - 107			04/11/22 16:41	04/29/22 20:32	5

Eurofins Environment Testing Philadelphia, LLC

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: SC-1 COMPOSITE (C1+C2)

## Lab Sample ID: 630-30382-10

Date Collected: 04/04/22 12:05

Matrix: Sediment

Date Received: 04/04/22 12:25

Percent Solids: 36.6

### Method: EPA 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016 (1C)	0.011	U	0.011	0.0037	mg/Kg	⊗	04/11/22 17:17	04/16/22 12:14	10
PCB-1221 (1C)	0.011	U	0.011	0.0040	mg/Kg	⊗	04/11/22 17:17	04/16/22 12:14	10
PCB-1232 (1C)	0.011	U	0.011	0.0028	mg/Kg	⊗	04/11/22 17:17	04/16/22 12:14	10
PCB-1242 (1C)	0.011	U	0.011	0.0017	mg/Kg	⊗	04/11/22 17:17	04/16/22 12:14	10
<b>PCB-1248 (2C)</b>	<b>0.013</b>		0.011	0.0027	mg/Kg	⊗	04/11/22 17:17	04/16/22 12:14	10
PCB-1254 (1C)	0.011	U	0.011	0.0034	mg/Kg	⊗	04/11/22 17:17	04/16/22 12:14	10
<b>PCB-1260 (2C)</b>	<b>0.024</b>		0.011	0.0032	mg/Kg	⊗	04/11/22 17:17	04/16/22 12:14	10
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Tetrachloro-m-xylene (Surr) (1C)		45		33 - 126			04/11/22 17:17	04/16/22 12:14	10
Tetrachloro-m-xylene (Surr) (2C)		43		33 - 126			04/11/22 17:17	04/16/22 12:14	10
DCB Decachlorobiphenyl (Surr) (1C)		93		26 - 170			04/11/22 17:17	04/16/22 12:14	10
DCB Decachlorobiphenyl (Surr) (2C)		91		26 - 170			04/11/22 17:17	04/16/22 12:14	10

### Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Polychlorinated biphenyls, Total</b>	<b>0.037</b>		0.011	0.0040	mg/Kg		04/11/22 17:17		10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	13000	^2	8.0	5.7	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Arsenic	8.6		0.13	0.077	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Barium	160		1.3	0.82	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Antimony	0.55		0.27	0.14	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Beryllium	1.1		0.13	0.096	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Cadmium	1.6		0.13	0.075	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Calcium	4000		67	27	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Chromium	33		0.27	0.24	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Cobalt	16		0.067	0.048	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Copper	41		0.40	0.27	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Magnesium	4000		67	6.1	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Manganese	1800		0.67	0.57	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Iron	29000		6.7	6.4	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Lead	60		0.13	0.088	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Potassium	1400		67	19	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Nickel	24		0.13	0.13	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Selenium	0.78		0.67	0.16	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Sodium	130		67	34	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Silver	0.40		0.13	0.037	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Thallium	0.15		0.13	0.093	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Vanadium	27		0.13	0.13	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1
Zinc	290		0.67	0.64	mg/Kg	⊗	04/21/22 11:14	04/22/22 20:35	1

### Method: EPA 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.26		0.038	0.024	mg/Kg	⊗	05/01/22 10:20	05/02/22 13:17	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	63.4		0.1	0.1	%			04/06/22 18:44	1
Percent Solids	36.6		0.1	0.1	%			04/06/22 18:44	1

Eurofins Environment Testing Philadelphia, LLC

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

**Client Sample ID: SC-1 COMPOSITE (C1+C2)**

**Lab Sample ID: 630-30382-10**

Date Collected: 04/04/22 12:05

Matrix: Sediment

Date Received: 04/04/22 12:25

Percent Solids: 36.6

## General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III)	33		0.50	0.21	mg/Kg			05/02/22 13:58	1
Cr (VI)	5.4	U	5.4	2.9	mg/Kg	⊗	04/19/22 10:26	04/22/22 12:34	5
Cyanide, Total	20		0.51	0.38	mg/Kg	⊗	04/15/22 11:45	04/15/22 14:28	1
Total Organic Carbon - Duplicates	52000		2700	2700	mg/Kg	⊗		04/06/22 21:17	1

## Method: D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	167.8				%			04/08/22 17:35	1

## Method: D422 - Grain Size

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			04/08/22 17:49	1
Sieve Size 3 inch - Percent Finer	100.0				% Passing			04/08/22 17:49	1
Sand	8.7				%			04/08/22 17:49	1
Sieve Size 2 inch - Percent Finer	100.0				% Passing			04/08/22 17:49	1
Coarse Sand	0.4				%			04/08/22 17:49	1
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing			04/08/22 17:49	1
Medium Sand	1.5				%			04/08/22 17:49	1
Sieve Size 1 inch - Percent Finer	100.0				% Passing			04/08/22 17:49	1
Fine Sand	6.8				%			04/08/22 17:49	1
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing			04/08/22 17:49	1
Finer									
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing			04/08/22 17:49	1
Silt	59.1				%			04/08/22 17:49	1
Clay	32.2				%			04/08/22 17:49	1
Sieve Size #4 - Percent Finer	100.0				% Passing			04/08/22 17:49	1
Sieve Size #10 - Percent Finer	99.6				% Passing			04/08/22 17:49	1
Sieve Size #20 - Percent Finer	98.7				% Passing			04/08/22 17:49	1
Sieve Size #40 - Percent Finer	98.1				% Passing			04/08/22 17:49	1
Sieve Size #60 - Percent Finer	97.4				% Passing			04/08/22 17:49	1
Sieve Size #80 - Percent Finer	96.8				% Passing			04/08/22 17:49	1
Sieve Size #100 - Percent Finer	96.2				% Passing			04/08/22 17:49	1
Sieve Size #200 - Percent Finer	91.3				% Passing			04/08/22 17:49	1
Hydrometer Reading 1 - Percent Finer	54.5				% Passing			04/08/22 17:49	1
Hydrometer Reading 2 - Percent Finer	48.2				% Passing			04/08/22 17:49	1
Hydrometer Reading 3 - Percent Finer	41.8				% Passing			04/08/22 17:49	1
Hydrometer Reading 4 - Percent Finer	36.5				% Passing			04/08/22 17:49	1
Hydrometer Reading 5 - Percent Finer	32.2				% Passing			04/08/22 17:49	1
Hydrometer Reading 6 - Percent Finer	21.6				% Passing			04/08/22 17:49	1
Hydrometer Reading 7 - Percent Finer	14.0				% Passing			04/08/22 17:49	1
Gravel	0.0				%			04/08/22 17:49	1
Sand	8.7				%			04/08/22 17:49	1
Coarse Sand	0.4				%			04/08/22 17:49	1
Medium Sand	1.5				%			04/08/22 17:49	1

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## **Client Sample ID: SC-1 COMPOSITE (C1+C2)**

Date Collected: 04/04/22 12:05

**Lab Sample ID: 630-30382-10**

Date Received: 04/04/22 12:25

Matrix: Sediment

Percent Solids: 36.6

### **Method: D422 - Grain Size (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fine Sand	6.8				%			04/08/22 17:49	1
Silt	59.1				%			04/08/22 17:49	1
Clay	32.2				%			04/08/22 17:49	1

## **Client Sample ID: SC-4 COMPOSITE (C7+C8)**

Date Collected: 04/04/22 12:25

**Lab Sample ID: 630-30382-13**

Date Received: 04/04/22 12:25

Matrix: Sediment

Percent Solids: 44.1

### **Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.93	U	0.93	0.34	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
1,2-Dichlorobenzene	0.93	U	0.93	0.30	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
1,2,4,5-Tetrachlorobenzene	930	U	930	370	ug/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
1,3-Dichlorobenzene	0.93	U	0.93	0.31	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
1,4-Dichlorobenzene	0.93	U	0.93	0.34	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
1,4-Dioxane	1.9	U	1.9	0.29	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
1,2-Diphenylhydrazine(as Azobenzene)	0.93	U	0.93	0.42	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
1,2,4-Trichlorobenzene	0.93	U	0.93	0.28	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
2-Chloronaphthalene	0.19	U	0.19	0.043	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
2-Chlorophenol	0.93	U	0.93	0.34	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
2,3,4,6-Tetrachlorophenol	930	U	930	390	ug/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
2,4-Dichlorophenol	0.19	U	0.19	0.072	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
2,4-Dimethylphenol	0.93	U	0.93	0.31	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
2,4-Dinitrophenol	9.3	U	9.3	5.8	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
2,4-Dinitrotoluene	0.93	U	0.93	0.56	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
2,6-Dinitrotoluene	0.93	U	0.93	0.36	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
<b>2-Methylnaphthalene</b>	<b>0.064 J</b>		0.19	0.045	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
2-Methylphenol	0.93	U	0.93	0.27	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Methylphenol, 3 & 4	0.93	U	0.93	0.27	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
2-Nitroaniline	4.8	U	4.8	0.43	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
3-Nitroaniline	4.8	U	4.8	0.24	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
4-Nitroaniline	4.8	U	4.8	0.35	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
2-Nitrophenol	0.93	U	0.93	0.34	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
4-Nitrophenol	4.8	U	4.8	0.66	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
2,2'-oxybis[1-chloropropane]	0.19	U	0.19	0.070	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
2,4,5-Trichlorophenol	0.93	U	0.93	0.32	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
2,4,6-Trichlorophenol	0.93	U	0.93	0.31	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
4-Chloro-3-methylphenol	0.93	U	0.93	0.33	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
4-Chlorophenyl phenyl ether	0.93	U	0.93	0.31	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
4,6-Dinitro-2-methylphenol	4.8	U	4.8	1.6	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Cresols, Total	1.9	U	1.9	0.53	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Acenaphthene	0.19	U	0.19	0.054	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
<b>Acenaphthylene</b>	<b>0.060 J</b>		0.19	0.041	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Acetophenone	1.9	U	1.9	0.33	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Aniline	0.93	U	0.93	0.24	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
<b>Anthracene</b>	<b>0.079 J</b>		0.19	0.049	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Atrazine	1.9	U	1.9	0.41	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Benzaldehyde	1.9	U	1.9	0.12	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Benzidine	19	U	19	7.1	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25

Eurofins Environment Testing Philadelphia, LLC

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: SC-4 COMPOSITE (C7+C8)

## Lab Sample ID: 630-30382-13

Date Collected: 04/04/22 12:25

Matrix: Sediment

Date Received: 04/04/22 12:25

Percent Solids: 44.1

### Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.27		0.19	0.084	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Benzo[b]fluoranthene	0.35		0.19	0.046	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Benzo[k]fluoranthene	0.12 J		0.19	0.056	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Benzoic acid	4.8 U		4.8	2.1	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Benzo[g,h,i]perylene	0.21		0.19	0.040	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Benzo[a]pyrene	0.27		0.19	0.081	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Bis(2-chloroethoxy)methane	0.93 U		0.93	0.34	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Bis(2-chloroethyl)ether	0.19 U		0.19	0.034	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Bis(2-ethylhexyl) phthalate	9.3 U		9.3	1.0	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
4-Bromophenyl phenyl ether	0.93 U		0.93	0.40	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Butyl benzyl phthalate	0.93 U		0.93	0.65	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Caprolactam	4.8 U		4.8	0.61	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Carbazole	0.19 U		0.19	0.044	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
4-Chloroaniline	0.93 U		0.93	0.25	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Chrysene	0.30		0.19	0.10	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Dibenz(a,h)anthracene	0.19 U		0.19	0.12	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Dibenzofuran	0.93 U		0.93	0.34	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Di-n-butyl phthalate	0.93 U		0.93	0.41	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Di-n-octyl phthalate	0.93 U		0.93	0.54	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Diethyl phthalate	0.93 U		0.93	0.33	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Dimethyl phthalate	0.93 U		0.93	0.37	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Fluoranthene	0.47		0.19	0.049	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Fluorene	0.054 J		0.19	0.037	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Hexachlorobenzene	0.19 U		0.19	0.067	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Hexachlorobutadiene	0.19 U		0.19	0.055	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Hexachlorocyclopentadiene	0.93 U		0.93	0.096	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Hexachloroethane	0.93 U		0.93	0.33	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Indeno[1,2,3-cd]pyrene	0.17 J		0.19	0.093	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Isophorone	0.93 U		0.93	0.35	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Naphthalene	0.097 J		0.19	0.036	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Nitrobenzene	1.9 U		1.9	0.34	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
N-Nitrosodimethylamine	0.93 U		0.93	0.35	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
N-Nitrosodiphenylamine	0.93 U		0.93	0.31	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
N-Nitrosodi-n-propylamine	0.19 U		0.19	0.063	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Pentachlorophenol	4.8 U		4.8	1.5	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Phenanthrene	0.10 J		0.19	0.050	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Phenol	0.93 U		0.93	0.28	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Pyrene	0.48		0.19	0.044	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Pyridine	1.9 U		1.9	0.51	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Benzyl alcohol	0.93 U		0.93	0.063	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
3,3'-Dichlorobenzidine	0.93 U		0.93	0.88	mg/Kg	⊗	04/14/22 11:26	04/19/22 22:11	25
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	0	S1-D	35 - 105				04/14/22 11:26	04/19/22 22:11	25
2-Fluorophenol (Surr)	0	S1-D	32 - 105				04/14/22 11:26	04/19/22 22:11	25
2,4,6-Tribromophenol (Surr)	0	S1-D	20 - 119				04/14/22 11:26	04/19/22 22:11	25
Nitrobenzene-d5 (Surr)	0	S1-D	34 - 109				04/14/22 11:26	04/19/22 22:11	25
Phenol-d5 (Surr)	0	S1-D	34 - 105				04/14/22 11:26	04/19/22 22:11	25
Terphenyl-d14 (Surr)	0	S1-D	20 - 117				04/14/22 11:26	04/19/22 22:11	25

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: SC-4 COMPOSITE (C7+C8)

## Lab Sample ID: 630-30382-13

Date Collected: 04/04/22 12:25

Matrix: Sediment

Date Received: 04/04/22 12:25

Percent Solids: 44.1

### Method: EPA 8081B LL - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin (2C)	0.00047	U	0.00047	0.00015	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
alpha-BHC (2C)	0.00047	U	0.00047	0.00011	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
beta-BHC (2C)	0.00047	U	0.00047	0.00013	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
delta-BHC (2C)	0.00047	U	0.00047	0.00015	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
gamma-BHC (Lindane) (2C)	0.00047	U	0.00047	0.00012	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
<b>cis-Chlordane (2C)</b>	<b>0.0011</b>	<b>p</b>	0.00047	0.00012	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
trans-Chlordane (2C)	0.00047	U	0.00047	0.00011	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
Chlordane (technical) (2C)	0.0047	U	0.0047	0.0020	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
<b>4,4'-DDE (1C)</b>	<b>0.029</b>		0.00047	0.000095	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
4,4'-DDT (2C)	0.00047	U	0.00047	0.00034	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
Dieldrin (2C)	0.00047	U	0.00047	0.00012	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
Endosulfan I (2C)	0.00047	U	0.00047	0.00013	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
Endosulfan II (2C)	0.00047	U	0.00047	0.00010	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
Endosulfan sulfate (2C)	0.00047	U	0.00047	0.00021	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
Endrin (2C)	0.00047	U	0.00047	0.000087	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
Endrin aldehyde (2C)	0.00047	U	0.00047	0.00017	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
Endrin ketone (2C)	0.00047	U	0.00047	0.000064	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
Heptachlor (2C)	0.00047	U	0.00047	0.00015	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
<b>Heptachlor epoxide (2C)</b>	<b>0.00054</b>	<b>p</b>	0.00047	0.00012	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
Methoxychlor (2C)	0.00047	U	0.00047	0.00018	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
Mirex (2C)	0.00047	U	0.00047	0.000087	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
Toxaphene (2C)	0.019	U	0.019	0.013	mg/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5
Endosulfan, Total (2C)	0.93	U	0.93	0.23	ug/Kg	⊗	04/11/22 16:41	04/29/22 20:48	5

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr) (1C)	34		10 - 105	04/11/22 16:41	04/29/22 20:48	5
Tetrachloro-m-xylene (Surr) (2C)	27		10 - 105	04/11/22 16:41	04/29/22 20:48	5
DCB Decachlorobiphenyl (Surr) (1C)	198	S1+	25 - 107	04/11/22 16:41	04/29/22 20:48	5
DCB Decachlorobiphenyl (Surr) (2C)	180	S1+	25 - 107	04/11/22 16:41	04/29/22 20:48	5

### Method: EPA 8081B LL - Organochlorine Pesticides (GC) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>4,4'-DDD (2C)</b>	<b>0.0049</b>	<b>p</b>	0.00047	0.000098	mg/Kg	⊗	04/11/22 16:41	05/02/22 11:21	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr) (1C)	38		10 - 105	04/11/22 16:41	05/02/22 11:21	5
Tetrachloro-m-xylene (Surr) (2C)	33		10 - 105	04/11/22 16:41	05/02/22 11:21	5
DCB Decachlorobiphenyl (Surr) (1C)	212	S1+	25 - 107	04/11/22 16:41	05/02/22 11:21	5
DCB Decachlorobiphenyl (Surr) (2C)	219	S1+	25 - 107	04/11/22 16:41	05/02/22 11:21	5

### Method: EPA 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016 (1C)	0.0094	U	0.0094	0.0030	mg/Kg	⊗	04/11/22 17:17	04/16/22 12:33	10
PCB-1221 (1C)	0.0094	U	0.0094	0.0033	mg/Kg	⊗	04/11/22 17:17	04/16/22 12:33	10
PCB-1232 (1C)	0.0094	U	0.0094	0.0023	mg/Kg	⊗	04/11/22 17:17	04/16/22 12:33	10
PCB-1242 (1C)	0.0094	U	0.0094	0.0014	mg/Kg	⊗	04/11/22 17:17	04/16/22 12:33	10
<b>PCB-1248 (2C)</b>	<b>0.017</b>		0.0094	0.0023	mg/Kg	⊗	04/11/22 17:17	04/16/22 12:33	10
PCB-1254 (1C)	0.0094	U	0.0094	0.0028	mg/Kg	⊗	04/11/22 17:17	04/16/22 12:33	10
<b>PCB-1260 (2C)</b>	<b>0.036</b>		0.0094	0.0027	mg/Kg	⊗	04/11/22 17:17	04/16/22 12:33	10

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: SC-4 COMPOSITE (C7+C8)

## Lab Sample ID: 630-30382-13

Date Collected: 04/04/22 12:25

Matrix: Sediment

Date Received: 04/04/22 12:25

Percent Solids: 44.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr) (1C)	27	S1-	33 - 126	04/11/22 17:17	04/16/22 12:33	10
Tetrachloro-m-xylene (Surr) (2C)	26	S1-	33 - 126	04/11/22 17:17	04/16/22 12:33	10
DCB Decachlorobiphenyl (Surr) (1C)	126		26 - 170	04/11/22 17:17	04/16/22 12:33	10
DCB Decachlorobiphenyl (Surr) (2C)	124		26 - 170	04/11/22 17:17	04/16/22 12:33	10

## Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	0.053		0.0094	0.0033	mg/Kg		04/11/22 17:17		10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	12000	^2	6.7	4.8	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Arsenic	9.6	F1	0.11	0.065	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Barium	150		1.1	0.69	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Antimony	0.84	F1	0.22	0.12	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Beryllium	1.1	F1	0.11	0.081	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Cadmium	2.1	F1	0.11	0.063	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Calcium	3300	F1	56	23	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Chromium	40	F1	0.22	0.20	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Cobalt	15	F1	0.056	0.040	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Copper	51	F1	0.34	0.23	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Magnesium	3700	F1	56	5.1	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Manganese	1200		0.56	0.48	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Iron	27000		5.6	5.4	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Lead	80	F1	0.11	0.074	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Potassium	1400	F1	56	16	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Nickel	25	F1	0.11	0.11	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Selenium	0.80	F1	0.56	0.14	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Sodium	110	F1	56	29	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Silver	0.83	F1	0.11	0.031	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Thallium	0.17		0.11	0.079	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Vanadium	32	F1	0.11	0.11	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1
Zinc	350		0.56	0.54	mg/Kg	✉	04/21/22 11:14	04/22/22 20:39	1

## Method: EPA 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.27		0.037	0.024	mg/Kg	✉	05/01/22 10:20	05/02/22 13:18	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	55.9		0.1	0.1	%			04/06/22 18:44	1
Percent Solids	44.1		0.1	0.1	%			04/06/22 18:44	1
Cr (III)	40		0.50	0.21	mg/Kg			05/03/22 10:12	1
Cr (VI)	9.1	U	9.1	4.8	mg/Kg	✉	04/27/22 10:22	05/02/22 16:55	10
Cyanide, Total	6.3		0.45	0.34	mg/Kg	✉	04/15/22 11:45	04/15/22 14:30	1
Total Organic Carbon - Duplicates	45000		2300	2200	mg/Kg	✉		04/06/22 21:39	1

## Method: D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	127.6				%			04/08/22 17:35	1

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: SC-4 COMPOSITE (C7+C8)

## Lab Sample ID: 630-30382-13

Matrix: Sediment

Percent Solids: 44.1

Date Collected: 04/04/22 12:25

Date Received: 04/04/22 12:25

### Method: D422 - Grain Size

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%		04/08/22 17:52		1
Sieve Size 3 inch - Percent Finer	100.0				% Passing		04/08/22 17:52		1
Sand	5.0				%		04/08/22 17:52		1
Sieve Size 2 inch - Percent Finer	100.0				% Passing		04/08/22 17:52		1
Coarse Sand	0.4				%		04/08/22 17:52		1
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing		04/08/22 17:52		1
Medium Sand	1.0				%		04/08/22 17:52		1
Sieve Size 1 inch - Percent Finer	100.0				% Passing		04/08/22 17:52		1
Fine Sand	3.6				%		04/08/22 17:52		1
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing		04/08/22 17:52		1
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing		04/08/22 17:52		1
Silt	57.4				%		04/08/22 17:52		1
Clay	37.6				%		04/08/22 17:52		1
Sieve Size #4 - Percent Finer	100.0				% Passing		04/08/22 17:52		1
Sieve Size #10 - Percent Finer	99.6				% Passing		04/08/22 17:52		1
Sieve Size #20 - Percent Finer	99.1				% Passing		04/08/22 17:52		1
Sieve Size #40 - Percent Finer	98.6				% Passing		04/08/22 17:52		1
Sieve Size #60 - Percent Finer	97.9				% Passing		04/08/22 17:52		1
Sieve Size #80 - Percent Finer	97.4				% Passing		04/08/22 17:52		1
Sieve Size #100 - Percent Finer	97.1				% Passing		04/08/22 17:52		1
Sieve Size #200 - Percent Finer	95.0				% Passing		04/08/22 17:52		1
Hydrometer Reading 1 - Percent Finer	72.8				% Passing		04/08/22 17:52		1
Hydrometer Reading 2 - Percent Finer	64.0				% Passing		04/08/22 17:52		1
Hydrometer Reading 3 - Percent Finer	53.4				% Passing		04/08/22 17:52		1
Hydrometer Reading 4 - Percent Finer	44.6				% Passing		04/08/22 17:52		1
Hydrometer Reading 5 - Percent Finer	37.6				% Passing		04/08/22 17:52		1
Hydrometer Reading 6 - Percent Finer	28.8				% Passing		04/08/22 17:52		1
Hydrometer Reading 7 - Percent Finer	17.9				% Passing		04/08/22 17:52		1
Gravel	0.0				%		04/08/22 17:52		1
Sand	5.0				%		04/08/22 17:52		1
Coarse Sand	0.4				%		04/08/22 17:52		1
Medium Sand	1.0				%		04/08/22 17:52		1
Fine Sand	3.6				%		04/08/22 17:52		1
Silt	57.4				%		04/08/22 17:52		1
Clay	37.6				%		04/08/22 17:52		1

## Client Sample ID: FIELD BLANK

## Lab Sample ID: 630-30382-14

Matrix: Water

Date Collected: 03/30/22 14:57

Date Received: 04/04/22 12:25

### Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.00096	U H	0.00096	0.00014	mg/L		04/07/22 17:36	04/13/22 19:36	1

Eurofins Environment Testing Philadelphia, LLC

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: FIELD BLANK

Date Collected: 03/30/22 14:57

## Lab Sample ID: 630-30382-14

Matrix: Water

Date Received: 04/04/22 12:25

### Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	0.00096	U H	0.00096	0.000091	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
1,2,4,5-Tetrachlorobenzene	0.00096	U H	0.00096	0.00014	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
1,3-Dichlorobenzene	0.00096	U H	0.00096	0.000095	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
1,4-Dichlorobenzene	0.00096	U H	0.00096	0.000059	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
1,4-Dioxane	0.0019	U H	0.0019	0.00019	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
1,2-Diphenylhydrazine(as Azobenzene)	0.00096	U H	0.00096	0.00019	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
1,2,4-Trichlorobenzene	0.00096	U H	0.00096	0.00013	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
2-Chloronaphthalene	0.00018	U H	0.00018	0.000057	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
2-Chlorophenol	0.00096	U H	0.00096	0.00012	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
2,3,4,6-Tetrachlorophenol	0.00096	U H	0.00096	0.00031	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
2,4-Dichlorophenol	0.00018	U H	0.00018	0.000049	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
2,4-Dimethylphenol	0.00096	U H	0.00096	0.00016	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
2,4-Dinitrophenol	0.0096	U H	0.0096	0.0015	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
2,4-Dinitrotoluene	0.00096	U H	0.00096	0.00034	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
2,6-Dinitrotoluene	0.00096	U H	0.00096	0.00017	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
2-Methylnaphthalene	0.00018	U H	0.00018	0.000060	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
2-Methylphenol	0.00096	U H	0.00096	0.00029	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Methylphenol, 3 & 4	0.00096	U H	0.00096	0.00036	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
2-Nitroaniline	0.0048	U H	0.0048	0.00053	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
3-Nitroaniline	0.0048	U H	0.0048	0.00042	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
4-Nitroaniline	0.0048	U H	0.0048	0.00035	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
2-Nitrophenol	0.00096	U H	0.00096	0.00019	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
4-Nitrophenol	0.0048	U H	0.0048	0.00090	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
2,2'-oxybis[1-chloropropane]	0.00018	U H	0.00018	0.000056	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
2,4,5-Trichlorophenol	0.00096	U H	0.00096	0.00024	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
2,4,6-Trichlorophenol	0.00096	U H	0.00096	0.00022	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
4-Chloro-3-methylphenol	0.00096	U H	0.00096	0.00027	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
4-Chlorophenyl phenyl ether	0.00096	U H	0.00096	0.00021	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
4,6-Dinitro-2-methylphenol	0.0048	U H	0.0048	0.0014	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Cresols, Total	0.0019	U H	0.0019	0.00074	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Acenaphthene	0.00018	U H	0.00018	0.000063	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Acenaphthylene	0.00018	U H	0.00018	0.000063	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Acetophenone	0.00096	U H	0.00096	0.00015	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Aniline	0.00096	U H	0.00096	0.00036	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Anthracene	0.00018	U H	0.00018	0.000047	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Atrazine	0.00096	U H	0.00096	0.00061	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Benzaldehyde	0.00096	U H	0.00096	0.00052	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Benzidine	0.019	U H	0.019	0.0088	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Benzo[a]anthracene	0.00018	U H	0.00018	0.000072	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
<b>Benzo[b]fluoranthene</b>	<b>0.00010</b>	<b>J H</b>	0.00018	0.000093	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
<b>Benzo[k]fluoranthene</b>	<b>0.000098</b>	<b>J H</b>	0.00018	0.000085	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Benzoic acid	0.0048	U H	0.0048	0.00089	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Benzo[g,h,i]perylene	0.00018	U H	0.00018	0.000066	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Benzo[a]pyrene	0.00018	U H	0.00018	0.000051	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Bis(2-chloroethoxy)methane	0.00096	U H	0.00096	0.00015	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Bis(2-chloroethyl)ether	0.00018	U H	0.00018	0.000038	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
Bis(2-ethylhexyl) phthalate	0.0096	U H	0.0096	0.0060	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
4-Bromophenyl phenyl ether	0.00096	U H	0.00096	0.00031	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1
<b>Butyl benzyl phthalate</b>	<b>0.00092</b>	<b>J H</b>	0.00096	0.00044	mg/L	04/07/22 17:36	04/13/22 19:36	04/13/22 19:36	1

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: FIELD BLANK

## Lab Sample ID: 630-30382-14

Matrix: Water

Date Collected: 03/30/22 14:57

Date Received: 04/04/22 12:25

### Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Caprolactam</b>	<b>0.0020</b>	<b>J H</b>		0.00048	mg/L		04/07/22 17:36	04/13/22 19:36	1
Carbazole	0.00018	U H		0.00018	mg/L		04/07/22 17:36	04/13/22 19:36	1
4-Chloroaniline	0.00096	U H		0.00096	mg/L		04/07/22 17:36	04/13/22 19:36	1
Chrysene	0.00018	U H		0.00018	mg/L		04/07/22 17:36	04/13/22 19:36	1
<b>Dibenz(a,h)anthracene</b>	<b>0.000074</b>	<b>J H</b>		0.000018	mg/L		04/07/22 17:36	04/13/22 19:36	1
Dibenzofuran	0.00096	U H		0.00096	mg/L		04/07/22 17:36	04/13/22 19:36	1
<b>Di-n-butyl phthalate</b>	<b>0.0064</b>	<b>H</b>		0.00096	mg/L		04/07/22 17:36	04/13/22 19:36	1
Di-n-octyl phthalate	0.00096	U H		0.00096	mg/L		04/07/22 17:36	04/13/22 19:36	1
<b>Diethyl phthalate</b>	<b>0.00068</b>	<b>J H</b>		0.00096	mg/L		04/07/22 17:36	04/13/22 19:36	1
Dimethyl phthalate	0.00096	U H		0.00096	mg/L		04/07/22 17:36	04/13/22 19:36	1
Fluoranthene	0.00018	U H		0.00018	mg/L		04/07/22 17:36	04/13/22 19:36	1
Fluorene	0.00018	U H		0.00018	mg/L		04/07/22 17:36	04/13/22 19:36	1
Hexachlorobenzene	0.00018	U H		0.00018	mg/L		04/07/22 17:36	04/13/22 19:36	1
Hexachlorobutadiene	0.00018	U H		0.00018	mg/L		04/07/22 17:36	04/13/22 19:36	1
Hexachlorocyclopentadiene	0.00096	U H		0.00096	mg/L		04/07/22 17:36	04/13/22 19:36	1
Hexachloroethane	0.00096	U H		0.00096	mg/L		04/07/22 17:36	04/13/22 19:36	1
Indeno[1,2,3-cd]pyrene	0.00018	U H		0.00018	mg/L		04/07/22 17:36	04/13/22 19:36	1
Isophorone	0.00096	U H		0.00096	mg/L		04/07/22 17:36	04/13/22 19:36	1
Naphthalene	0.00018	U H		0.00018	mg/L		04/07/22 17:36	04/13/22 19:36	1
Nitrobenzene	0.0019	U H		0.0019	mg/L		04/07/22 17:36	04/13/22 19:36	1
N-Nitrosodimethylamine	0.00096	U H		0.00096	mg/L		04/07/22 17:36	04/13/22 19:36	1
N-Nitrosodiphenylamine	0.00096	U H		0.00096	mg/L		04/07/22 17:36	04/13/22 19:36	1
N-Nitrosodi-n-propylamine	0.00018	U H		0.00018	mg/L		04/07/22 17:36	04/13/22 19:36	1
Pentachlorophenol	0.0048	U H		0.0048	mg/L		04/07/22 17:36	04/13/22 19:36	1
<b>Phenanthrene</b>	<b>0.00014</b>	<b>J H</b>		0.00018	mg/L		04/07/22 17:36	04/13/22 19:36	1
Phenol	0.00096	U H		0.00096	mg/L		04/07/22 17:36	04/13/22 19:36	1
Pyrene	0.00018	U H		0.00018	mg/L		04/07/22 17:36	04/13/22 19:36	1
<b>Pyridine</b>	<b>0.00090</b>	<b>J H</b>		0.0019	mg/L		04/07/22 17:36	04/13/22 19:36	1
<b>Benzyl alcohol</b>	<b>0.0010</b>	<b>H</b>		0.00096	mg/L		04/07/22 17:36	04/13/22 19:36	1
3,3'-Dichlorobenzidine	0.00096	U H		0.00096	mg/L		04/07/22 17:36	04/13/22 19:36	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	47		20 - 105				04/07/22 17:36	04/13/22 19:36	1
2-Fluorophenol (Surr)	46		20 - 105				04/07/22 17:36	04/13/22 19:36	1
2,4,6-Tribromophenol (Surr)	54		23 - 128				04/07/22 17:36	04/13/22 19:36	1
Nitrobenzene-d5 (Surr)	54		20 - 107				04/07/22 17:36	04/13/22 19:36	1
Phenol-d5 (Surr)	42		20 - 106				04/07/22 17:36	04/13/22 19:36	1
Terphenyl-d14 (Surr)	72		22 - 120				04/07/22 17:36	04/13/22 19:36	1

### Method: EPA 8081B LL - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin (1C)	0.0000013	U	0.0000013	0.0000003	mg/L		04/06/22 08:30	04/12/22 18:43	1
alpha-BHC (1C)	0.0000013	U	0.0000013	0.0000002	mg/L		04/06/22 08:30	04/12/22 18:43	1
beta-BHC (1C)	0.0000013	U	0.0000013	0.0000003	mg/L		04/06/22 08:30	04/12/22 18:43	1
delta-BHC (1C)	0.0000013	U	0.0000013	0.0000006	mg/L		04/06/22 08:30	04/12/22 18:43	1
gamma-BHC (Lindane) (1C)	0.0000013	U	0.0000013	0.0000003	mg/L		04/06/22 08:30	04/12/22 18:43	1

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: FIELD BLANK

Lab Sample ID: 630-30382-14

Matrix: Water

Date Collected: 03/30/22 14:57

Date Received: 04/04/22 12:25

### Method: EPA 8081B LL - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-Chlordane (1C)	0.0000013	U	0.0000013	0.0000003	mg/L		04/06/22 08:30	04/12/22 18:43	1
				7					
trans-Chlordane (1C)	0.0000013	U	0.0000013	0.0000004	mg/L		04/06/22 08:30	04/12/22 18:43	1
				1					
Chlordane (technical) (2C)	0.0000013	U	0.0000013	0.0000073	mg/L		04/06/22 08:30	04/12/22 18:43	1
4,4'-DDD (1C)	0.0000013	U	0.0000013	0.0000005	mg/L		04/06/22 08:30	04/12/22 18:43	1
				4					
4,4'-DDE (1C)	0.0000013	U	0.0000013	0.0000003	mg/L		04/06/22 08:30	04/12/22 18:43	1
				0					
4,4'-DDT (1C)	0.0000013	U	0.0000013	0.0000007	mg/L		04/06/22 08:30	04/12/22 18:43	1
				0					
Dieldrin (1C)	0.0000013	U	0.0000013	0.0000002	mg/L		04/06/22 08:30	04/12/22 18:43	1
				8					
Endosulfan I (1C)	0.0000013	U	0.0000013	0.0000006	mg/L		04/06/22 08:30	04/12/22 18:43	1
				9					
Endosulfan II (1C)	0.0000013	U	0.0000013	0.0000003	mg/L		04/06/22 08:30	04/12/22 18:43	1
				2					
Endosulfan sulfate (1C)	0.0000013	U	0.0000013	0.0000006	mg/L		04/06/22 08:30	04/12/22 18:43	1
				4					
Endrin (1C)	0.0000013	U	0.0000013	0.0000002	mg/L		04/06/22 08:30	04/12/22 18:43	1
				3					
Endrin aldehyde (1C)	0.0000013	U *+	0.0000013	0.0000005	mg/L		04/06/22 08:30	04/12/22 18:43	1
				2					
Endrin ketone (1C)	0.0000013	U *+	0.0000013	0.0000004	mg/L		04/06/22 08:30	04/12/22 18:43	1
				0					
Heptachlor (1C)	0.0000013	U	0.0000013	0.0000004	mg/L		04/06/22 08:30	04/12/22 18:43	1
				6					
Heptachlor epoxide (1C)	0.0000013	U	0.0000013	0.0000003	mg/L		04/06/22 08:30	04/12/22 18:43	1
				4					
Methoxychlor (1C)	0.0000013	U	0.0000013	0.0000007	mg/L		04/06/22 08:30	04/12/22 18:43	1
				8					
Mirex (1C)	0.0000013	U	0.0000013	0.0000004	mg/L		04/06/22 08:30	04/12/22 18:43	1
				7					
Toxaphene (1C)	0.00010	U	0.00010	0.000050	mg/L		04/06/22 08:30	04/12/22 18:43	1
Endosulfan, Total (1C)	0.0000026	U	0.0000026	0.0000010	mg/L		04/06/22 08:30	04/12/22 18:43	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Tetrachloro-m-xylene (Surr) (1C)	75		39 - 119				04/06/22 08:30	04/12/22 18:43	1
Tetrachloro-m-xylene (Surr) (2C)	90		39 - 119				04/06/22 08:30	04/12/22 18:43	1
DCB Decachlorobiphenyl (Surr) (1C)	81		46 - 114				04/06/22 08:30	04/12/22 18:43	1
DCB Decachlorobiphenyl (Surr) (2C)	102		46 - 114				04/06/22 08:30	04/12/22 18:43	1

### Method: EPA 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016 (1C)	0.000010	U	0.000010	0.0000048	mg/L		04/06/22 08:30	04/07/22 10:29	1
PCB-1221 (1C)	0.000010	U	0.000010	0.0000058	mg/L		04/06/22 08:30	04/07/22 10:29	1
PCB-1232 (1C)	0.000010	U	0.000010	0.0000053	mg/L		04/06/22 08:30	04/07/22 10:29	1
PCB-1242 (1C)	0.000010	U	0.000010	0.0000036	mg/L		04/06/22 08:30	04/07/22 10:29	1
PCB-1248 (1C)	0.000010	U	0.000010	0.0000081	mg/L		04/06/22 08:30	04/07/22 10:29	1
PCB-1254 (1C)	0.000010	U	0.000010	0.0000046	mg/L		04/06/22 08:30	04/07/22 10:29	1
PCB-1260 (1C)	0.000010	U	0.000010	0.0000040	mg/L		04/06/22 08:30	04/07/22 10:29	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
DCB Decachlorobiphenyl (Surr) (1C)	90		48 - 129				04/06/22 08:30	04/07/22 10:29	1

Eurofins Environment Testing Philadelphia, LLC

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: FIELD BLANK

Date Collected: 03/30/22 14:57

Lab Sample ID: 630-30382-14

Date Received: 04/04/22 12:25

Matrix: Water

### Method: EPA 8082A - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr) (2C)	87		48 - 129	04/06/22 08:30	04/07/22 10:29	1
Tetrachloro-m-xylene (Surr) (1C)	80		36 - 117	04/06/22 08:30	04/07/22 10:29	1
Tetrachloro-m-xylene (Surr) (2C)	78		36 - 117	04/06/22 08:30	04/07/22 10:29	1

### Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	0.000010	U	0.000010	0.0000081	mg/L		04/06/22 08:30		1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.030	U	0.030	0.016	mg/L		04/19/22 09:30	04/26/22 13:02	1
Arsenic	0.0010	U	0.0010	0.00028	mg/L		04/19/22 09:30	04/26/22 13:02	1
Barium	0.010	U	0.010	0.0031	mg/L		04/19/22 09:30	04/26/22 13:02	1
Antimony	0.0020	U	0.0020	0.00051	mg/L		04/19/22 09:30	04/26/22 13:02	1
Beryllium	0.0010	U	0.0010	0.00027	mg/L		04/19/22 09:30	04/26/22 13:02	1
Cadmium	0.0010	U	0.0010	0.00022	mg/L		04/19/22 09:30	04/26/22 13:02	1
Calcium	0.50	U	0.50	0.13	mg/L		04/19/22 09:30	04/26/22 13:02	1
Chromium	0.0020	U	0.0020	0.0015	mg/L		04/29/22 10:43	04/30/22 13:29	1
Cobalt	0.00050	U	0.00050	0.00026	mg/L		04/19/22 09:30	04/26/22 13:02	1
Copper	0.0020	U	0.0020	0.0011	mg/L		04/19/22 09:30	04/26/22 13:02	1
Magnesium	0.50	U	0.50	0.050	mg/L		04/19/22 09:30	04/26/22 13:02	1
Manganese	0.0050	U	0.0050	0.0013	mg/L		04/19/22 09:30	04/26/22 13:02	1
Iron	0.035	J	0.050	0.028	mg/L		04/19/22 09:30	04/26/22 13:02	1
Lead	0.0010	U	0.0010	0.00017	mg/L		04/19/22 09:30	04/26/22 13:02	1
Potassium	0.50	U	0.50	0.16	mg/L		04/19/22 09:30	04/26/22 13:02	1
Nickel	0.0010	U	0.0010	0.00052	mg/L		04/29/22 10:43	04/30/22 13:29	1
Selenium	0.0050	U	0.0050	0.00074	mg/L		04/19/22 09:30	04/26/22 13:02	1
Sodium	0.28	J	0.50	0.18	mg/L		04/19/22 09:30	04/26/22 13:02	1
Silver	0.0010	U	0.0010	0.00022	mg/L		04/19/22 09:30	04/26/22 13:02	1
Thallium	0.0010	U	0.0010	0.00047	mg/L		04/19/22 09:30	04/26/22 13:02	1
Vanadium	0.0010	U	0.0010	0.00078	mg/L		04/19/22 09:30	04/26/22 13:02	1
Zinc	0.0040	J	0.0050	0.0029	mg/L		04/19/22 09:30	04/26/22 13:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.00013	mg/L		04/22/22 12:47	04/23/22 16:15	1

### Method: SM 2340B - Total Hardness (as CaCO<sub>3</sub>) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	3.3	U	3.3	0.52	mg/L			05/03/22 10:13	1
Calcium hardness as calcium carbonate	1.3	U	1.3	0.32	mg/L			05/03/22 10:13	1
Magnesium hardness as calcium carbonate	2.1	U	2.1	0.21	mg/L			05/03/22 10:13	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0080	mg/L		04/11/22 13:00	04/11/22 16:14	1
Total Suspended Solids	2.0	U	2.0	2.0	mg/L			04/06/22 08:38	1

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: SITE WATER

Lab Sample ID: 630-30382-15

Matrix: Water

Date Collected: 03/30/22 16:40

Date Received: 04/04/22 12:25

### Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.00093	U H	0.00093	0.00013	mg/L	04/07/22 17:36	04/13/22 19:59	1	1
1,2-Dichlorobenzene	0.00093	U H	0.00093	0.000088	mg/L	04/07/22 17:36	04/13/22 19:59	1	2
1,2,4,5-Tetrachlorobenzene	0.00093	U H	0.00093	0.00014	mg/L	04/07/22 17:36	04/13/22 19:59	1	3
1,3-Dichlorobenzene	0.00093	U H	0.00093	0.000092	mg/L	04/07/22 17:36	04/13/22 19:59	1	4
1,4-Dichlorobenzene	0.00093	U H	0.00093	0.000056	mg/L	04/07/22 17:36	04/13/22 19:59	1	5
1,4-Dioxane	0.0019	U H	0.0019	0.00018	mg/L	04/07/22 17:36	04/13/22 19:59	1	6
1,2-Diphenylhydrazine(as Azobenzene)	0.00093	U H	0.00093	0.00018	mg/L	04/07/22 17:36	04/13/22 19:59	1	7
1,2,4-Trichlorobenzene	0.00093	U H	0.00093	0.00012	mg/L	04/07/22 17:36	04/13/22 19:59	1	8
2-Chloronaphthalene	0.00018	U H	0.00018	0.000055	mg/L	04/07/22 17:36	04/13/22 19:59	1	9
2-Chlorophenol	0.00093	U H	0.00093	0.00012	mg/L	04/07/22 17:36	04/13/22 19:59	1	10
2,3,4,6-Tetrachlorophenol	0.00093	U H	0.00093	0.00030	mg/L	04/07/22 17:36	04/13/22 19:59	1	11
2,4-Dichlorophenol	0.00018	U H	0.00018	0.000047	mg/L	04/07/22 17:36	04/13/22 19:59	1	12
2,4-Dimethylphenol	0.00093	U H	0.00093	0.00015	mg/L	04/07/22 17:36	04/13/22 19:59	1	13
2,4-Dinitrophenol	0.0093	U H	0.0093	0.0014	mg/L	04/07/22 17:36	04/13/22 19:59	1	14
2,4-Dinitrotoluene	0.00093	U H	0.00093	0.00033	mg/L	04/07/22 17:36	04/13/22 19:59	1	15
2,6-Dinitrotoluene	0.00093	U H	0.00093	0.00016	mg/L	04/07/22 17:36	04/13/22 19:59	1	16
2-Methylnaphthalene	0.00018	U H	0.00018	0.000057	mg/L	04/07/22 17:36	04/13/22 19:59	1	17
2-Methylphenol	0.00093	U H	0.00093	0.00028	mg/L	04/07/22 17:36	04/13/22 19:59	1	18
Methylphenol, 3 & 4	0.00093	U H	0.00093	0.00034	mg/L	04/07/22 17:36	04/13/22 19:59	1	19
2-Nitroaniline	0.0046	U H	0.0046	0.00051	mg/L	04/07/22 17:36	04/13/22 19:59	1	20
3-Nitroaniline	0.0046	U H	0.0046	0.00040	mg/L	04/07/22 17:36	04/13/22 19:59	1	21
4-Nitroaniline	0.0046	U H	0.0046	0.00034	mg/L	04/07/22 17:36	04/13/22 19:59	1	22
2-Nitrophenol	0.00093	U H	0.00093	0.00018	mg/L	04/07/22 17:36	04/13/22 19:59	1	23
4-Nitrophenol	0.0046	U H	0.0046	0.00087	mg/L	04/07/22 17:36	04/13/22 19:59	1	24
2,2'-oxybis[1-chloropropane]	0.00018	U H	0.00018	0.000054	mg/L	04/07/22 17:36	04/13/22 19:59	1	25
2,4,5-Trichlorophenol	0.00093	U H	0.00093	0.00023	mg/L	04/07/22 17:36	04/13/22 19:59	1	26
2,4,6-Trichlorophenol	0.00093	U H	0.00093	0.00021	mg/L	04/07/22 17:36	04/13/22 19:59	1	27
4-Chloro-3-methylphenol	0.00093	U H	0.00093	0.00026	mg/L	04/07/22 17:36	04/13/22 19:59	1	28
4-Chlorophenyl phenyl ether	0.00093	U H	0.00093	0.00020	mg/L	04/07/22 17:36	04/13/22 19:59	1	29
4,6-Dinitro-2-methylphenol	0.0046	U H	0.0046	0.0014	mg/L	04/07/22 17:36	04/13/22 19:59	1	30
Cresols, Total	0.0019	U H	0.0019	0.00072	mg/L	04/07/22 17:36	04/13/22 19:59	1	31
Acenaphthene	0.00018	U H	0.00018	0.000060	mg/L	04/07/22 17:36	04/13/22 19:59	1	32
Acenaphthylene	0.00018	U H	0.00018	0.000060	mg/L	04/07/22 17:36	04/13/22 19:59	1	33
Acetophenone	0.00093	U H	0.00093	0.00015	mg/L	04/07/22 17:36	04/13/22 19:59	1	34
Aniline	0.00093	U H	0.00093	0.00034	mg/L	04/07/22 17:36	04/13/22 19:59	1	35
Anthracene	0.00018	U H	0.00018	0.000045	mg/L	04/07/22 17:36	04/13/22 19:59	1	36
Atrazine	0.00093	U H	0.00093	0.00059	mg/L	04/07/22 17:36	04/13/22 19:59	1	37
Benzaldehyde	0.00093	U H	0.00093	0.00050	mg/L	04/07/22 17:36	04/13/22 19:59	1	38
Benzidine	0.019	U H	0.019	0.0085	mg/L	04/07/22 17:36	04/13/22 19:59	1	39
Benzo[a]anthracene	0.00018	U H	0.00018	0.000069	mg/L	04/07/22 17:36	04/13/22 19:59	1	40
Benzo[b]fluoranthene	0.00018	U H	0.00018	0.000090	mg/L	04/07/22 17:36	04/13/22 19:59	1	41
Benzo[k]fluoranthene	0.00018	U H	0.00018	0.000081	mg/L	04/07/22 17:36	04/13/22 19:59	1	42
Benzoic acid	0.0046	U H	0.0046	0.00085	mg/L	04/07/22 17:36	04/13/22 19:59	1	43
Benzo[g,h,i]perylene	0.00018	U H	0.00018	0.000064	mg/L	04/07/22 17:36	04/13/22 19:59	1	44
Benzo[a]pyrene	0.00018	U H	0.00018	0.000049	mg/L	04/07/22 17:36	04/13/22 19:59	1	45
Bis(2-chloroethoxy)methane	0.00093	U H	0.00093	0.00014	mg/L	04/07/22 17:36	04/13/22 19:59	1	46
Bis(2-chloroethyl)ether	0.00018	U H	0.00018	0.000037	mg/L	04/07/22 17:36	04/13/22 19:59	1	47
Bis(2-ethylhexyl) phthalate	0.0093	U H	0.0093	0.0058	mg/L	04/07/22 17:36	04/13/22 19:59	1	48
4-Bromophenyl phenyl ether	0.00093	U H	0.00093	0.00030	mg/L	04/07/22 17:36	04/13/22 19:59	1	49

Eurofins Environment Testing Philadelphia, LLC

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: SITE WATER

Lab Sample ID: 630-30382-15

Matrix: Water

Date Collected: 03/30/22 16:40

Date Received: 04/04/22 12:25

### Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butyl benzyl phthalate	0.00084	J H	0.00093	0.00043	mg/L		04/07/22 17:36	04/13/22 19:59	1
Caprolactam	0.00096	J H	0.0046	0.00044	mg/L		04/07/22 17:36	04/13/22 19:59	1
Carbazole	0.00018	U H	0.00018	0.000047	mg/L		04/07/22 17:36	04/13/22 19:59	1
4-Chloroaniline	0.00093	U H	0.00093	0.00035	mg/L		04/07/22 17:36	04/13/22 19:59	1
Chrysene	0.00018	U H	0.00018	0.000075	mg/L		04/07/22 17:36	04/13/22 19:59	1
Dibenz(a,h)anthracene	0.00018	U H	0.00018	0.000067	mg/L		04/07/22 17:36	04/13/22 19:59	1
Dibenzofuran	0.00093	U H	0.00093	0.00018	mg/L		04/07/22 17:36	04/13/22 19:59	1
Di-n-butyl phthalate	0.0051	H	0.00093	0.00069	mg/L		04/07/22 17:36	04/13/22 19:59	1
Di-n-octyl phthalate	0.00093	U H	0.00093	0.00063	mg/L		04/07/22 17:36	04/13/22 19:59	1
Diethyl phthalate	0.00093	U H	0.00093	0.00053	mg/L		04/07/22 17:36	04/13/22 19:59	1
Dimethyl phthalate	0.00093	U H	0.00093	0.00019	mg/L		04/07/22 17:36	04/13/22 19:59	1
Fluoranthene	0.00018	U H	0.00018	0.000056	mg/L		04/07/22 17:36	04/13/22 19:59	1
Fluorene	0.00018	U H	0.00018	0.000064	mg/L		04/07/22 17:36	04/13/22 19:59	1
Hexachlorobenzene	0.00018	U H	0.00018	0.000052	mg/L		04/07/22 17:36	04/13/22 19:59	1
Hexachlorobutadiene	0.00018	U H	0.00018	0.000064	mg/L		04/07/22 17:36	04/13/22 19:59	1
Hexachlorocyclopentadiene	0.00093	U H	0.00093	0.00046	mg/L		04/07/22 17:36	04/13/22 19:59	1
Hexachloroethane	0.00093	U H	0.00093	0.00012	mg/L		04/07/22 17:36	04/13/22 19:59	1
Indeno[1,2,3-cd]pyrene	0.00018	U H	0.00018	0.000079	mg/L		04/07/22 17:36	04/13/22 19:59	1
Isophorone	0.00093	U H	0.00093	0.00017	mg/L		04/07/22 17:36	04/13/22 19:59	1
Naphthalene	0.00018	U H	0.00018	0.000055	mg/L		04/07/22 17:36	04/13/22 19:59	1
Nitrobenzene	0.0019	U H	0.0019	0.00046	mg/L		04/07/22 17:36	04/13/22 19:59	1
N-Nitrosodimethylamine	0.00093	U H	0.00093	0.000062	mg/L		04/07/22 17:36	04/13/22 19:59	1
N-Nitrosodiphenylamine	0.00093	U H	0.00093	0.00011	mg/L		04/07/22 17:36	04/13/22 19:59	1
N-Nitrosodi-n-propylamine	0.00018	U H	0.00018	0.000066	mg/L		04/07/22 17:36	04/13/22 19:59	1
Pentachlorophenol	0.0046	U H	0.0046	0.00078	mg/L		04/07/22 17:36	04/13/22 19:59	1
Phenanthrene	0.00013	J H	0.00018	0.000051	mg/L		04/07/22 17:36	04/13/22 19:59	1
Phenol	0.00093	U H	0.00093	0.00045	mg/L		04/07/22 17:36	04/13/22 19:59	1
Pyrene	0.00018	U H	0.00018	0.000050	mg/L		04/07/22 17:36	04/13/22 19:59	1
Pyridine	0.0019	U H	0.0019	0.00050	mg/L		04/07/22 17:36	04/13/22 19:59	1
Benzyl alcohol	0.0011	H	0.00093	0.00015	mg/L		04/07/22 17:36	04/13/22 19:59	1
3,3'-Dichlorobenzidine	0.00093	U H	0.00093	0.00054	mg/L		04/07/22 17:36	04/13/22 19:59	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl (Surr)	48		20 - 105				04/07/22 17:36	04/13/22 19:59	1
2-Fluorophenol (Surr)	35		20 - 105				04/07/22 17:36	04/13/22 19:59	1
2,4,6-Tribromophenol (Surr)	59		23 - 128				04/07/22 17:36	04/13/22 19:59	1
Nitrobenzene-d5 (Surr)	51		20 - 107				04/07/22 17:36	04/13/22 19:59	1
Phenol-d5 (Surr)	41		20 - 106				04/07/22 17:36	04/13/22 19:59	1
Terphenyl-d14 (Surr)	95		22 - 120				04/07/22 17:36	04/13/22 19:59	1

### Method: EPA 8081B LL - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin (1C)	0.0000013	U	0.0000013	0.0000003	mg/L		04/06/22 08:30	04/12/22 18:59	1
alpha-BHC (1C)	0.0000013	U	0.0000013	0.0000002	mg/L		04/06/22 08:30	04/12/22 18:59	1
beta-BHC (1C)	0.0000013	U	0.0000013	0.0000003	mg/L		04/06/22 08:30	04/12/22 18:59	1
delta-BHC (1C)	0.0000013	U	0.0000013	0.0000006	mg/L		04/06/22 08:30	04/12/22 18:59	1

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: SITE WATER

Lab Sample ID: 630-30382-15

Matrix: Water

Date Collected: 03/30/22 16:40

Date Received: 04/04/22 12:25

### Method: EPA 8081B LL - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
gamma-BHC (Lindane) (1C)	0.0000013	U	0.0000013	0.0000003	mg/L		04/06/22 08:30	04/12/22 18:59	1
cis-Chlordane (1C)	0.0000013	U	0.0000013	0.0000003	mg/L		04/06/22 08:30	04/12/22 18:59	1
trans-Chlordane (1C)	0.0000013	U	0.0000013	0.0000004	mg/L		04/06/22 08:30	04/12/22 18:59	1
Chlordane (technical) (2C)	0.000013	U	0.000013	0.0000073	mg/L		04/06/22 08:30	04/12/22 18:59	1
4,4'-DDD (1C)	0.0000013	U	0.0000013	0.0000005	mg/L		04/06/22 08:30	04/12/22 18:59	1
4,4'-DDE (1C)	0.0000013	U	0.0000013	0.0000003	mg/L		04/06/22 08:30	04/12/22 18:59	1
4,4'-DDT (1C)	0.0000013	U	0.0000013	0.0000007	mg/L		04/06/22 08:30	04/12/22 18:59	1
Dieldrin (1C)	0.0000013	U	0.0000013	0.0000002	mg/L		04/06/22 08:30	04/12/22 18:59	1
Endosulfan I (1C)	0.0000013	U	0.0000013	0.0000006	mg/L		04/06/22 08:30	04/12/22 18:59	1
Endosulfan II (1C)	0.0000013	U	0.0000013	0.0000003	mg/L		04/06/22 08:30	04/12/22 18:59	1
Endosulfan sulfate (1C)	0.0000013	U	0.0000013	0.0000006	mg/L		04/06/22 08:30	04/12/22 18:59	1
Endrin (1C)	0.0000013	U	0.0000013	0.0000002	mg/L		04/06/22 08:30	04/12/22 18:59	1
Endrin aldehyde (1C)	0.0000013	U *+	0.0000013	0.0000005	mg/L		04/06/22 08:30	04/12/22 18:59	1
Endrin ketone (1C)	0.0000013	U *+	0.0000013	0.0000004	mg/L		04/06/22 08:30	04/12/22 18:59	1
Heptachlor (1C)	0.0000013	U	0.0000013	0.0000004	mg/L		04/06/22 08:30	04/12/22 18:59	1
Heptachlor epoxide (1C)	0.0000013	U	0.0000013	0.0000003	mg/L		04/06/22 08:30	04/12/22 18:59	1
Methoxychlor (1C)	0.0000013	U	0.0000013	0.0000007	mg/L		04/06/22 08:30	04/12/22 18:59	1
Mirex (1C)	0.0000013	U	0.0000013	0.0000004	mg/L		04/06/22 08:30	04/12/22 18:59	1
Toxaphene (1C)	0.00010	U	0.00010	0.000050	mg/L		04/06/22 08:30	04/12/22 18:59	1
Endosulfan, Total (1C)	0.0000026	U	0.0000026	0.0000010	mg/L		04/06/22 08:30	04/12/22 18:59	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Tetrachloro-m-xylene (Surr) (1C)	71			39 - 119			04/06/22 08:30	04/12/22 18:59	1
Tetrachloro-m-xylene (Surr) (2C)	82			39 - 119			04/06/22 08:30	04/12/22 18:59	1
DCB Decachlorobiphenyl (Surr) (1C)	90			46 - 114			04/06/22 08:30	04/12/22 18:59	1
DCB Decachlorobiphenyl (Surr) (2C)	108			46 - 114			04/06/22 08:30	04/12/22 18:59	1

### Method: EPA 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016 (1C)	0.000010	U	0.000010	0.0000048	mg/L		04/06/22 08:30	04/07/22 10:48	1
PCB-1221 (1C)	0.000010	U	0.000010	0.0000058	mg/L		04/06/22 08:30	04/07/22 10:48	1
PCB-1232 (1C)	0.000010	U	0.000010	0.0000053	mg/L		04/06/22 08:30	04/07/22 10:48	1
PCB-1242 (1C)	0.000010	U	0.000010	0.0000036	mg/L		04/06/22 08:30	04/07/22 10:48	1
PCB-1248 (1C)	0.000010	U	0.000010	0.0000081	mg/L		04/06/22 08:30	04/07/22 10:48	1
PCB-1254 (1C)	0.000010	U	0.000010	0.0000046	mg/L		04/06/22 08:30	04/07/22 10:48	1
PCB-1260 (1C)	0.000010	U	0.000010	0.0000040	mg/L		04/06/22 08:30	04/07/22 10:48	1

# Client Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: SITE WATER

Lab Sample ID: 630-30382-15

Matrix: Water

Date Collected: 03/30/22 16:40

Date Received: 04/04/22 12:25

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr) (1C)	83		48 - 129	04/06/22 08:30	04/07/22 10:48	1
DCB Decachlorobiphenyl (Surr) (2C)	87		48 - 129	04/06/22 08:30	04/07/22 10:48	1
Tetrachloro-m-xylene (Surr) (1C)	73		36 - 117	04/06/22 08:30	04/07/22 10:48	1
Tetrachloro-m-xylene (Surr) (2C)	71		36 - 117	04/06/22 08:30	04/07/22 10:48	1

### Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	0.000010	U	0.000010	0.0000081	mg/L		04/06/22 08:30		1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.086		0.030	0.016	mg/L		04/19/22 09:30	04/26/22 13:05	1
Arsenic	0.00029	J	0.0010	0.00028	mg/L		04/19/22 09:30	04/26/22 13:05	1
Barium	0.026		0.010	0.0031	mg/L		04/19/22 09:30	04/26/22 13:05	1
Antimony	0.0020	U	0.0020	0.00051	mg/L		04/19/22 09:30	04/26/22 13:05	1
Beryllium	0.0010	U	0.0010	0.00027	mg/L		04/19/22 09:30	04/26/22 13:05	1
Cadmium	0.0010	U	0.0010	0.00022	mg/L		04/19/22 09:30	04/26/22 13:05	1
Calcium	14		0.50	0.13	mg/L		04/19/22 09:30	04/26/22 13:05	1
Chromium	0.0020	U	0.0020	0.0015	mg/L		04/19/22 09:30	04/26/22 13:05	1
Cobalt	0.00050	U	0.00050	0.00026	mg/L		04/19/22 09:30	04/26/22 13:05	1
Copper	0.0020		0.0020	0.0011	mg/L		04/19/22 09:30	04/26/22 13:05	1
Magnesium	4.2		0.50	0.050	mg/L		04/19/22 09:30	04/26/22 13:05	1
Manganese	0.031		0.0050	0.0013	mg/L		04/19/22 09:30	04/26/22 13:05	1
Iron	0.34		0.050	0.028	mg/L		04/19/22 09:30	04/26/22 13:05	1
Lead	0.00093	J	0.0010	0.00017	mg/L		04/19/22 09:30	04/26/22 13:05	1
Potassium	1.7		0.50	0.16	mg/L		04/19/22 09:30	04/26/22 13:05	1
Nickel	0.00093	J	0.0010	0.00052	mg/L		04/19/22 09:30	04/26/22 13:05	1
Selenium	0.0050	U	0.0050	0.00074	mg/L		04/19/22 09:30	04/26/22 13:05	1
Sodium	21		0.50	0.18	mg/L		04/19/22 09:30	04/26/22 13:05	1
Silver	0.0010	U	0.0010	0.00022	mg/L		04/19/22 09:30	04/26/22 13:05	1
Thallium	0.0010	U	0.0010	0.00047	mg/L		04/19/22 09:30	04/26/22 13:05	1
Vanadium	0.0010	U	0.0010	0.00078	mg/L		04/19/22 09:30	04/26/22 13:05	1
Zinc	0.016		0.0050	0.0029	mg/L		04/19/22 09:30	04/26/22 13:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.00013	mg/L		04/22/22 12:47	04/23/22 16:16	1

### Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	52		3.3	0.52	mg/L			05/03/22 10:13	1
Calcium hardness as calcium carbonate	35		1.3	0.32	mg/L			05/03/22 10:13	1
Magnesium hardness as calcium carbonate	17		2.1	0.21	mg/L			05/03/22 10:13	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0080	mg/L		04/11/22 13:00	04/11/22 16:16	1
Total Suspended Solids	2.0	U	2.0	2.0	mg/L			04/06/22 08:38	1

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## Particle Size of Soils by ASTM D422

Sample ID: C-1 GRAB  
 Lab ID: 630-30382-B-1

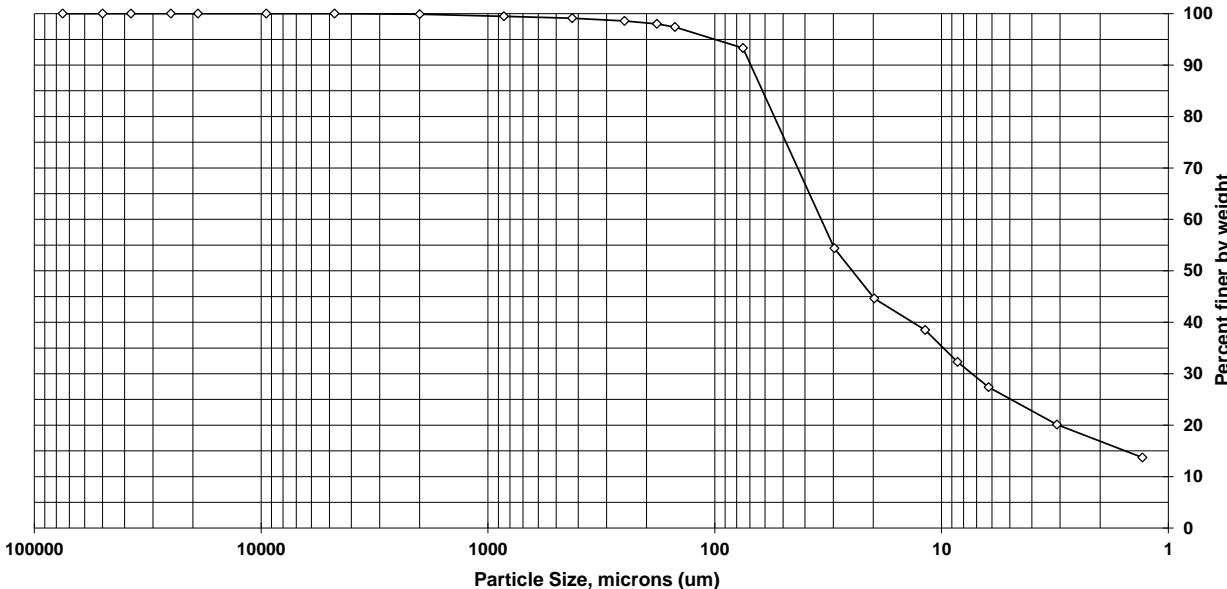
Percent Solids: 35.4%  
 Specific Gravity: 2.650

Date Received: 4/4/2022  
 Start Date: 4/8/2022  
 End Date: 4/22/2022

Shape (> #10): n/a

Non-soil material: plant

Hardness (> #10): n/a



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	99.9	0.1
#20	850	99.5	0.4
#40	425	99.1	0.4
#60	250	98.6	0.5
#80	180	98.0	0.6
#100	150	97.4	0.6
#200	75	93.3	4.1
Hyd1	29.7	54.4	38.9
Hyd2	19.8	44.6	9.8
Hyd3	11.8	38.5	6.1
Hyd4	8.5	32.3	6.2
Hyd5	6.2	27.4	4.9
Hyd6	3.1	20.1	7.3
Hyd7	1.3	13.7	6.4

Soil Classification	Percent of sample
Gravel	0.0
Sand	6.7
Coarse Sand	0.1
Medium Sand	0.8
Fine Sand	5.8
Silt	65.9
Clay	27.4

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## Particle Size of Soils by ASTM D422

Sample ID: C-2 GRAB  
 Lab ID: 630-30382-B-2

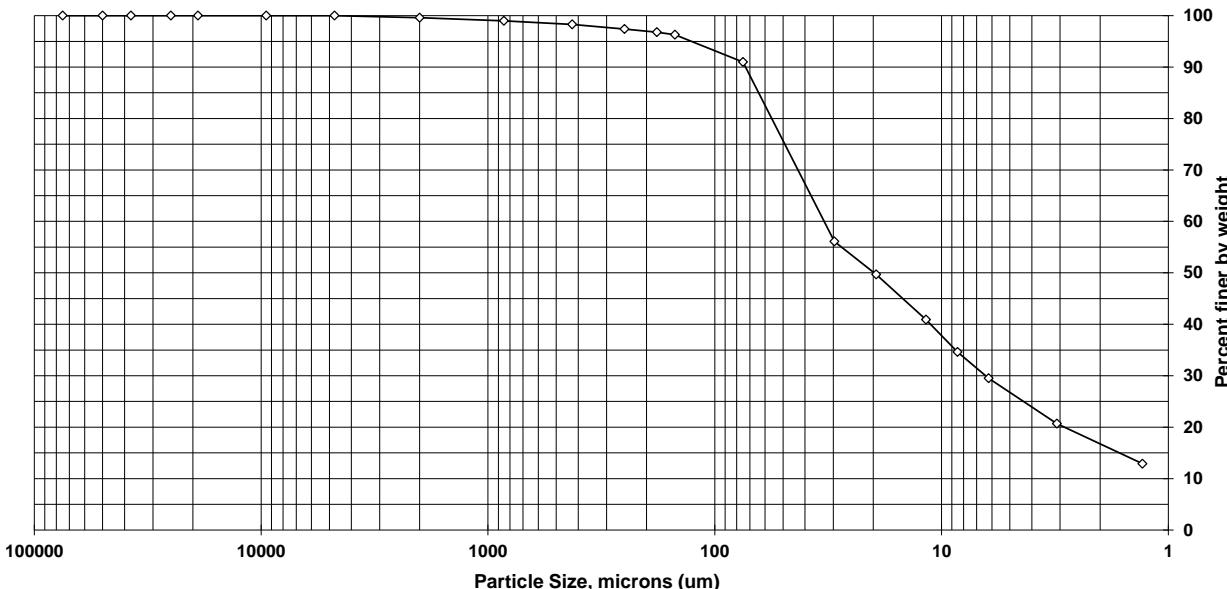
Percent Solids: 38.8%  
 Specific Gravity: 2.650

Date Received: 4/4/2022  
 Start Date: 4/8/2022  
 End Date: 4/22/2022

Shape (> #10): subangular

Non-soil material: plant

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	99.6	0.4
#20	850	99.0	0.6
#40	425	98.3	0.7
#60	250	97.4	0.9
#80	180	96.8	0.6
#100	150	96.3	0.5
#200	75	91.0	5.3
Hyd1	29.7	56.1	34.9
Hyd2	19.4	49.7	6.4
Hyd3	11.7	40.9	8.8
Hyd4	8.5	34.6	6.3
Hyd5	6.2	29.5	5.1
Hyd6	3.1	20.7	8.8
Hyd7	1.3	12.9	7.8

Soil Classification	Percent of sample
Gravel	0.0
Sand	9.0
Coarse Sand	0.4
Medium Sand	1.3
Fine Sand	7.3
Silt	61.5
Clay	29.5

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## Particle Size of Soils by ASTM D422

Sample ID: C-3 GRAB  
 Lab ID: 630-30382-B-3

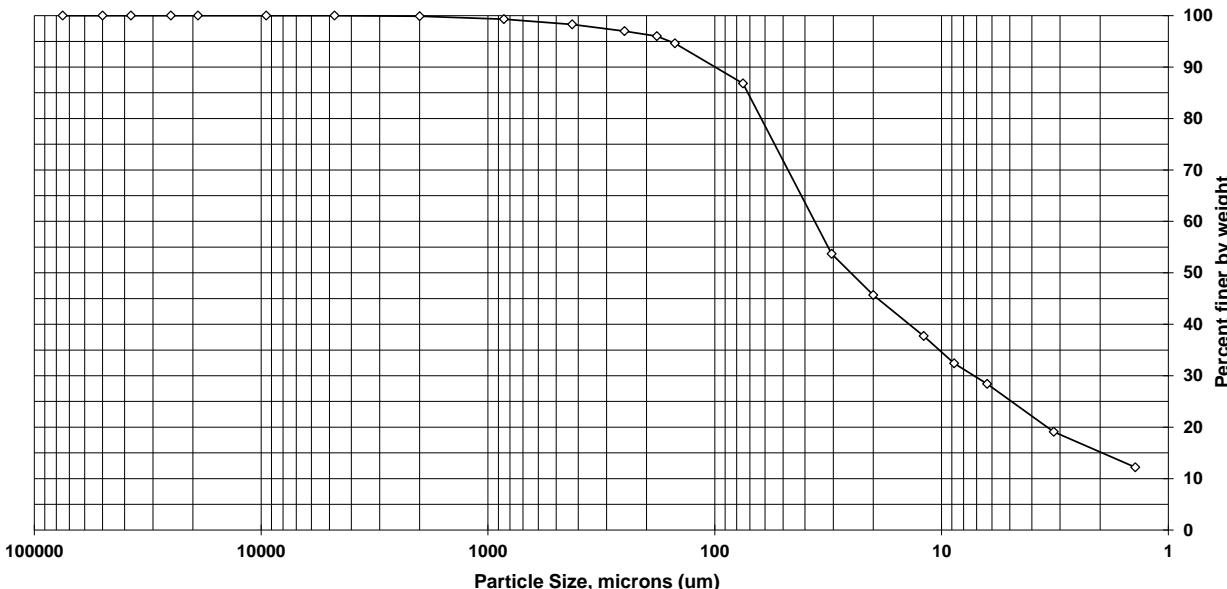
Percent Solids: 46.0%  
 Specific Gravity: 2.650

Date Received: 4/4/2022  
 Start Date: 4/8/2022  
 End Date: 4/22/2022

Shape (> #10): n/a

Non-soil material: plant

Hardness (> #10): n/a



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	99.9	0.1
#20	850	99.3	0.6
#40	425	98.3	1.0
#60	250	97.0	1.3
#80	180	96.0	1.0
#100	150	94.6	1.4
#200	75	86.8	7.8
Hyd1	30.5	53.7	33.1
Hyd2	20	45.7	8.0
Hyd3	12	37.7	8.0
Hyd4	8.8	32.4	5.3
Hyd5	6.3	28.4	4.0
Hyd6	3.2	19.1	9.3
Hyd7	1.4	12.2	6.9

Soil Classification	Percent of sample
Gravel	0.0
Sand	13.2
Coarse Sand	0.1
Medium Sand	1.6
Fine Sand	11.5
Silt	58.4
Clay	28.4

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## Particle Size of Soils by ASTM D422

Sample ID: C-7 GRAB  
 Lab ID: 630-30382-B-7

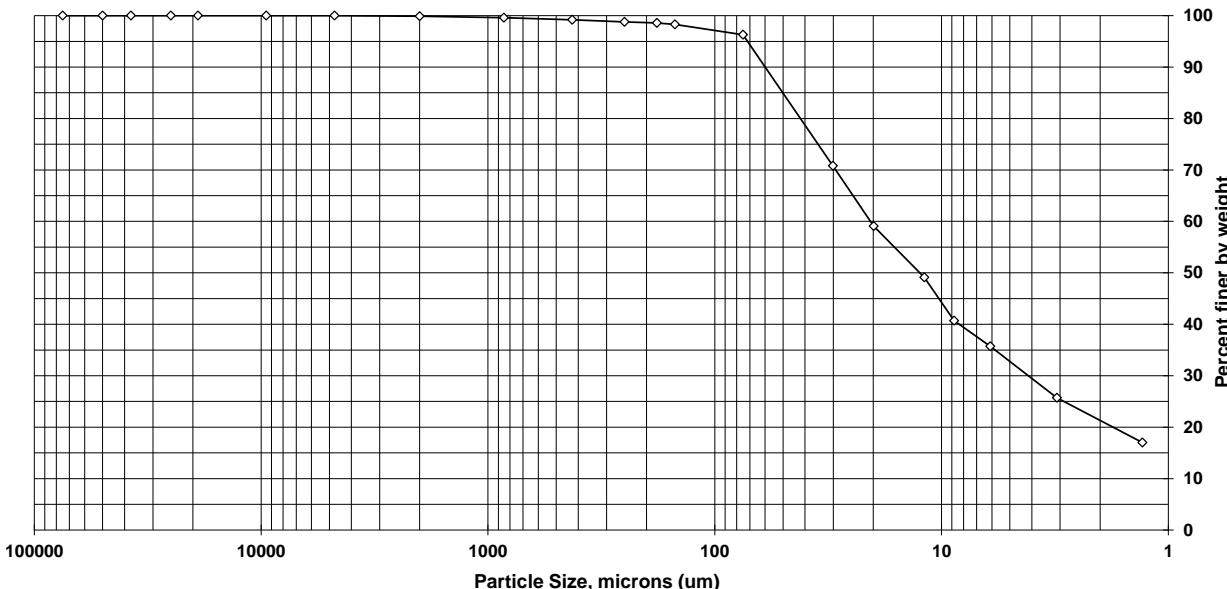
Percent Solids: 39.6%  
 Specific Gravity: 2.650

Date Received: 4/4/2022  
 Start Date: 4/8/2022  
 End Date: 4/22/2022

Shape (> #10): n/a

Non-soil material: plant

Hardness (> #10): n/a



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	99.9	0.1
#20	850	99.6	0.3
#40	425	99.2	0.4
#60	250	98.8	0.4
#80	180	98.6	0.2
#100	150	98.3	0.3
#200	75	96.3	2.0
Hyd1	30.1	70.8	25.5
Hyd2	19.9	59.1	11.7
Hyd3	11.9	49.1	10.0
Hyd4	8.8	40.7	8.4
Hyd5	6.1	35.7	5.0
Hyd6	3.1	25.7	10.0
Hyd7	1.3	17.0	8.7

Soil Classification	Percent of sample
Gravel	0.0
Sand	3.7
Coarse Sand	0.1
Medium Sand	0.7
Fine Sand	2.9
Silt	60.6
Clay	35.7

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## Particle Size of Soils by ASTM D422

Sample ID: C-8 GRAB  
 Lab ID: 630-30382-B-8

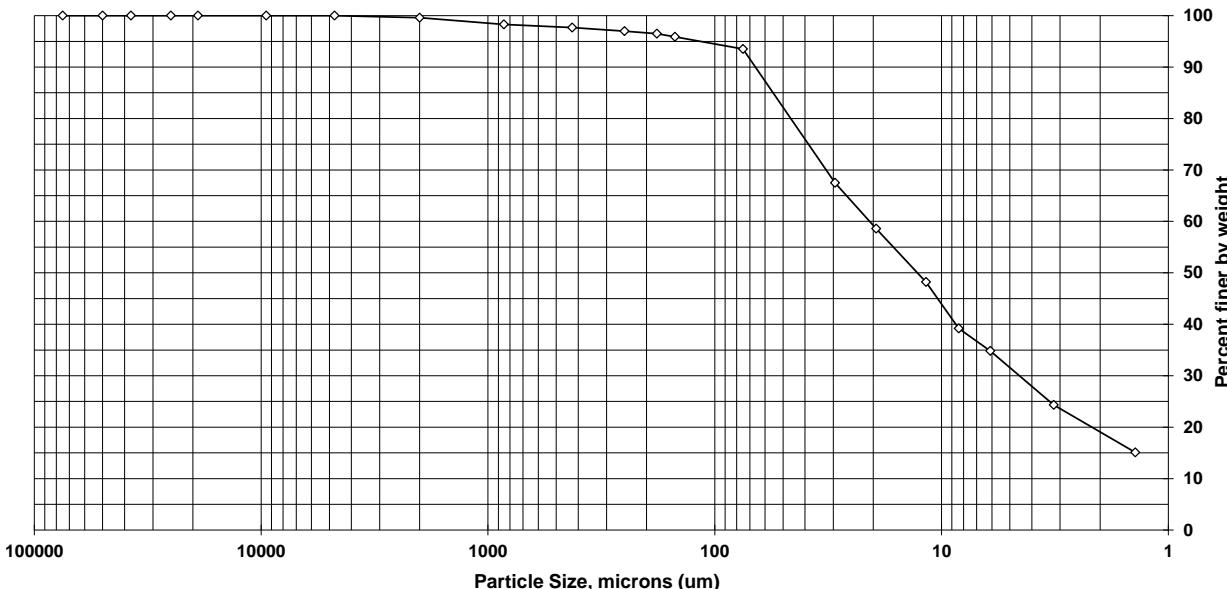
Percent Solids: 47.9%  
 Specific Gravity: 2.650

Date Received: 4/4/2022  
 Start Date: 4/8/2022  
 End Date: 4/22/2022

Shape (> #10): n/a

Non-soil material: plant

Hardness (> #10): n/a



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	99.6	0.4
#20	850	98.3	1.3
#40	425	97.7	0.6
#60	250	97.0	0.7
#80	180	96.5	0.5
#100	150	95.9	0.6
#200	75	93.5	2.4
Hyd1	29.5	67.5	26.0
Hyd2	19.4	58.6	8.9
Hyd3	11.7	48.2	10.4
Hyd4	8.4	39.2	9.0
Hyd5	6.1	34.8	4.4
Hyd6	3.2	24.3	10.5
Hyd7	1.4	15.1	9.2

Soil Classification	Percent of sample
Gravel	0.0
Sand	6.5
Coarse Sand	0.4
Medium Sand	1.9
Fine Sand	4.2
Silt	58.7
Clay	34.8

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## Particle Size of Soils by ASTM D422

Sample ID: D-9 DISCRETE  
 Lab ID: 630-30382-C-9

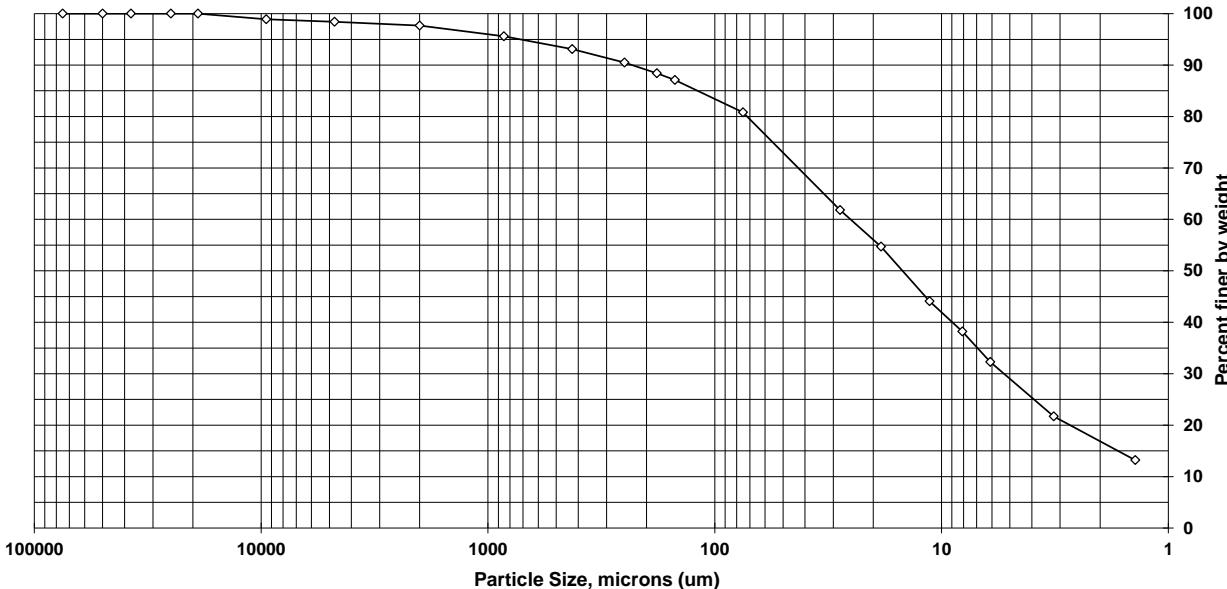
Percent Solids: 48.2%  
 Specific Gravity: 2.650

Date Received: 4/4/2022  
 Start Date: 4/8/2022  
 End Date: 4/22/2022

Shape (> #10): subangular

Non-soil material: plant

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	98.9	1.1
#4	4750	98.4	0.5
#10	2000	97.7	0.7
#20	850	95.6	2.1
#40	425	93.1	2.5
#60	250	90.5	2.6
#80	180	88.4	2.1
#100	150	87.1	1.3
#200	75	80.8	6.3
Hyd1	28	61.8	19.0
Hyd2	18.5	54.7	7.1
Hyd3	11.3	44.1	10.6
Hyd4	8.1	38.2	5.9
Hyd5	6.1	32.3	5.9
Hyd6	3.2	21.7	10.6
Hyd7	1.4	13.2	8.5

Soil Classification	Percent of sample
Gravel	1.6
Sand	17.6
Coarse Sand	0.7
Medium Sand	4.6
Fine Sand	12.3
Silt	48.5
Clay	32.3

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## Particle Size of Soils by ASTM D422

Sample ID: SC-1 COMPOSITE (C1+C)  
 Lab ID: 630-30382-C-10

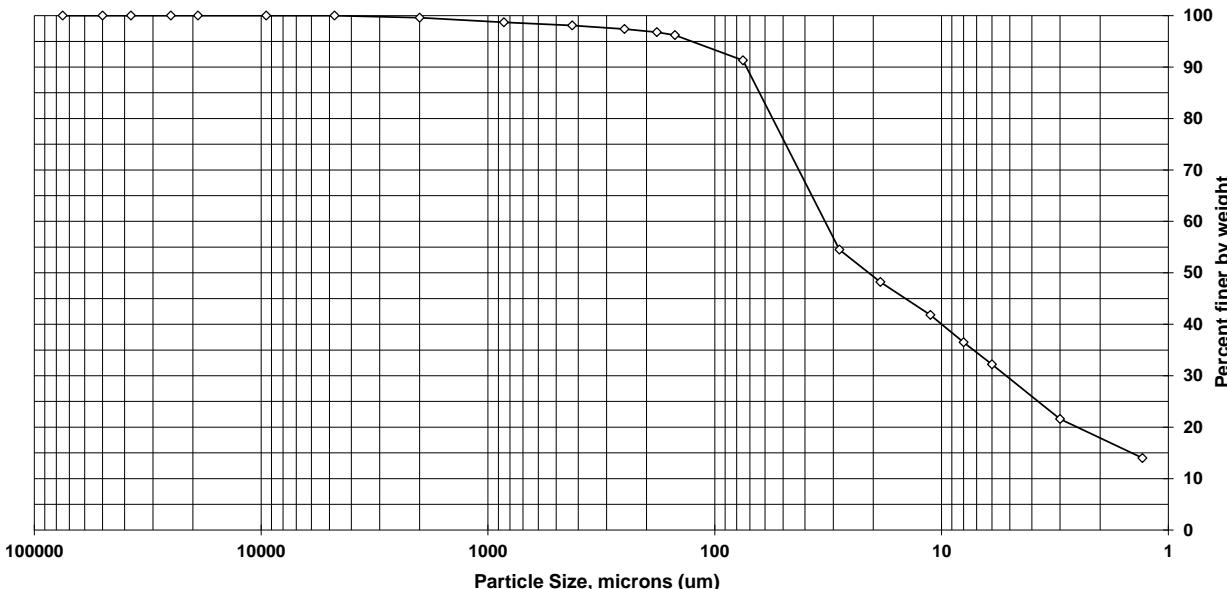
Percent Solids: 37.3%  
 Specific Gravity: 2.650

Date Received: 4/4/2022  
 Start Date: 4/8/2022  
 End Date: 4/22/2022

Shape (> #10): n/a

Non-soil material: plant

Hardness (> #10): n/a



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	99.6	0.4
#20	850	98.7	0.9
#40	425	98.1	0.6
#60	250	97.4	0.7
#80	180	96.8	0.6
#100	150	96.2	0.6
#200	75	91.3	4.9
Hyd1	28.2	54.5	36.8
Hyd2	18.6	48.2	6.3
Hyd3	11.2	41.8	6.4
Hyd4	8	36.5	5.3
Hyd5	6	32.2	4.3
Hyd6	3	21.6	10.6
Hyd7	1.3	14.0	7.6

Soil Classification	Percent of sample
Gravel	0.0
Sand	8.7
Coarse Sand	0.4
Medium Sand	1.5
Fine Sand	6.8
Silt	59.1
Clay	32.2

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## Particle Size of Soils by ASTM D422

Sample ID: SC-4 COMPOSITE (C7+C)  
 Lab ID: 630-30382-C-13

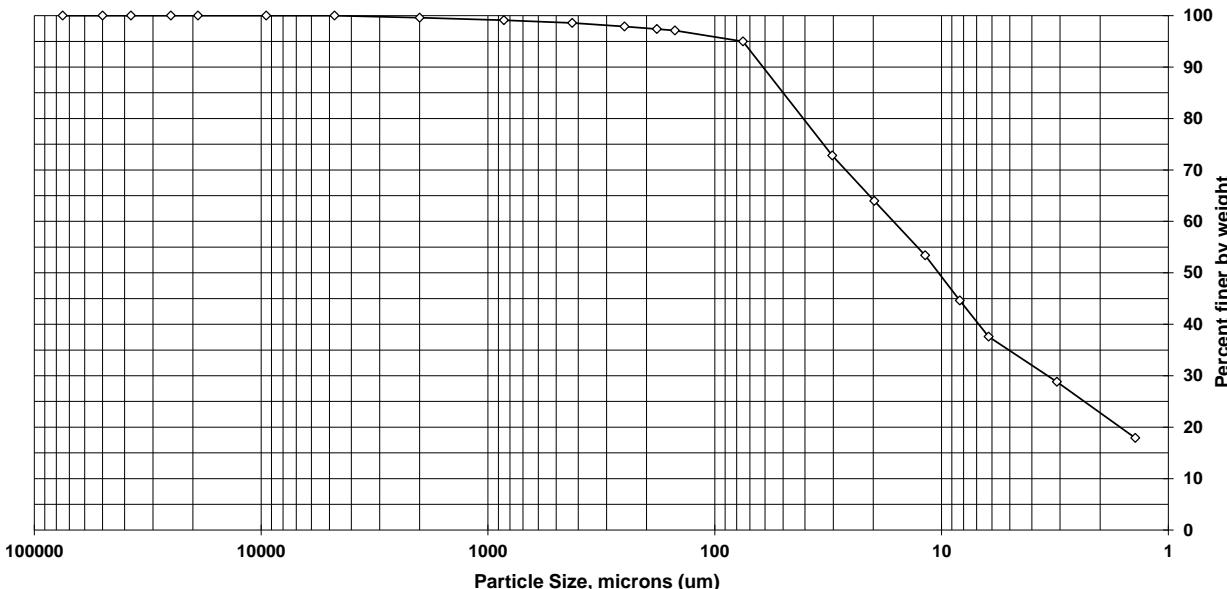
Percent Solids: 43.9%  
 Specific Gravity: 2.650

Date Received: 4/4/2022  
 Start Date: 4/8/2022  
 End Date: 4/22/2022

Shape (> #10): n/a

Non-soil material: plant

Hardness (> #10): n/a



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	99.6	0.4
#20	850	99.1	0.5
#40	425	98.6	0.5
#60	250	97.9	0.7
#80	180	97.4	0.5
#100	150	97.1	0.3
#200	75	95.0	2.1
Hyd1	30.3	72.8	22.2
Hyd2	19.8	64.0	8.8
Hyd3	11.8	53.4	10.6
Hyd4	8.3	44.6	8.8
Hyd5	6.2	37.6	7.0
Hyd6	3.1	28.8	8.8
Hyd7	1.4	17.9	10.9

Soil Classification	Percent of sample
Gravel	0.0
Sand	5.0
Coarse Sand	0.4
Medium Sand	1.0
Fine Sand	3.6
Silt	57.4
Clay	37.6

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# TestAmerica Burlington

**Sediment Grain Size - D422**

Client	
Client Sample ID	C-1 GRAB
Lab Sample ID	630-30382-B-1

Date Received	4/4/2022
Start Date	04/08/2022 17:37
End Date	04/22/2022 14:22

<b>Dry Weight Determination</b>	
Tin Weight	1.04 g
Wet Sample + Tin	34.76 g
Dry Sample + Tin	12.99 g
% Moisture	64.56 %

Non-soil material:	plant
Shape (> #10):	n/a
Hardness (> #10):	n/a
Date/Time in oven	04/08/2022 17:38
Date/Time out of oven	04/11/2022 14:11

<b>Sample Weights</b>		
	Tare (g)	Pan+Samp (g)
Sample Weight (Wet)	44.07	228.55
Sample Weight (Oven Dried)		184.48

<b>Hydrometer Data</b>	
Serial Number	542318
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	462.56	462.62	0.06 g	99.9	Sand	Coarse
#20	850	378.19	378.48	0.29 g	99.5	Sand	Medium
#40	425	366.18	366.42	0.24 g	99.1	Sand	Medium
#60	250	348.09	348.43	0.34 g	98.6	Sand	Fine
#80	180	337.06	337.42	0.36 g	98.0	Sand	Fine
#100	150	327.41	327.77	0.36 g	97.4	Sand	Fine
#200	75	312.40	315.11	2.71 g	93.3	Sand	Fine
				0.00 g	93.3		

**Adjusted Hydrometer Sample Mass**

Hydrometer Sample Mass (g)	65.4
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**Silt/Clay Fraction (Hydrometer Test)**

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0250	21.0	29.7	54.4	Silt	
5	5	1.0210	21.0	19.8	44.6	Silt	
15	15	1.0185	21.0	11.8	38.5	Silt	
30	30	1.0160	21.0	8.5	32.3	Silt	
60	59	1.0140	21.0	6.2	27.4	Silt	
250	256	1.0110	21.0	3.1	20.1	Clay	
1440	1440	1.0085	20.5	1.3	13.7	Clay	

# TestAmerica Burlington

**Sediment Grain Size - D422**

Client	C-2 GRAB
Client Sample ID	
Lab Sample ID	630-30382-B-2

Date Received	4/4/2022
Start Date	04/08/2022 17:39
End Date	04/22/2022 14:26

**Dry Weight Determination**

Tin Weight	1.04 g
Wet Sample + Tin	36.55 g
Dry Sample + Tin	14.82 g
% Moisture	61.19 %

Non-soil material: plant

Shape (> #10): subangular

Hardness (> #10): hard

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	47.84	211.53	163.69
Sample Weight (Oven Dried)			63.5

Date/Time in oven 04/08/2022 17:40  
Date/Time out of oven 04/11/2022 14:11

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0.25
Sample <#10			63.3
% Passing #10			38.7

Hydrometer Data	
Serial Number	542318
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	462.56	462.81	0.25 g	99.6	Sand	Coarse
#20	850	373.18	373.56	0.38 g	99.0	Sand	Medium
#40	425	361.38	361.83	0.45 g	98.3	Sand	Medium
#60	250	351.69	352.24	0.55 g	97.4	Sand	Fine
#80	180	318.65	319.05	0.40 g	96.8	Sand	Fine
#100	150	327.92	328.26	0.34 g	96.3	Sand	Fine
#200	75	313.74	317.12	3.38 g	91.0	Sand	Fine
				0.00 g	91.0		

**Adjusted Hydrometer Sample Mass**

Hydrometer Sample Mass (g) 63.5

**Silt/Clay Fraction (Hydrometer Test)**

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0250	21.0	29.7	56.1	Silt	
5	5	1.0225	21.0	19.4	49.7	Silt	
15	15	1.0190	21.0	11.7	40.9	Silt	
30	30	1.0165	21.0	8.5	34.6	Silt	
60	58	1.0145	21.0	6.2	29.5	Silt	
250	256	1.0110	21.0	3.1	20.7	Clay	
1440	1440	1.0080	20.5	1.3	12.9	Clay	

# TestAmerica Burlington

**Sediment Grain Size - D422**

Client	C-3 GRAB
Client Sample ID	
Lab Sample ID	630-30382-B-3

Date Received	4/4/2022
Start Date	04/08/2022 17:41
End Date	04/22/2022 14:36

**Dry Weight Determination**

Tin Weight	1.01 g
Wet Sample + Tin	47.35 g
Dry Sample + Tin	22.33 g
% Moisture	53.99 %

Non-soil material: plant

Shape (> #10): n/a

Hardness (> #10): n/a

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	44.65	175.63	130.98
Sample Weight (Oven Dried)			60.3

Date/Time in oven 04/08/2022 17:42  
Date/Time out of oven 04/11/2022 14:12

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >= #10			0.07
Sample <#10			60.2
% Passing #10			46

Hydrometer Data	
Serial Number	542318
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	462.56	462.63	0.07 g	99.9	Sand	Coarse
#20	850	378.19	378.58	0.39 g	99.3	Sand	Medium
#40	425	366.18	366.80	0.62 g	98.3	Sand	Medium
#60	250	348.09	348.89	0.80 g	97.0	Sand	Fine
#80	180	337.06	337.68	0.62 g	96.0	Sand	Fine
#100	150	327.41	328.28	0.87 g	94.6	Sand	Fine
#200	75	312.40	317.08	4.68 g	86.8	Sand	Fine
				0.00 g	86.8		

**Adjusted Hydrometer Sample Mass**

Hydrometer Sample Mass (g) 60.3

**Silt/Clay Fraction (Hydrometer Test)**

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0230	21.0	30.5	53.7	Silt	
5	5	1.0200	21.0	20	45.7	Silt	
15	15	1.0170	21.0	12	37.7	Silt	
30	29	1.0150	21.0	8.8	32.4	Silt	
60	58	1.0135	21.0	6.3	28.4	Silt	
250	250	1.0100	21.0	3.2	19.1	Clay	
1440	1434	1.0075	20.5	1.4	12.2	Clay	

# TestAmerica Burlington

**Sediment Grain Size - D422**

Client	
Client Sample ID	C-7 GRAB
Lab Sample ID	630-30382-B-7

Date Received	4/4/2022
Start Date	04/08/2022 17:43
End Date	04/22/2022 14:39

**Dry Weight Determination**

Tin Weight	1.01 g
Wet Sample + Tin	40.32 g
Dry Sample + Tin	16.56 g
% Moisture	60.44 %

Non-soil material: plant

Shape (> #10): n/a

Hardness (> #10): n/a

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	44.07	165.42	121.35
Sample Weight (Oven Dried)			48

Date/Time in oven 04/08/2022 17:45  
Date/Time out of oven 04/11/2022 14:12

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >= #10			0.04
Sample <#10			48
% Passing #10			39.6

Hydrometer Data	
Serial Number	542318
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	462.56	462.60	0.04 g	99.9	Sand	Coarse
#20	850	373.18	373.34	0.16 g	99.6	Sand	Medium
#40	425	361.38	361.55	0.17 g	99.2	Sand	Medium
#60	250	351.69	351.89	0.20 g	98.8	Sand	Fine
#80	180	318.65	318.77	0.12 g	98.6	Sand	Fine
#100	150	327.92	328.07	0.15 g	98.3	Sand	Fine
#200	75	313.74	314.70	0.96 g	96.3	Sand	Fine
				0.00 g	96.3		

**Adjusted Hydrometer Sample Mass**

Hydrometer Sample Mass (g) 48

**Silt/Clay Fraction (Hydrometer Test)**

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0240	21.0	30.1	70.8	Silt	
5	5	1.0205	21.0	19.9	59.1	Silt	
15	15	1.0175	21.0	11.9	49.1	Silt	
30	29	1.0150	21.0	8.8	40.7	Silt	
60	63	1.0135	21.0	6.1	35.7	Silt	
250	250	1.0105	21.0	3.1	25.7	Clay	
1440	1434	1.0080	20.5	1.3	17	Clay	

# TestAmerica Burlington

**Sediment Grain Size - D422**

Client	C-8 GRAB
Client Sample ID	
Lab Sample ID	630-30382-B-8

Date Received	4/4/2022
Start Date	04/08/2022 17:45
End Date	04/22/2022 14:54

**Dry Weight Determination**

Tin Weight	0.98 g
Wet Sample + Tin	36.78 g
Dry Sample + Tin	18.12 g
% Moisture	52.12 %

Non-soil material:	plant
Shape (> #10):	n/a
Hardness (> #10):	n/a

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	47.85	160.35	112.5
Sample Weight (Oven Dried)			53.9

Date/Time in oven	04/08/2022 17:47
Date/Time out of oven	04/11/2022 14:12

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0.21
Sample <#10			53.7
% Passing #10			47.7

Hydrometer Data	
Serial Number	542318
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	462.56	462.77	0.21 g	99.6	Sand	Coarse
#20	850	378.19	378.91	0.72 g	98.3	Sand	Medium
#40	425	366.18	366.48	0.30 g	97.7	Sand	Medium
#60	250	348.09	348.46	0.37 g	97.0	Sand	Fine
#80	180	337.06	337.33	0.27 g	96.5	Sand	Fine
#100	150	327.41	327.72	0.31 g	95.9	Sand	Fine
#200	75	312.40	313.71	1.31 g	93.5	Sand	Fine
				0.00 g	93.5		

**Adjusted Hydrometer Sample Mass**

Hydrometer Sample Mass (g)	53.9
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**Silt/Clay Fraction (Hydrometer Test)**

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0255	21.0	29.5	67.5	Silt	
5	5	1.0225	21.0	19.4	58.6	Silt	
15	15	1.0190	21.0	11.7	48.2	Silt	
30	31	1.0160	21.0	8.4	39.2	Silt	
60	60	1.0145	21.0	6.1	34.8	Silt	
250	240	1.0110	21.0	3.2	24.3	Clay	
1440	1424	1.0080	20.5	1.4	15.1	Clay	

# TestAmerica Burlington

**Sediment Grain Size - D422**

Client	D-9 DISCRETE
Client Sample ID	
Lab Sample ID	630-30382-C-9

Date Received	4/4/2022
Start Date	04/08/2022 17:47
End Date	04/22/2022 14:58

**Dry Weight Determination**

Tin Weight	0.99 g
Wet Sample + Tin	38.57 g
Dry Sample + Tin	19.11 g
% Moisture	51.78 %

Non-soil material:	plant
Shape (> #10):	subangular
Hardness (> #10):	hard

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	44.61	185.68	141.07
Sample Weight (Oven Dried)			68

Date/Time in oven	04/08/2022 17:49
Date/Time out of oven	04/11/2022 14:13

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			1.52
Sample <#10			66.5
% Passing #10			47.1

Hydrometer Data	
Serial Number	542318
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	447.20	447.92	0.72 g	98.9	Gravel	
#4	4750	487.94	488.25	0.31 g	98.4	Gravel	
#10	2000	462.56	463.05	0.49 g	97.7	Sand	Coarse
#20	850	373.18	374.63	1.45 g	95.6	Sand	Medium
#40	425	361.38	363.09	1.71 g	93.1	Sand	Medium
#60	250	351.69	353.49	1.80 g	90.5	Sand	Fine
#80	180	318.65	320.10	1.45 g	88.4	Sand	Fine
#100	150	327.92	328.83	0.91 g	87.1	Sand	Fine
#200	75	313.74	318.01	4.27 g	80.8	Sand	Fine
				0.00 g	80.8		

**Adjusted Hydrometer Sample Mass**

Hydrometer Sample Mass (g)	68
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**Silt/Clay Fraction (Hydrometer Test)**

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0290	21.0	28	61.8	Silt	
5	5	1.0260	21.0	18.5	54.7	Silt	
15	15	1.0215	21.0	11.3	44.1	Silt	
30	31	1.0190	21.0	8.1	38.2	Silt	
60	59	1.0165	21.0	6.1	32.3	Silt	
250	234	1.0120	21.0	3.2	21.7	Clay	
1440	1418	1.0085	20.5	1.4	13.2	Clay	

# TestAmerica Burlington

**Sediment Grain Size - D422**

Client	SC-1 COMPOSITE (C1+C)
Client Sample ID	630-30382-C-10

Date Received	4/4/2022
Start Date	04/08/2022 17:49
End Date	04/22/2022 15:08

**Dry Weight Determination**

Tin Weight	0.99 g
Wet Sample + Tin	39.34 g
Dry Sample + Tin	15.31 g
% Moisture	62.66 %

Non-soil material:	plant
Shape (> #10):	n/a
Hardness (> #10):	n/a

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	47.82	250.31	202.49
Sample Weight (Oven Dried)			75.6

Date/Time in oven	04/08/2022 17:51
Date/Time out of oven	04/11/2022 14:13

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			0.29
Sample <#10			75.3
% Passing #10			37.2

Hydrometer Data	
Serial Number	542318
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	462.56	462.85	0.29 g	99.6	Sand	Coarse
#20	850	378.19	378.84	0.65 g	98.7	Sand	Medium
#40	425	366.18	366.63	0.45 g	98.1	Sand	Medium
#60	250	348.09	348.60	0.51 g	97.4	Sand	Fine
#80	180	337.06	337.50	0.44 g	96.8	Sand	Fine
#100	150	327.41	327.87	0.46 g	96.2	Sand	Fine
#200	75	312.40	316.07	3.67 g	91.3	Sand	Fine
				0.00 g	91.3		

**Adjusted Hydrometer Sample Mass**

Hydrometer Sample Mass (g)	75.6
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**Silt/Clay Fraction (Hydrometer Test)**

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0285	21.0	28.2	54.5	Silt	
5	5	1.0255	21.0	18.6	48.2	Silt	
15	15	1.0225	21.0	11.2	41.8	Silt	
30	31	1.0200	21.0	8	36.5	Silt	
60	59	1.0180	21.0	6	32.2	Silt	
250	265	1.0130	21.0	3	21.6	Clay	
1440	1412	1.0095	20.5	1.3	14	Clay	

# TestAmerica Burlington

**Sediment Grain Size - D422**

Client	SC-4 COMPOSITE (C7+C)
Client Sample ID	630-30382-C-13
Lab Sample ID	

Date Received	4/4/2022
Start Date	04/08/2022 17:52
End Date	04/22/2022 15:12

**Dry Weight Determination**

Tin Weight	0.99 g
Wet Sample + Tin	32.47 g
Dry Sample + Tin	14.82 g
% Moisture	56.07 %

Non-soil material:	plant
Shape (> #10):	n/a
Hardness (> #10):	n/a

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	47.82	151.56	103.74
Sample Weight (Oven Dried)			45.6

Date/Time in oven	04/08/2022 17:53
Date/Time out of oven	04/11/2022 14:13

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >= #10			0.16
Sample <#10			45.4
% Passing #10			43.8

Hydrometer Data	
Serial Number	542318
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	462.56	462.72	0.16 g	99.6	Sand	Coarse
#20	850	373.18	373.41	0.23 g	99.1	Sand	Medium
#40	425	361.38	361.62	0.24 g	98.6	Sand	Medium
#60	250	351.69	351.99	0.30 g	97.9	Sand	Fine
#80	180	318.65	318.87	0.22 g	97.4	Sand	Fine
#100	150	327.92	328.07	0.15 g	97.1	Sand	Fine
#200	75	313.74	314.69	0.95 g	95.0	Sand	Fine
				0.00 g	95.0		

**Adjusted Hydrometer Sample Mass**

Hydrometer Sample Mass (g)	45.6
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**Silt/Clay Fraction (Hydrometer Test)**

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0235	21.0	30.3	72.8	Silt	
5	5	1.0210	21.0	19.8	64	Silt	
15	15	1.0180	21.0	11.8	53.4	Silt	
30	32	1.0155	21.0	8.3	44.6	Silt	
60	60	1.0135	21.0	6.2	37.6	Silt	
250	259	1.0110	21.0	3.1	28.8	Clay	
1440	1406	1.0080	20.5	1.4	17.9	Clay	

# Surrogate Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Matrix: Sediment

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (35-105)	2FP (32-105)	TBP (20-119)	NBZ (34-109)	PHL (34-105)	TPHL (20-117)
630-30382-9	D-9 DISCRETE	54	67	39	51	62	57
630-30382-10	SC-1 COMPOSITE (C1+C2)	63	39	51	55	58	59
630-30382-13	SC-4 COMPOSITE (C7+C8)	0 S1- D	0 S1- D	0 S1- D	0 S1- D	0 S1- D	0 S1- D
LCS 180-395091/2-A	Lab Control Sample	59	67	56	73	66	58
LCS 180-395442/2-A	Lab Control Sample	65	74	63	80	74	65
MB 180-395091/1-A	Method Blank	66	73	63	80	72	68
MB 180-395442/1-A	Method Blank	65	73	61	78	71	69

**Surrogate Legend**

FBP = 2-Fluorobiphenyl (Surr)  
 2FP = 2-Fluorophenol (Surr)  
 TBP = 2,4,6-Tribromophenol (Surr)  
 NBZ = Nitrobenzene-d5 (Surr)  
 PHL = Phenol-d5 (Surr)  
 TPHL = Terphenyl-d14 (Surr)

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (20-105)	2FP (20-105)	TBP (23-128)	NBZ (20-107)	PHL (20-106)	TPHL (22-120)
630-30382-14	FIELD BLANK	47	46	54	54	42	72
630-30382-15	SITE WATER	48	35	59	51	41	95
LCS 180-394252/2-A	Lab Control Sample	64	80	72	71	70	76
LCSD 180-394252/3-A	Lab Control Sample Dup	69	84	73	75	71	80
MB 180-394252/1-A	Method Blank	69	82	80	75	73	86

**Surrogate Legend**

FBP = 2-Fluorobiphenyl (Surr)  
 2FP = 2-Fluorophenol (Surr)  
 TBP = 2,4,6-Tribromophenol (Surr)  
 NBZ = Nitrobenzene-d5 (Surr)  
 PHL = Phenol-d5 (Surr)  
 TPHL = Terphenyl-d14 (Surr)

## Method: EPA 8081B LL - Organochlorine Pesticides (GC)

Matrix: Sediment

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (10-105)	TCX2 (10-105)	DCB1 (25-107)	DCB2 (25-107)
630-30382-9	D-9 DISCRETE	40	30	132 S1+	114 S1+
630-30382-10	SC-1 COMPOSITE (C1+C2)	39	28	122 S1+	122 S1+
630-30382-13	SC-4 COMPOSITE (C7+C8)	34	27	198 S1+	180 S1+
630-30382-13 - RA	SC-4 COMPOSITE (C7+C8)	38	33	212 S1+	219 S1+
LCS 180-395001/2-B	Lab Control Sample	56	51	78	68
MB 180-395001/1-B	Method Blank	56	51	77	62

**Surrogate Legend**

TCX = Tetrachloro-m-xylene (Surr)  
 DCB = DCB Decachlorobiphenyl (Surr)

Eurofins Environment Testing Philadelphia, LLC

## Surrogate Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

### Method: EPA 8081B LL - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (39-119)	TCX2 (39-119)	DCB1 (46-114)	DCB2 (46-114)
630-30382-14	FIELD BLANK	75	90	81	102
630-30382-15	SITE WATER	71	82	90	108
LCS 180-394406/2-A	Lab Control Sample	80	93	82	98
LCSD 180-394406/3-A	Lab Control Sample Dup	82	96	85	100
MB 180-394406/1-A	Method Blank	84	98	89	105

#### Surrogate Legend

TCX = Tetrachloro-m-xylene (Surr)

DCB = DCB Decachlorobiphenyl (Surr)

### Method: EPA 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Sediment

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (33-126)	TCX2 (33-126)	DCB1 (26-170)	DCB2 (26-170)
630-30382-9	D-9 DISCRETE	83	78	313 S1+	328 S1+
630-30382-10	SC-1 COMPOSITE (C1+C2)	45	43	93	91
630-30382-13	SC-4 COMPOSITE (C7+C8)	27 S1-	26 S1-	126	124
LCS 180-395005/2-C	Lab Control Sample	85	82	90	91
MB 180-395005/1-C	Method Blank	90	88	99	99

#### Surrogate Legend

TCX = Tetrachloro-m-xylene (Surr)

DCB = DCB Decachlorobiphenyl (Surr)

### Method: EPA 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCB1 (48-129)	DCB2 (48-129)	TCX1 (36-117)	TCX2 (36-117)
630-30382-14	FIELD BLANK	90	87	80	78
630-30382-15	SITE WATER	83	87	73	71
LCS 180-394406/4-A	Lab Control Sample	82	89	87	81
LCSD 180-394406/5-A	Lab Control Sample Dup	85	85	84	78
MB 180-394406/1-A	Method Blank	87	86	82	77

#### Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene (Surr)

# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 180-394252/1-A**

**Matrix: Water**

**Analysis Batch: 395213**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 394252**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.0010	U	0.0010	0.00014	mg/L	04/05/22 12:27	04/13/22 10:17	1	1
1,2-Dichlorobenzene	0.0010	U	0.0010	0.000095	mg/L	04/05/22 12:27	04/13/22 10:17	1	2
1,2,4,5-Tetrachlorobenzene	0.0010	U	0.0010	0.00015	mg/L	04/05/22 12:27	04/13/22 10:17	1	3
1,3-Dichlorobenzene	0.0010	U	0.0010	0.000099	mg/L	04/05/22 12:27	04/13/22 10:17	1	4
1,4-Dichlorobenzene	0.0010	U	0.0010	0.000061	mg/L	04/05/22 12:27	04/13/22 10:17	1	5
1,4-Dioxane	0.0020	U	0.0020	0.00019	mg/L	04/05/22 12:27	04/13/22 10:17	1	6
1,2-Diphenylhydrazine(as Azobenzene)	0.0010	U	0.0010	0.00020	mg/L	04/05/22 12:27	04/13/22 10:17	1	7
1,2,4-Trichlorobenzene	0.0010	U	0.0010	0.00013	mg/L	04/05/22 12:27	04/13/22 10:17	1	8
2-Chloronaphthalene	0.00019	U	0.00019	0.000059	mg/L	04/05/22 12:27	04/13/22 10:17	1	9
2-Chlorophenol	0.0010	U	0.0010	0.00013	mg/L	04/05/22 12:27	04/13/22 10:17	1	10
2,3,4,6-Tetrachlorophenol	0.0010	U	0.0010	0.00033	mg/L	04/05/22 12:27	04/13/22 10:17	1	11
2,4-Dichlorophenol	0.00019	U	0.00019	0.000051	mg/L	04/05/22 12:27	04/13/22 10:17	1	12
2,4-Dimethylphenol	0.0010	U	0.0010	0.00017	mg/L	04/05/22 12:27	04/13/22 10:17	1	13
2,4-Dinitrophenol	0.010	U	0.010	0.0015	mg/L	04/05/22 12:27	04/13/22 10:17	1	14
2,4-Dinitrotoluene	0.0010	U	0.0010	0.00035	mg/L	04/05/22 12:27	04/13/22 10:17	1	15
2,6-Dinitrotoluene	0.0010	U	0.0010	0.00017	mg/L	04/05/22 12:27	04/13/22 10:17	1	1
2-Methylnaphthalene	0.00019	U	0.00019	0.000062	mg/L	04/05/22 12:27	04/13/22 10:17	1	2
2-Methylphenol	0.0010	U	0.0010	0.00030	mg/L	04/05/22 12:27	04/13/22 10:17	1	3
Methylphenol, 3 & 4	0.0010	U	0.0010	0.00037	mg/L	04/05/22 12:27	04/13/22 10:17	1	4
2-Nitroaniline	0.0050	U	0.0050	0.00055	mg/L	04/05/22 12:27	04/13/22 10:17	1	5
3-Nitroaniline	0.0050	U	0.0050	0.00044	mg/L	04/05/22 12:27	04/13/22 10:17	1	6
4-Nitroaniline	0.0050	U	0.0050	0.00036	mg/L	04/05/22 12:27	04/13/22 10:17	1	7
2-Nitrophenol	0.0010	U	0.0010	0.00019	mg/L	04/05/22 12:27	04/13/22 10:17	1	8
4-Nitrophenol	0.0050	U	0.0050	0.00094	mg/L	04/05/22 12:27	04/13/22 10:17	1	9
2,2'-oxybis[1-chloropropane]	0.00019	U	0.00019	0.000058	mg/L	04/05/22 12:27	04/13/22 10:17	1	10
2,4,5-Trichlorophenol	0.0010	U	0.0010	0.00025	mg/L	04/05/22 12:27	04/13/22 10:17	1	11
2,4,6-Trichlorophenol	0.0010	U	0.0010	0.00022	mg/L	04/05/22 12:27	04/13/22 10:17	1	12
4-Chloro-3-methylphenol	0.0010	U	0.0010	0.00028	mg/L	04/05/22 12:27	04/13/22 10:17	1	13
4-Chlorophenyl phenyl ether	0.0010	U	0.0010	0.00022	mg/L	04/05/22 12:27	04/13/22 10:17	1	14
4,6-Dinitro-2-methylphenol	0.0050	U	0.0050	0.0015	mg/L	04/05/22 12:27	04/13/22 10:17	1	15
Cresols, Total	0.0020	U	0.0020	0.00077	mg/L	04/05/22 12:27	04/13/22 10:17	1	1
Acenaphthene	0.00019	U	0.00019	0.000065	mg/L	04/05/22 12:27	04/13/22 10:17	1	2
Acenaphthylene	0.00019	U	0.00019	0.000065	mg/L	04/05/22 12:27	04/13/22 10:17	1	3
Acetophenone	0.0010	U	0.0010	0.00016	mg/L	04/05/22 12:27	04/13/22 10:17	1	4
Aniline	0.0010	U	0.0010	0.00037	mg/L	04/05/22 12:27	04/13/22 10:17	1	5
Anthracene	0.00019	U	0.00019	0.000049	mg/L	04/05/22 12:27	04/13/22 10:17	1	6
Atrazine	0.0010	U	0.0010	0.00063	mg/L	04/05/22 12:27	04/13/22 10:17	1	7
Benzaldehyde	0.0010	U	0.0010	0.00054	mg/L	04/05/22 12:27	04/13/22 10:17	1	8
Benzidine	0.020	U	0.020	0.0091	mg/L	04/05/22 12:27	04/13/22 10:17	1	9
Benzo[a]anthracene	0.00019	U	0.00019	0.000075	mg/L	04/05/22 12:27	04/13/22 10:17	1	10
Benzo[b]fluoranthene	0.00019	U	0.00019	0.000097	mg/L	04/05/22 12:27	04/13/22 10:17	1	11
Benzo[k]fluoranthene	0.00019	U	0.00019	0.000088	mg/L	04/05/22 12:27	04/13/22 10:17	1	12
Benzoic acid	0.0050	U	0.0050	0.00092	mg/L	04/05/22 12:27	04/13/22 10:17	1	13
Benzo[g,h,i]perylene	0.00019	U	0.00019	0.000069	mg/L	04/05/22 12:27	04/13/22 10:17	1	14
Benzo[a]pyrene	0.00019	U	0.00019	0.000053	mg/L	04/05/22 12:27	04/13/22 10:17	1	15
Bis(2-chloroethoxy)methane	0.0010	U	0.0010	0.00015	mg/L	04/05/22 12:27	04/13/22 10:17	1	1
Bis(2-chloroethyl)ether	0.00019	U	0.00019	0.000040	mg/L	04/05/22 12:27	04/13/22 10:17	1	2
Bis(2-ethylhexyl) phthalate	0.010	U	0.010	0.0062	mg/L	04/05/22 12:27	04/13/22 10:17	1	3

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 180-394252/1-A**

**Matrix: Water**

**Analysis Batch: 395213**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 394252**

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
4-Bromophenyl phenyl ether	0.0010	U	0.0010		0.00032	mg/L		04/05/22 12:27	04/13/22 10:17		1
Butyl benzyl phthalate	0.0010	U	0.0010		0.00046	mg/L		04/05/22 12:27	04/13/22 10:17		1
Caprolactam	0.0050	U	0.0050		0.00047	mg/L		04/05/22 12:27	04/13/22 10:17		1
Carbazole	0.00019	U	0.00019		0.000051	mg/L		04/05/22 12:27	04/13/22 10:17		1
4-Chloroaniline	0.0010	U	0.0010		0.00038	mg/L		04/05/22 12:27	04/13/22 10:17		1
Chrysene	0.00019	U	0.00019		0.000081	mg/L		04/05/22 12:27	04/13/22 10:17		1
Dibenz(a,h)anthracene	0.00019	U	0.00019		0.000072	mg/L		04/05/22 12:27	04/13/22 10:17		1
Dibenzofuran	0.0010	U	0.0010		0.00019	mg/L		04/05/22 12:27	04/13/22 10:17		1
Di-n-butyl phthalate	0.0010	U	0.0010		0.00074	mg/L		04/05/22 12:27	04/13/22 10:17		1
Di-n-octyl phthalate	0.0010	U	0.0010		0.00069	mg/L		04/05/22 12:27	04/13/22 10:17		1
Diethyl phthalate	0.0010	U	0.0010		0.00057	mg/L		04/05/22 12:27	04/13/22 10:17		1
Dimethyl phthalate	0.0010	U	0.0010		0.00020	mg/L		04/05/22 12:27	04/13/22 10:17		1
Fluoranthene	0.00019	U	0.00019		0.000060	mg/L		04/05/22 12:27	04/13/22 10:17		1
Fluorene	0.00019	U	0.00019		0.000069	mg/L		04/05/22 12:27	04/13/22 10:17		1
Hexachlorobenzene	0.00019	U	0.00019		0.000056	mg/L		04/05/22 12:27	04/13/22 10:17		1
Hexachlorobutadiene	0.00019	U	0.00019		0.000069	mg/L		04/05/22 12:27	04/13/22 10:17		1
Hexachlorocyclopentadiene	0.0010	U	0.0010		0.00050	mg/L		04/05/22 12:27	04/13/22 10:17		1
Hexachloroethane	0.0010	U	0.0010		0.00013	mg/L		04/05/22 12:27	04/13/22 10:17		1
Indeno[1,2,3-cd]pyrene	0.00019	U	0.00019		0.000085	mg/L		04/05/22 12:27	04/13/22 10:17		1
Isophorone	0.0010	U	0.0010		0.00019	mg/L		04/05/22 12:27	04/13/22 10:17		1
Naphthalene	0.00019	U	0.00019		0.000059	mg/L		04/05/22 12:27	04/13/22 10:17		1
Nitrobenzene	0.0020	U	0.0020		0.00050	mg/L		04/05/22 12:27	04/13/22 10:17		1
N-Nitrosodimethylamine	0.0010	U	0.0010		0.000067	mg/L		04/05/22 12:27	04/13/22 10:17		1
N-Nitrosodiphenylamine	0.0010	U	0.0010		0.00012	mg/L		04/05/22 12:27	04/13/22 10:17		1
N-Nitrosodi-n-propylamine	0.00019	U	0.00019		0.000071	mg/L		04/05/22 12:27	04/13/22 10:17		1
Pentachlorophenol	0.0050	U	0.0050		0.00085	mg/L		04/05/22 12:27	04/13/22 10:17		1
Phenanthrene	0.00019	U	0.00019		0.000055	mg/L		04/05/22 12:27	04/13/22 10:17		1
Phenol	0.0010	U	0.0010		0.00049	mg/L		04/05/22 12:27	04/13/22 10:17		1
Pyrene	0.00019	U	0.00019		0.000054	mg/L		04/05/22 12:27	04/13/22 10:17		1
Pyridine	0.0020	U	0.0020		0.00054	mg/L		04/05/22 12:27	04/13/22 10:17		1
Benzyl alcohol	0.0010	U	0.0010		0.00016	mg/L		04/05/22 12:27	04/13/22 10:17		1
3,3'-Dichlorobenzidine	0.0010	U	0.0010		0.00058	mg/L		04/05/22 12:27	04/13/22 10:17		1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
2-Fluorobiphenyl (Surr)	69		20 - 105			04/05/22 12:27	04/13/22 10:17	1
2-Fluorophenol (Surr)	82		20 - 105			04/05/22 12:27	04/13/22 10:17	1
2,4,6-Tribromophenol (Surr)	80		23 - 128			04/05/22 12:27	04/13/22 10:17	1
Nitrobenzene-d5 (Surr)	75		20 - 107			04/05/22 12:27	04/13/22 10:17	1
Phenol-d5 (Surr)	73		20 - 106			04/05/22 12:27	04/13/22 10:17	1
Terphenyl-d14 (Surr)	86		22 - 120			04/05/22 12:27	04/13/22 10:17	1

**Lab Sample ID: LCS 180-394252/2-A**

**Matrix: Water**

**Analysis Batch: 395213**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 394252**

Analyte	Spike			LCS			%Rec		
	Added	Result	Qualifier	Unit	D	%Rec	Limits		
1,1'-Biphenyl	0.0200	0.0128		mg/L	64	51 - 100			
1,2-Dichlorobenzene	0.0200	0.0149		mg/L	74	51 - 100			

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-394252/2-A**

**Matrix: Water**

**Analysis Batch: 395213**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 394252**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				Limits
1,2,4,5-Tetrachlorobenzene	0.0200	0.0122		mg/L	61	48 - 100	
1,3-Dichlorobenzene	0.0200	0.0150		mg/L	75	51 - 100	
1,4-Dichlorobenzene	0.0200	0.0147		mg/L	73	52 - 100	
1,4-Dioxane	0.0200	0.0177		mg/L	88	33 - 111	
1,2-Diphenylhydrazine(as Azobenzene)	0.0200	0.0140		mg/L	70	42 - 100	
1,2,4-Trichlorobenzene	0.0200	0.0143		mg/L	72	51 - 100	
2-Chloronaphthalene	0.0200	0.0128		mg/L	64	52 - 100	
2-Chlorophenol	0.0200	0.0144		mg/L	72	53 - 100	
2,3,4,6-Tetrachlorophenol	0.0200	0.0133		mg/L	67	50 - 100	
2,4-Dichlorophenol	0.0200	0.0148		mg/L	74	55 - 100	
2,4-Dimethylphenol	0.0200	0.0146		mg/L	73	51 - 100	
2,4-Dinitrophenol	0.0400	0.0169		mg/L	42	32 - 100	
2,4-Dinitrotoluene	0.0200	0.0146		mg/L	73	56 - 100	
2,6-Dinitrotoluene	0.0200	0.0142		mg/L	71	56 - 101	
2-Methylnaphthalene	0.0200	0.0130		mg/L	65	53 - 100	
2-Methylphenol	0.0200	0.0137		mg/L	68	51 - 100	
Methylphenol, 3 & 4	0.0200	0.0138		mg/L	69	51 - 100	
2-Nitroaniline	0.0200	0.0128		mg/L	64	47 - 104	
3-Nitroaniline	0.0200	0.0138		mg/L	69	54 - 100	
4-Nitroaniline	0.0200	0.0129		mg/L	65	54 - 100	
2-Nitrophenol	0.0200	0.0157		mg/L	79	56 - 100	
4-Nitrophenol	0.0400	0.0277		mg/L	69	37 - 120	
2,2'-oxybis[1-chloropropane]	0.0200	0.00897		mg/L	45	29 - 102	
2,4,5-Trichlorophenol	0.0200	0.0138		mg/L	69	55 - 100	
2,4,6-Trichlorophenol	0.0200	0.0140		mg/L	70	54 - 100	
4-Chloro-3-methylphenol	0.0200	0.0144		mg/L	72	47 - 105	
4-Chlorophenyl phenyl ether	0.0200	0.0126		mg/L	63	52 - 100	
4,6-Dinitro-2-methylphenol	0.0400	0.0250		mg/L	62	48 - 100	
Cresols, Total	0.0400	0.0275		mg/L	69	51 - 100	
Acenaphthene	0.0200	0.0133		mg/L	66	51 - 100	
Acenaphthylene	0.0200	0.0127		mg/L	63	54 - 100	
Acetophenone	0.0200	0.0134		mg/L	67	46 - 100	
Aniline	0.0200	0.0126		mg/L	63	42 - 100	
Anthracene	0.0200	0.0153		mg/L	76	54 - 100	
Atrazine	0.0200	0.0149		mg/L	75	50 - 100	
Benzaldehyde	0.0200	0.0146		mg/L	73	25 - 114	
Benzidine	0.0200	0.020	U	mg/L	11	5 - 100	
Benzo[a]anthracene	0.0200	0.0139		mg/L	70	52 - 100	
Benzo[b]fluoranthene	0.0200	0.0106		mg/L	53	50 - 100	
Benzo[k]fluoranthene	0.0200	0.0118		mg/L	59	49 - 100	
Benzoic acid	0.0200	0.0133		mg/L	67	31 - 122	
Benzo[g,h,i]perylene	0.0200	0.0107		mg/L	54	53 - 100	
Benzo[a]pyrene	0.0200	0.0105		mg/L	53	52 - 100	
Bis(2-chloroethoxy)methane	0.0200	0.0127		mg/L	63	49 - 100	
Bis(2-chloroethyl)ether	0.0200	0.0127		mg/L	64	46 - 100	
Bis(2-ethylhexyl) phthalate	0.0200	0.0142		mg/L	71	52 - 101	
4-Bromophenyl phenyl ether	0.0200	0.0135		mg/L	68	50 - 100	
Butyl benzyl phthalate	0.0200	0.0149		mg/L	74	52 - 100	

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCS 180-394252/2-A

**Matrix:** Water

**Analysis Batch:** 395213

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 394252

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				Limits
Caprolactam	0.0200	0.0142		mg/L	71	46 - 111	
Carbazole	0.0200	0.0144		mg/L	72	55 - 100	
4-Chloroaniline	0.0200	0.0134		mg/L	67	48 - 100	
Chrysene	0.0200	0.0134		mg/L	67	51 - 100	
Dibenz(a,h)anthracene	0.0200	0.0111		mg/L	56	52 - 101	
Dibenzofuran	0.0200	0.0131		mg/L	66	53 - 100	
Di-n-butyl phthalate	0.0200	0.0153		mg/L	76	57 - 100	
Di-n-octyl phthalate	0.0200	0.0109		mg/L	55	41 - 100	
Diethyl phthalate	0.0200	0.0131		mg/L	65	52 - 100	
Dimethyl phthalate	0.0200	0.0139		mg/L	69	55 - 100	
Fluoranthene	0.0200	0.0150		mg/L	75	56 - 100	
Fluorene	0.0200	0.0136		mg/L	68	53 - 100	
Hexachlorobenzene	0.0200	0.0127		mg/L	63	46 - 100	
Hexachlorobutadiene	0.0200	0.0134		mg/L	67	42 - 101	
Hexachlorocyclopentadiene	0.0200	0.0133		mg/L	67	38 - 102	
Hexachloroethane	0.0200	0.0151		mg/L	76	46 - 100	
Indeno[1,2,3-cd]pyrene	0.0200	0.0109		mg/L	54	54 - 100	
Isophorone	0.0200	0.0135		mg/L	67	50 - 100	
Naphthalene	0.0200	0.0142		mg/L	71	53 - 100	
Nitrobenzene	0.0200	0.0143		mg/L	71	47 - 100	
N-Nitrosodimethylamine	0.0200	0.0175		mg/L	87	39 - 114	
N-Nitrosodiphenylamine	0.0200	0.0140		mg/L	70	53 - 100	
N-Nitrosodi-n-propylamine	0.0200	0.0135		mg/L	68	43 - 103	
Pentachlorophenol	0.0400	0.0266		mg/L	67	35 - 102	
Phenanthrene	0.0200	0.0144		mg/L	72	53 - 100	
Phenol	0.0200	0.0136		mg/L	68	49 - 100	
Pyrene	0.0200	0.0146		mg/L	73	53 - 100	
Pyridine	0.0400	0.0331		mg/L	83	31 - 105	
Benzyl alcohol	0.0200	0.0143		mg/L	72	33 - 107	
3,3'-Dichlorobenzidine	0.0200	0.0124		mg/L	62	42 - 100	

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	64		20 - 105
2-Fluorophenol (Surr)	80		20 - 105
2,4,6-Tribromophenol (Surr)	72		23 - 128
Nitrobenzene-d5 (Surr)	71		20 - 107
Phenol-d5 (Surr)	70		20 - 106
Terphenyl-d14 (Surr)	76		22 - 120

**Lab Sample ID:** LCSD 180-394252/3-A

**Matrix:** Water

**Analysis Batch:** 395213

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

**Prep Batch:** 394252

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD
	Added	Result	Qualifier				Limits	
1,1'-Biphenyl	0.0200	0.0137		mg/L	69	51 - 100	7	16
1,2-Dichlorobenzene	0.0200	0.0157		mg/L	79	51 - 100	6	16
1,2,4,5-Tetrachlorobenzene	0.0200	0.0130		mg/L	65	48 - 100	7	16
1,3-Dichlorobenzene	0.0200	0.0161		mg/L	81	51 - 100	8	15

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 180-394252/3-A**

**Matrix: Water**

**Analysis Batch: 395213**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 394252**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec		RPD	RPD	Limit
	Added	Result	Qualifier				Limits				
1,4-Dichlorobenzene	0.0200	0.0155		mg/L	77	52 - 100		5	15		
1,4-Dioxane	0.0200	0.0178		mg/L	89	33 - 111		1	15		
1,2-Diphenylhydrazine(as Azobenzene)	0.0200	0.0146		mg/L	73	42 - 100		4	15		
1,2,4-Trichlorobenzene	0.0200	0.0144		mg/L	72	51 - 100		1	15		
2-Chloronaphthalene	0.0200	0.0135		mg/L	67	52 - 100		5	15		
2-Chlorophenol	0.0200	0.0152		mg/L	76	53 - 100		5	17		
2,3,4,6-Tetrachlorophenol	0.0200	0.0144		mg/L	72	50 - 100		8	21		
2,4-Dichlorophenol	0.0200	0.0151		mg/L	76	55 - 100		2	15		
2,4-Dimethylphenol	0.0200	0.0153		mg/L	76	51 - 100		5	16		
2,4-Dinitrophenol	0.0400	0.0169		mg/L	42	32 - 100		0	19		
2,4-Dinitrotoluene	0.0200	0.0155		mg/L	78	56 - 100		6	16		
2,6-Dinitrotoluene	0.0200	0.0153		mg/L	76	56 - 101		7	16		
2-Methylnaphthalene	0.0200	0.0137		mg/L	69	53 - 100		6	15		
2-Methylphenol	0.0200	0.0145		mg/L	73	51 - 100		6	16		
Methylphenol, 3 & 4	0.0200	0.0140		mg/L	70	51 - 100		2	18		
2-Nitroaniline	0.0200	0.0137		mg/L	69	47 - 104		7	18		
3-Nitroaniline	0.0200	0.0140		mg/L	70	54 - 100		1	15		
4-Nitroaniline	0.0200	0.0134		mg/L	67	54 - 100		4	16		
2-Nitrophenol	0.0200	0.0168		mg/L	84	56 - 100		7	15		
4-Nitrophenol	0.0400	0.0290		mg/L	72	37 - 120		5	18		
2,2'-oxybis[1-chloropropane]	0.0200	0.00936		mg/L	47	29 - 102		4	16		
2,4,5-Trichlorophenol	0.0200	0.0145		mg/L	73	55 - 100		5	18		
2,4,6-Trichlorophenol	0.0200	0.0147		mg/L	73	54 - 100		4	16		
4-Chloro-3-methylphenol	0.0200	0.0149		mg/L	74	47 - 105		3	18		
4-Chlorophenyl phenyl ether	0.0200	0.0130		mg/L	65	52 - 100		3	16		
4,6-Dinitro-2-methylphenol	0.0400	0.0257		mg/L	64	48 - 100		3	15		
Cresols, Total	0.0400	0.0285		mg/L	71	51 - 100		4	17		
Acenaphthene	0.0200	0.0141		mg/L	71	51 - 100		6	15		
Acenaphthylene	0.0200	0.0137		mg/L	68	54 - 100		8	16		
Acetophenone	0.0200	0.0140		mg/L	70	46 - 100		5	16		
Aniline	0.0200	0.0138		mg/L	69	42 - 100		10	17		
Anthracene	0.0200	0.0159		mg/L	80	54 - 100		4	15		
Atrazine	0.0200	0.0156		mg/L	78	50 - 100		4	15		
Benzaldehyde	0.0200	0.0148		mg/L	74	25 - 114		1	16		
Benzidine	0.0200	0.020 U		mg/L	11	5 - 100		2	35		
Benzo[a]anthracene	0.0200	0.0147		mg/L	74	52 - 100		6	15		
Benzo[b]fluoranthene	0.0200	0.0117		mg/L	58	50 - 100		9	15		
Benzo[k]fluoranthene	0.0200	0.0119		mg/L	60	49 - 100		1	20		
Benzoic acid	0.0200	0.0140		mg/L	70	31 - 122		5	32		
Benzo[g,h,i]perylene	0.0200	0.0117		mg/L	59	53 - 100		9	15		
Benzo[a]pyrene	0.0200	0.0110		mg/L	55	52 - 100		4	16		
Bis(2-chloroethoxy)methane	0.0200	0.0130		mg/L	65	49 - 100		3	15		
Bis(2-chloroethyl)ether	0.0200	0.0137		mg/L	69	46 - 100		7	17		
Bis(2-ethylhexyl) phthalate	0.0200	0.0147		mg/L	74	52 - 101		4	15		
4-Bromophenyl phenyl ether	0.0200	0.0143		mg/L	72	50 - 100		6	15		
Butyl benzyl phthalate	0.0200	0.0157		mg/L	79	52 - 100		6	15		
Caprolactam	0.0200	0.0148		mg/L	74	46 - 111		4	16		
Carbazole	0.0200	0.0157		mg/L	79	55 - 100		9	16		

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 180-394252/3-A**

**Matrix: Water**

**Analysis Batch: 395213**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 394252**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec %Rec	Limits	RPD RPD	RPD Limit
4-Chloroaniline	0.0200	0.0138	mg/L	69	48 - 100	3	15		
Chrysene	0.0200	0.0141	mg/L	70	51 - 100	5	15		
Dibenz(a,h)anthracene	0.0200	0.0118	mg/L	59	52 - 101	6	15		
Dibenzofuran	0.0200	0.0139	mg/L	69	53 - 100	5	16		
Di-n-butyl phthalate	0.0200	0.0163	mg/L	81	57 - 100	6	15		
Di-n-octyl phthalate	0.0200	0.0116	mg/L	58	41 - 100	5	17		
Diethyl phthalate	0.0200	0.0136	mg/L	68	52 - 100	4	15		
Dimethyl phthalate	0.0200	0.0144	mg/L	72	55 - 100	4	15		
Fluoranthene	0.0200	0.0157	mg/L	78	56 - 100	4	15		
Fluorene	0.0200	0.0142	mg/L	71	53 - 100	5	17		
Hexachlorobenzene	0.0200	0.0136	mg/L	68	46 - 100	7	15		
Hexachlorobutadiene	0.0200	0.0139	mg/L	70	42 - 101	4	15		
Hexachlorocyclopentadiene	0.0200	0.0142	mg/L	71	38 - 102	6	16		
Hexachloroethane	0.0200	0.0161	mg/L	80	46 - 100	6	16		
Indeno[1,2,3-cd]pyrene	0.0200	0.0119	mg/L	59	54 - 100	9	16		
Isophorone	0.0200	0.0142	mg/L	71	50 - 100	5	15		
Naphthalene	0.0200	0.0150	mg/L	75	53 - 100	5	15		
Nitrobenzene	0.0200	0.0148	mg/L	74	47 - 100	4	16		
N-Nitrosodimethylamine	0.0200	0.0178	mg/L	89	39 - 114	2	16		
N-Nitrosodiphenylamine	0.0200	0.0150	mg/L	75	53 - 100	7	16		
N-Nitrosodi-n-propylamine	0.0200	0.0144	mg/L	72	43 - 103	6	16		
Pentachlorophenol	0.0400	0.0282	mg/L	71	35 - 102	6	17		
Phenanthrene	0.0200	0.0152	mg/L	76	53 - 100	6	15		
Phenol	0.0200	0.0146	mg/L	73	49 - 100	7	17		
Pyrene	0.0200	0.0152	mg/L	76	53 - 100	4	15		
Pyridine	0.0400	0.0340	mg/L	85	31 - 105	3	16		
Benzyl alcohol	0.0200	0.0151	mg/L	75	33 - 107	5	35		
3,3'-Dichlorobenzidine	0.0200	0.0131	mg/L	66	42 - 100	5	15		

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	69		20 - 105
2-Fluorophenol (Surr)	84		20 - 105
2,4,6-Tribromophenol (Surr)	73		23 - 128
Nitrobenzene-d5 (Surr)	75		20 - 107
Phenol-d5 (Surr)	71		20 - 106
Terphenyl-d14 (Surr)	80		22 - 120

**Lab Sample ID: MB 180-395091/1-A**

**Matrix: Sediment**

**Analysis Batch: 395441**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 395091**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.033	U	0.033	0.012	mg/Kg	04/12/22 09:40	04/14/22 12:19		1
1,2-Dichlorobenzene	0.033	U	0.033	0.011	mg/Kg	04/12/22 09:40	04/14/22 12:19		1
1,2,4,5-Tetrachlorobenzene	33	U	33	13	ug/Kg	04/12/22 09:40	04/14/22 12:19		1
1,3-Dichlorobenzene	0.033	U	0.033	0.011	mg/Kg	04/12/22 09:40	04/14/22 12:19		1
1,4-Dichlorobenzene	0.033	U	0.033	0.012	mg/Kg	04/12/22 09:40	04/14/22 12:19		1
1,4-Dioxane	0.067	U	0.067	0.010	mg/Kg	04/12/22 09:40	04/14/22 12:19		1

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 180-395091/1-A**

**Client Sample ID: Method Blank**

**Matrix: Sediment**

**Prep Type: Total/NA**

**Analysis Batch: 395441**

**Prep Batch: 395091**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2-Diphenylhydrazine(as Azobenzene)	0.033	U	0.033	0.015	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
1,2,4-Trichlorobenzene	0.033	U	0.033	0.010	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
2-Chloronaphthalene	0.0067	U	0.0067	0.0015	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
2-Chlorophenol	0.033	U	0.033	0.012	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
2,3,4,6-Tetrachlorophenol	33	U	33	14	ug/Kg		04/12/22 09:40	04/14/22 12:19	1
2,4-Dichlorophenol	0.0067	U	0.0067	0.0026	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
2,4-Dimethylphenol	0.033	U	0.033	0.011	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
2,4-Dinitrophenol	0.33	U	0.33	0.21	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
2,4-Dinitrotoluene	0.033	U	0.033	0.020	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
2,6-Dinitrotoluene	0.033	U	0.033	0.013	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
2-Methylnaphthalene	0.0067	U	0.0067	0.0016	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
2-Methylphenol	0.033	U	0.033	0.0096	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Methylphenol, 3 & 4	0.033	U	0.033	0.0098	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
2-Nitroaniline	0.17	U	0.17	0.015	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
3-Nitroaniline	0.17	U	0.17	0.0085	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
4-Nitroaniline	0.17	U	0.17	0.012	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
2-Nitrophenol	0.033	U	0.033	0.012	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
4-Nitrophenol	0.17	U	0.17	0.023	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
2,2'-oxybis[1-chloropropane]	0.0067	U	0.0067	0.0025	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
2,4,5-Trichlorophenol	0.033	U	0.033	0.012	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
2,4,6-Trichlorophenol	0.033	U	0.033	0.011	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
4-Chloro-3-methylphenol	0.033	U	0.033	0.012	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
4-Chlorophenyl phenyl ether	0.033	U	0.033	0.011	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
4,6-Dinitro-2-methylphenol	0.17	U	0.17	0.058	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Cresols, Total	0.066	U	0.066	0.019	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Acenaphthene	0.0067	U	0.0067	0.0019	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Acenaphthylene	0.0067	U	0.0067	0.0015	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Acetophenone	0.067	U	0.067	0.012	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Aniline	0.033	U	0.033	0.0086	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Anthracene	0.0067	U	0.0067	0.0017	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Atrazine	0.067	U	0.067	0.015	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Benzaldehyde	0.067	U	0.067	0.0041	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Benzidine	0.67	U	0.67	0.25	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Benzo[a]anthracene	0.0067	U	0.0067	0.0030	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Benzo[b]fluoranthene	0.0067	U	0.0067	0.0016	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Benzo[k]fluoranthene	0.0067	U	0.0067	0.0020	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Benzoic acid	0.17	U	0.17	0.074	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Benzo[g,h,i]perylene	0.0067	U	0.0067	0.0014	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Benzo[a]pyrene	0.0067	U	0.0067	0.0029	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Bis(2-chloroethoxy)methane	0.033	U	0.033	0.012	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Bis(2-chloroethyl)ether	0.0067	U	0.0067	0.0012	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Bis(2-ethylhexyl) phthalate	0.33	U	0.33	0.036	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
4-Bromophenyl phenyl ether	0.033	U	0.033	0.014	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Butyl benzyl phthalate	0.033	U	0.033	0.023	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Caprolactam	0.17	U	0.17	0.022	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Carbazole	0.0067	U	0.0067	0.0016	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
4-Chloroaniline	0.033	U	0.033	0.0088	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Chrysene	0.0067	U	0.0067	0.0037	mg/Kg		04/12/22 09:40	04/14/22 12:19	1

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 180-395091/1-A**

**Matrix: Sediment**

**Analysis Batch: 395441**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 395091**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Dibenz(a,h)anthracene	0.0067	U	0.0067	0.0043	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Dibenzofuran	0.033	U	0.033	0.012	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Di-n-butyl phthalate	0.033	U	0.033	0.015	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Di-n-octyl phthalate	0.033	U	0.033	0.019	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Diethyl phthalate	0.033	U	0.033	0.012	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Dimethyl phthalate	0.033	U	0.033	0.013	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Fluoranthene	0.0067	U	0.0067	0.0018	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Fluorene	0.0067	U	0.0067	0.0013	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Hexachlorobenzene	0.0067	U	0.0067	0.0024	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Hexachlorobutadiene	0.0067	U	0.0067	0.0020	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Hexachlorocyclopentadiene	0.033	U	0.033	0.0034	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Hexachloroethane	0.033	U	0.033	0.012	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Indeno[1,2,3-cd]pyrene	0.0067	U	0.0067	0.0033	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Isophorone	0.033	U	0.033	0.012	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Naphthalene	0.0067	U	0.0067	0.0013	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Nitrobenzene	0.067	U	0.067	0.012	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
N-Nitrosodimethylamine	0.033	U	0.033	0.013	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
N-Nitrosodiphenylamine	0.033	U	0.033	0.011	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
N-Nitrosodi-n-propylamine	0.0067	U	0.0067	0.0023	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Pentachlorophenol	0.17	U	0.17	0.054	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Phenanthrene	0.0067	U	0.0067	0.0018	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Phenol	0.033	U	0.033	0.010	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Pyrene	0.0067	U	0.0067	0.0016	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Pyridine	0.067	U	0.067	0.018	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
Benzyl alcohol	0.033	U	0.033	0.0023	mg/Kg		04/12/22 09:40	04/14/22 12:19	1
3,3'-Dichlorobenzidine	0.033	U	0.033	0.031	mg/Kg		04/12/22 09:40	04/14/22 12:19	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl (Surr)	66		35 - 105	04/12/22 09:40	04/14/22 12:19	1
2-Fluorophenol (Surr)	73		32 - 105	04/12/22 09:40	04/14/22 12:19	1
2,4,6-Tribromophenol (Surr)	63		20 - 119	04/12/22 09:40	04/14/22 12:19	1
Nitrobenzene-d5 (Surr)	80		34 - 109	04/12/22 09:40	04/14/22 12:19	1
Phenol-d5 (Surr)	72		34 - 105	04/12/22 09:40	04/14/22 12:19	1
Terphenyl-d14 (Surr)	68		20 - 117	04/12/22 09:40	04/14/22 12:19	1

**Lab Sample ID: LCS 180-395091/2-A**

**Matrix: Sediment**

**Analysis Batch: 395441**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 395091**

Analyte	Spike		LCS	LCS	%Rec		
	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1'-Biphenyl	0.667	0.378		mg/Kg		57	43 - 100
1,2-Dichlorobenzene	0.667	0.381		mg/Kg		57	41 - 100
1,2,4,5-Tetrachlorobenzene	667	368		ug/Kg		55	40 - 103
1,3-Dichlorobenzene	0.667	0.387		mg/Kg		58	41 - 100
1,4-Dichlorobenzene	0.667	0.380		mg/Kg		57	41 - 100
1,4-Dioxane	0.667	0.435		mg/Kg		65	10 - 133
1,2-Diphenylhydrazine(as Azobenzene)	0.667	0.448		mg/Kg		67	39 - 111
1,2,4-Trichlorobenzene	0.667	0.387		mg/Kg		58	44 - 100

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-395091/2-A**

**Matrix: Sediment**

**Analysis Batch: 395441**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 395091**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				Limits
2-Chloronaphthalene	0.667	0.378		mg/Kg	57	47 - 100	
2-Chlorophenol	0.667	0.409		mg/Kg	61	43 - 100	
2,3,4,6-Tetrachlorophenol	667	390		ug/Kg	58	43 - 107	
2,4-Dichlorophenol	0.667	0.418		mg/Kg	63	48 - 101	
2,4-Dimethylphenol	0.667	0.434		mg/Kg	65	46 - 103	
2,4-Dinitrophenol	1.33	0.812		mg/Kg	61	31 - 112	
2,4-Dinitrotoluene	0.667	0.419		mg/Kg	63	48 - 106	
2,6-Dinitrotoluene	0.667	0.414		mg/Kg	62	48 - 109	
2-Methylnaphthalene	0.667	0.387		mg/Kg	58	44 - 100	
2-Methylphenol	0.667	0.418		mg/Kg	63	43 - 101	
Methylphenol, 3 & 4	0.667	0.426		mg/Kg	64	43 - 104	
2-Nitroaniline	0.667	0.497		mg/Kg	75	40 - 122	
3-Nitroaniline	0.667	0.402		mg/Kg	60	39 - 107	
4-Nitroaniline	0.667	0.400		mg/Kg	60	41 - 110	
2-Nitrophenol	0.667	0.438		mg/Kg	66	48 - 108	
4-Nitrophenol	1.33	0.883		mg/Kg	66	33 - 131	
2,2'-oxybis[1-chloropropane]	0.667	0.334		mg/Kg	50	33 - 101	
2,4,5-Trichlorophenol	0.667	0.390		mg/Kg	58	47 - 108	
2,4,6-Trichlorophenol	0.667	0.429		mg/Kg	64	47 - 108	
4-Chloro-3-methylphenol	0.667	0.447		mg/Kg	67	47 - 108	
4-Chlorophenyl phenyl ether	0.667	0.375		mg/Kg	56	45 - 100	
4,6-Dinitro-2-methylphenol	1.33	0.747		mg/Kg	56	47 - 104	
Cresols, Total	1.33	0.843		mg/Kg	63	43 - 102	
Acenaphthene	0.667	0.390		mg/Kg	59	41 - 100	
Acenaphthylene	0.667	0.403		mg/Kg	60	45 - 100	
Acetophenone	0.667	0.425		mg/Kg	64	40 - 100	
Aniline	0.667	0.410		mg/Kg	62	36 - 100	
Anthracene	0.667	0.380		mg/Kg	57	47 - 100	
Atrazine	0.667	0.414		mg/Kg	62	46 - 102	
Benzaldehyde	0.667	0.394		mg/Kg	59	10 - 125	
Benzidine	0.667	0.67	U	mg/Kg	19	10 - 100	
Benzo[a]anthracene	0.667	0.407		mg/Kg	61	47 - 100	
Benzo[b]fluoranthene	0.667	0.366		mg/Kg	55	44 - 100	
Benzo[k]fluoranthene	0.667	0.318		mg/Kg	48	43 - 100	
Benzoic acid	0.667	0.378		mg/Kg	57	22 - 123	
Benzo[g,h,i]perylene	0.667	0.386		mg/Kg	58	45 - 103	
Benzo[a]pyrene	0.667	0.366		mg/Kg	55	45 - 101	
Bis(2-chloroethoxy)methane	0.667	0.387		mg/Kg	58	45 - 100	
Bis(2-chloroethyl)ether	0.667	0.415		mg/Kg	62	39 - 101	
Bis(2-ethylhexyl) phthalate	0.667	0.435		mg/Kg	65	45 - 109	
4-Bromophenyl phenyl ether	0.667	0.375		mg/Kg	56	17 - 104	
Butyl benzyl phthalate	0.667	0.449		mg/Kg	67	45 - 110	
Caprolactam	0.667	0.448		mg/Kg	67	46 - 109	
Carbazole	0.667	0.381		mg/Kg	57	46 - 100	
4-Chloroaniline	0.667	0.380		mg/Kg	57	38 - 100	
Chrysene	0.667	0.358		mg/Kg	54	44 - 100	
Dibenz(a,h)anthracene	0.667	0.418		mg/Kg	63	46 - 107	
Dibenzofuran	0.667	0.372		mg/Kg	56	47 - 100	
Di-n-butyl phthalate	0.667	0.403		mg/Kg	61	50 - 105	

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCS 180-395091/2-A

**Client Sample ID:** Lab Control Sample

**Matrix:** Sediment

**Prep Type:** Total/NA

**Analysis Batch:** 395441

**Prep Batch:** 395091

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				Limits
Di-n-octyl phthalate	0.667	0.438		mg/Kg	66	34 - 106	
Diethyl phthalate	0.667	0.377		mg/Kg	57	45 - 105	
Dimethyl phthalate	0.667	0.374		mg/Kg	56	46 - 101	
Fluoranthene	0.667	0.398		mg/Kg	60	49 - 102	
Fluorene	0.667	0.377		mg/Kg	57	46 - 100	
Hexachlorobenzene	0.667	0.340		mg/Kg	51	45 - 101	
Hexachlorobutadiene	0.667	0.390		mg/Kg	58	38 - 110	
Hexachlorocyclopentadiene	0.667	0.458		mg/Kg	69	31 - 116	
Hexachloroethane	0.667	0.436		mg/Kg	65	40 - 100	
Indeno[1,2,3-cd]pyrene	0.667	0.403		mg/Kg	61	48 - 104	
Isophorone	0.667	0.438		mg/Kg	66	46 - 105	
Naphthalene	0.667	0.377		mg/Kg	57	43 - 100	
Nitrobenzene	0.667	0.448		mg/Kg	67	43 - 107	
N-Nitrosodimethylamine	0.667	0.474		mg/Kg	71	29 - 121	
N-Nitrosodiphenylamine	0.667	0.375		mg/Kg	56	46 - 100	
N-Nitrosodi-n-propylamine	0.667	0.463		mg/Kg	69	40 - 109	
Pentachlorophenol	1.33	0.743		mg/Kg	56	34 - 112	
Phenanthrene	0.667	0.365		mg/Kg	55	46 - 100	
Phenol	0.667	0.421		mg/Kg	63	42 - 103	
Pyrene	0.667	0.388		mg/Kg	58	44 - 102	
Pyridine	1.33	0.824		mg/Kg	62	25 - 109	
Benzyl alcohol	0.667	0.439		mg/Kg	66	40 - 104	
3,3'-Dichlorobenzidine	0.667	0.359		mg/Kg	54	34 - 101	

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	59		35 - 105
2-Fluorophenol (Surr)	67		32 - 105
2,4,6-Tribromophenol (Surr)	56		20 - 119
Nitrobenzene-d5 (Surr)	73		34 - 109
Phenol-d5 (Surr)	66		34 - 105
Terphenyl-d14 (Surr)	58		20 - 117

**Lab Sample ID:** MB 180-395442/1-A

**Client Sample ID:** Method Blank

**Matrix:** Sediment

**Prep Type:** Total/NA

**Analysis Batch:** 395774

**Prep Batch:** 395442

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	0.017	U	0.017	0.0061	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
1,2-Dichlorobenzene	0.017	U	0.017	0.0053	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
1,2,4,5-Tetrachlorobenzene	17	U	17	6.6	ug/Kg	04/14/22 11:25	04/18/22 12:28		1
1,3-Dichlorobenzene	0.017	U	0.017	0.0055	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
1,4-Dichlorobenzene	0.017	U	0.017	0.0061	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
1,4-Dioxane	0.033	U	0.033	0.0052	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
1,2-Diphenylhydrazine(as Azobenzene)	0.017	U	0.017	0.0074	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
1,2,4-Trichlorobenzene	0.017	U	0.017	0.0051	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
2-Chloronaphthalene	0.0034	U	0.0034	0.00077	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
2-Chlorophenol	0.017	U	0.017	0.0061	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
2,3,4,6-Tetrachlorophenol	17	U	17	7.0	ug/Kg	04/14/22 11:25	04/18/22 12:28		1

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 180-395442/1-A**

**Matrix: Sediment**

**Analysis Batch: 395774**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 395442**

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
2,4-Dichlorophenol	0.0034	U	0.0034		0.0034	0.0013	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
2,4-Dimethylphenol	0.017	U	0.017		0.017	0.0056	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
2,4-Dinitrophenol	0.17	U	0.17		0.17	0.10	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
2,4-Dinitrotoluene	0.017	U	0.017		0.017	0.0099	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
2,6-Dinitrotoluene	0.017	U	0.017		0.017	0.0065	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
2-Methylnaphthalene	0.0034	U	0.0034		0.0034	0.00080	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
2-Methylphenol	0.017	U	0.017		0.017	0.0048	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
Methylphenol, 3 & 4	0.017	U	0.017		0.017	0.0049	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
2-Nitroaniline	0.085	U	0.085		0.085	0.0076	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
3-Nitroaniline	0.085	U	0.085		0.085	0.0042	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
4-Nitroaniline	0.085	U	0.085		0.085	0.0062	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
2-Nitrophenol	0.017	U	0.017		0.017	0.0061	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
4-Nitrophenol	0.085	U	0.085		0.085	0.012	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
2,2'-oxybis[1-chloropropane]	0.0034	U	0.0034		0.0034	0.0012	mg/Kg	04/14/22 11:25	04/18/22 12:28		1
2,4,5-Trichlorophenol	0.017	U	0.017		0.0058	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
2,4,6-Trichlorophenol	0.017	U	0.017		0.0055	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
4-Chloro-3-methylphenol	0.017	U	0.017		0.0059	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
4-Chlorophenyl phenyl ether	0.017	U	0.017		0.0055	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
4,6-Dinitro-2-methylphenol	0.085	U	0.085		0.029	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Cresols, Total	0.033	U	0.033		0.0095	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Acenaphthene	0.0034	U	0.0034		0.00096	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Acenaphthylene	0.0034	U	0.0034		0.00073	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Acetophenone	0.034	U	0.034		0.0059	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Aniline	0.017	U	0.017		0.0043	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Anthracene	0.0034	U	0.0034		0.00087	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Atrazine	0.034	U	0.034		0.0073	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Benzaldehyde	0.034	U	0.034		0.0021	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Benzidine	0.34	U	0.34		0.13	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Benzo[a]anthracene	0.0034	U	0.0034		0.0015	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Benzo[b]fluoranthene	0.0034	U	0.0034		0.00082	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Benzo[k]fluoranthene	0.0034	U	0.0034		0.0010	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Benzoic acid	0.085	U	0.085		0.037	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Benzo[g,h,i]perylene	0.0034	U	0.0034		0.00072	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Benzo[a]pyrene	0.0034	U	0.0034		0.0014	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Bis(2-chloroethoxy)methane	0.017	U	0.017		0.0061	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Bis(2-chloroethyl)ether	0.0034	U	0.0034		0.00061	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Bis(2-ethylhexyl) phthalate	0.17	U	0.17		0.018	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
4-Bromophenyl phenyl ether	0.017	U	0.017		0.0071	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Butyl benzyl phthalate	0.017	U	0.017		0.012	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Caprolactam	0.085	U	0.085		0.011	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Carbazole	0.0034	U	0.0034		0.00078	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
4-Chloroaniline	0.017	U	0.017		0.0044	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Chrysene	0.0034	U	0.0034		0.0019	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Dibenz(a,h)anthracene	0.0034	U	0.0034		0.0021	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Dibenzofuran	0.017	U	0.017		0.0061	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Di-n-butyl phthalate	0.017	U	0.017		0.0073	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Di-n-octyl phthalate	0.017	U	0.017		0.0097	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Diethyl phthalate	0.017	U	0.017		0.0059	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	
Dimethyl phthalate	0.017	U	0.017		0.0066	mg/Kg	04/14/22 11:25	04/18/22 12:28		1	

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** MB 180-395442/1-A

**Client Sample ID:** Method Blank

**Matrix:** Sediment

**Prep Type:** Total/NA

**Analysis Batch:** 395774

**Prep Batch:** 395442

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
Fluoranthene	0.0034	U	0.0034		0.0034	0.00088	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
Fluorene	0.0034	U	0.0034		0.0034	0.00066	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
Hexachlorobenzene	0.0034	U	0.0034		0.0034	0.0012	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
Hexachlorobutadiene	0.0034	U	0.0034		0.0034	0.00098	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
Hexachlorocyclopentadiene	0.017	U	0.017		0.0017	0.0017	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
Hexachloroethane	0.017	U	0.017		0.0059	0.0059	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
Indeno[1,2,3-cd]pyrene	0.0034	U	0.0034		0.0017	0.0017	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
Isophorone	0.017	U	0.017		0.0062	0.0062	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
Naphthalene	0.0034	U	0.0034		0.00065	0.00065	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
Nitrobenzene	0.033	U	0.033		0.0061	0.0061	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
N-Nitrosodimethylamine	0.017	U	0.017		0.0063	0.0063	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
N-Nitrosodiphenylamine	0.017	U	0.017		0.0056	0.0056	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
N-Nitrosodi-n-propylamine	0.0034	U	0.0034		0.0011	0.0011	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
Pentachlorophenol	0.085	U	0.085		0.027	0.027	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
Phenanthrrene	0.0034	U	0.0034		0.00090	0.00090	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
Phenol	0.017	U	0.017		0.0051	0.0051	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
Pyrene	0.0034	U	0.0034		0.00079	0.00079	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
Pyridine	0.034	U	0.034		0.0090	0.0090	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
Benzyl alcohol	0.017	U	0.017		0.0011	0.0011	mg/Kg		04/14/22 11:25	04/18/22 12:28	1
3,3'-Dichlorobenzidine	0.017	U	0.017		0.016	0.016	mg/Kg		04/14/22 11:25	04/18/22 12:28	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
2-Fluorobiphenyl (Surr)	65		35 - 105			04/14/22 11:25	04/18/22 12:28	1
2-Fluorophenol (Surr)	73		32 - 105			04/14/22 11:25	04/18/22 12:28	1
2,4,6-Tribromophenol (Surr)	61		20 - 119			04/14/22 11:25	04/18/22 12:28	1
Nitrobenzene-d5 (Surr)	78		34 - 109			04/14/22 11:25	04/18/22 12:28	1
Phenol-d5 (Surr)	71		34 - 105			04/14/22 11:25	04/18/22 12:28	1
Terphenyl-d14 (Surr)	69		20 - 117			04/14/22 11:25	04/18/22 12:28	1

**Lab Sample ID:** LCS 180-395442/2-A

**Client Sample ID:** Lab Control Sample

**Matrix:** Sediment

**Prep Type:** Total/NA

**Analysis Batch:** 395774

**Prep Batch:** 395442

Analyte	Spike Added	MB	LCS	LCS	Result	Qualifier	Unit	D	%Rec	Limits	%Rec
		Result	Qualifier								
1,1'-Biphenyl	0.333	0.209			0.209		mg/Kg		63	43 - 100	
1,2-Dichlorobenzene	0.333	0.211			0.211		mg/Kg		63	41 - 100	
1,2,4,5-Tetrachlorobenzene	333	207			207		ug/Kg		62	40 - 103	
1,3-Dichlorobenzene	0.333	0.211			0.211		mg/Kg		63	41 - 100	
1,4-Dichlorobenzene	0.333	0.210			0.210		mg/Kg		63	41 - 100	
1,4-Dioxane	0.333	0.234			0.234		mg/Kg		70	10 - 133	
1,2-Diphenylhydrazine(as Azobenzene)	0.333	0.247			0.247		mg/Kg		74	39 - 111	
1,2,4-Trichlorobenzene	0.333	0.212			0.212		mg/Kg		64	44 - 100	
2-Chloronaphthalene	0.333	0.210			0.210		mg/Kg		63	47 - 100	
2-Chlorophenol	0.333	0.223			0.223		mg/Kg		67	43 - 100	
2,3,4,6-Tetrachlorophenol	333	220			220		ug/Kg		66	43 - 107	
2,4-Dichlorophenol	0.333	0.228			0.228		mg/Kg		68	48 - 101	
2,4-Dimethylphenol	0.333	0.238			0.238		mg/Kg		71	46 - 103	
2,4-Dinitrophenol	0.667	0.457			0.457		mg/Kg		69	31 - 112	

Eurofins Environment Testing Philadelphia, LLC

# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 180-395442/2-A**

**Matrix: Sediment**

**Analysis Batch: 395774**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 395442**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				Limits
2,4-Dinitrotoluene	0.333	0.243		mg/Kg	73	48 - 106	
2,6-Dinitrotoluene	0.333	0.233		mg/Kg	70	48 - 109	
2-Methylnaphthalene	0.333	0.218		mg/Kg	65	44 - 100	
2-Methylphenol	0.333	0.235		mg/Kg	70	43 - 101	
Methylphenol, 3 & 4	0.333	0.232		mg/Kg	70	43 - 104	
2-Nitroaniline	0.333	0.284		mg/Kg	85	40 - 122	
3-Nitroaniline	0.333	0.230		mg/Kg	69	39 - 107	
4-Nitroaniline	0.333	0.235		mg/Kg	70	41 - 110	
2-Nitrophenol	0.333	0.245		mg/Kg	74	48 - 108	
4-Nitrophenol	0.667	0.505		mg/Kg	76	33 - 131	
2,2'-oxybis[1-chloropropane]	0.333	0.187		mg/Kg	56	33 - 101	
2,4,5-Trichlorophenol	0.333	0.221		mg/Kg	66	47 - 108	
2,4,6-Trichlorophenol	0.333	0.238		mg/Kg	71	47 - 108	
4-Chloro-3-methylphenol	0.333	0.254		mg/Kg	76	47 - 108	
4-Chlorophenyl phenyl ether	0.333	0.211		mg/Kg	63	45 - 100	
4,6-Dinitro-2-methylphenol	0.667	0.455		mg/Kg	68	47 - 104	
Cresols, Total	0.667	0.467		mg/Kg	70	43 - 102	
Acenaphthene	0.333	0.216		mg/Kg	65	41 - 100	
Acenaphthylene	0.333	0.227		mg/Kg	68	45 - 100	
Acetophenone	0.333	0.235		mg/Kg	71	40 - 100	
Aniline	0.333	0.229		mg/Kg	69	36 - 100	
Anthracene	0.333	0.217		mg/Kg	65	47 - 100	
Atrazine	0.333	0.233		mg/Kg	70	46 - 102	
Benzaldehyde	0.333	0.214		mg/Kg	64	10 - 125	
Benzidine	0.333	0.34 U		mg/Kg	22	10 - 100	
Benzo[a]anthracene	0.333	0.229		mg/Kg	69	47 - 100	
Benzo[b]fluoranthene	0.333	0.214		mg/Kg	64	44 - 100	
Benzo[k]fluoranthene	0.333	0.183		mg/Kg	55	43 - 100	
Benzoic acid	0.333	0.270		mg/Kg	81	22 - 123	
Benzo[g,h,i]perylene	0.333	0.206		mg/Kg	62	45 - 103	
Benzo[a]pyrene	0.333	0.206		mg/Kg	62	45 - 101	
Bis(2-chloroethoxy)methane	0.333	0.220		mg/Kg	66	45 - 100	
Bis(2-chloroethyl)ether	0.333	0.228		mg/Kg	69	39 - 101	
Bis(2-ethylhexyl) phthalate	0.333	0.247		mg/Kg	74	45 - 109	
4-Bromophenyl phenyl ether	0.333	0.214		mg/Kg	64	17 - 104	
Butyl benzyl phthalate	0.333	0.252		mg/Kg	76	45 - 110	
Caprolactam	0.333	0.263		mg/Kg	79	46 - 109	
Carbazole	0.333	0.219		mg/Kg	66	46 - 100	
4-Chloroaniline	0.333	0.217		mg/Kg	65	38 - 100	
Chrysene	0.333	0.194		mg/Kg	58	44 - 100	
Dibenz(a,h)anthracene	0.333	0.219		mg/Kg	66	46 - 107	
Dibenzofuran	0.333	0.212		mg/Kg	64	47 - 100	
Di-n-butyl phthalate	0.333	0.232		mg/Kg	70	50 - 105	
Di-n-octyl phthalate	0.333	0.240		mg/Kg	72	34 - 106	
Diethyl phthalate	0.333	0.218		mg/Kg	65	45 - 105	
Dimethyl phthalate	0.333	0.215		mg/Kg	64	46 - 101	
Fluoranthene	0.333	0.228		mg/Kg	68	49 - 102	
Fluorene	0.333	0.216		mg/Kg	65	46 - 100	
Hexachlorobenzene	0.333	0.192		mg/Kg	58	45 - 101	

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8270E LL - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCS 180-395442/2-A

**Client Sample ID:** Lab Control Sample

**Matrix:** Sediment

**Prep Type:** Total/NA

**Analysis Batch:** 395774

**Prep Batch:** 395442

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Hexachlorobutadiene	0.333	0.213		mg/Kg	64	38 - 110	
Hexachlorocyclopentadiene	0.333	0.238		mg/Kg	71	31 - 116	
Hexachloroethane	0.333	0.238		mg/Kg	72	40 - 100	
Indeno[1,2,3-cd]pyrene	0.333	0.214		mg/Kg	64	48 - 104	
Isophorone	0.333	0.248		mg/Kg	75	46 - 105	
Naphthalene	0.333	0.211		mg/Kg	63	43 - 100	
Nitrobenzene	0.333	0.252		mg/Kg	75	43 - 107	
N-Nitrosodimethylamine	0.333	0.253		mg/Kg	76	29 - 121	
N-Nitrosodiphenylamine	0.333	0.217		mg/Kg	65	46 - 100	
N-Nitrosodi-n-propylamine	0.333	0.257		mg/Kg	77	40 - 109	
Pentachlorophenol	0.667	0.429		mg/Kg	64	34 - 112	
Phenanthrene	0.333	0.213		mg/Kg	64	46 - 100	
Phenol	0.333	0.235		mg/Kg	71	42 - 103	
Pyrene	0.333	0.220		mg/Kg	66	44 - 102	
Pyridine	0.667	0.466		mg/Kg	70	25 - 109	
Benzyl alcohol	0.333	0.250		mg/Kg	75	40 - 104	
3,3'-Dichlorobenzidine	0.333	0.204		mg/Kg	61	34 - 101	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	65		35 - 105
2-Fluorophenol (Surr)	74		32 - 105
2,4,6-Tribromophenol (Surr)	63		20 - 119
Nitrobenzene-d5 (Surr)	80		34 - 109
Phenol-d5 (Surr)	74		34 - 105
Terphenyl-d14 (Surr)	65		20 - 117

## Method: EPA 8081B LL - Organochlorine Pesticides (GC)

**Lab Sample ID:** MB 180-394406/1-A

**Client Sample ID:** Method Blank

**Matrix:** Water

**Prep Type:** Total/NA

**Analysis Batch:** 395076

**Prep Batch:** 394406

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin (1C)	0.0000013	U	0.0000013	0.0000003	mg/L	6	04/06/22 08:30	04/12/22 17:56	1
alpha-BHC (1C)	0.0000013	U	0.0000013	0.0000002	mg/L	4	04/06/22 08:30	04/12/22 17:56	1
beta-BHC (1C)	0.0000013	U	0.0000013	0.0000003	mg/L	7	04/06/22 08:30	04/12/22 17:56	1
delta-BHC (1C)	0.0000013	U	0.0000013	0.0000006	mg/L	4	04/06/22 08:30	04/12/22 17:56	1
gamma-BHC (Lindane) (1C)	0.0000013	U	0.0000013	0.0000002	mg/L	9	04/06/22 08:30	04/12/22 17:56	1
cis-Chlordane (1C)	0.0000013	U	0.0000013	0.0000003	mg/L	7	04/06/22 08:30	04/12/22 17:56	1
trans-Chlordane (1C)	0.0000013	U	0.0000013	0.0000004	mg/L	1	04/06/22 08:30	04/12/22 17:56	1
Chlordane (technical) (2C)	0.000013	U	0.000013	0.0000073	mg/L		04/06/22 08:30	04/12/22 17:56	1
4,4'-DDD (1C)	0.0000013	U	0.0000013	0.0000005	mg/L	3	04/06/22 08:30	04/12/22 17:56	1

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8081B LL - Organochlorine Pesticides (GC) (Continued)

**Lab Sample ID: MB 180-394406/1-A**

**Client Sample ID: Method Blank**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 395076**

**Prep Batch: 394406**

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
4,4'-DDE (1C)	0.0000013	U	0.0000013		0.0000003	0	mg/L		04/06/22 08:30	04/12/22 17:56	1
4,4'-DDT (1C)	0.0000013	U	0.0000013		0.0000006	9	mg/L		04/06/22 08:30	04/12/22 17:56	1
Dieldrin (1C)	0.0000013	U	0.0000013		0.0000002	7	mg/L		04/06/22 08:30	04/12/22 17:56	1
Endosulfan I (1C)	0.0000013	U	0.0000013		0.0000006	9	mg/L		04/06/22 08:30	04/12/22 17:56	1
Endosulfan II (1C)	0.0000013	U	0.0000013		0.0000003	2	mg/L		04/06/22 08:30	04/12/22 17:56	1
Endosulfan sulfate (1C)	0.0000013	U	0.0000013		0.0000006	4	mg/L		04/06/22 08:30	04/12/22 17:56	1
Endrin (1C)	0.0000013	U	0.0000013		0.0000002	3	mg/L		04/06/22 08:30	04/12/22 17:56	1
Endrin aldehyde (1C)	0.0000013	U	0.0000013		0.0000005	2	mg/L		04/06/22 08:30	04/12/22 17:56	1
Endrin ketone (1C)	0.0000013	U	0.0000013		0.0000004	0	mg/L		04/06/22 08:30	04/12/22 17:56	1
Heptachlor (1C)	0.0000013	U	0.0000013		0.0000004	5	mg/L		04/06/22 08:30	04/12/22 17:56	1
Heptachlor epoxide (1C)	0.0000013	U	0.0000013		0.0000003	4	mg/L		04/06/22 08:30	04/12/22 17:56	1
Methoxychlor (1C)	0.0000013	U	0.0000013		0.0000007	8	mg/L		04/06/22 08:30	04/12/22 17:56	1
Mirex (1C)	0.0000013	U	0.0000013		0.0000004	7	mg/L		04/06/22 08:30	04/12/22 17:56	1
Toxaphene (1C)	0.000010	U	0.000010		0.000049		mg/L		04/06/22 08:30	04/12/22 17:56	1
Endosulfan, Total (1C)	0.0000026	U	0.0000026		0.0000010		mg/L		04/06/22 08:30	04/12/22 17:56	1
Surrogate	MB	MB	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
	Result	Qualifier			39 - 119						
Tetrachloro-m-xylene (Surr) (1C)	84							04/06/22 08:30	04/12/22 17:56	1	
Tetrachloro-m-xylene (Surr) (2C)	98				39 - 119			04/06/22 08:30	04/12/22 17:56	1	
DCB Decachlorobiphenyl (Surr) (1C)	89				46 - 114			04/06/22 08:30	04/12/22 17:56	1	
DCB Decachlorobiphenyl (Surr) (2C)	105				46 - 114			04/06/22 08:30	04/12/22 17:56	1	

**Lab Sample ID: LCS 180-394406/2-A**

**Client Sample ID: Lab Control Sample**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 395076**

**Prep Batch: 394406**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits
	Added	Result	Qualifier					
Aldrin (1C)	0.0000250	0.0000247		mg/L		99	54 - 119	
alpha-BHC (1C)	0.0000250	0.0000248		mg/L		99	58 - 116	
beta-BHC (1C)	0.0000250	0.0000244		mg/L		98	54 - 111	
delta-BHC (1C)	0.0000250	0.0000249		mg/L		100	47 - 118	
gamma-BHC (Lindane) (1C)	0.0000250	0.0000242		mg/L		97	57 - 116	
cis-Chlordane (1C)	0.0000250	0.0000230		mg/L		92	50 - 117	
trans-Chlordane (1C)	0.0000250	0.0000230		mg/L		92	43 - 115	
4,4'-DDD (1C)	0.0000250	0.0000276		mg/L		110	57 - 116	
4,4'-DDE (1C)	0.0000250	0.0000268		mg/L		107	55 - 111	
4,4'-DDT (1C)	0.0000250	0.0000240		mg/L		96	45 - 107	
Dieldrin (1C)	0.0000250	0.0000274		mg/L		109	57 - 111	
Endosulfan I (1C)	0.0000250	0.0000235		mg/L		94	50 - 121	

Eurofins Environment Testing Philadelphia, LLC

# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8081B LL - Organochlorine Pesticides (GC) (Continued)

**Lab Sample ID: LCS 180-394406/2-A**

**Matrix: Water**

**Analysis Batch: 395076**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 394406**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				Limits
Endosulfan II (1C)	0.0000250	0.0000270		mg/L	108	54 - 116	
Endosulfan sulfate (1C)	0.0000250	0.0000277		mg/L	111	48 - 119	
Endrin (1C)	0.0000250	0.0000261		mg/L	105	58 - 110	
Endrin aldehyde (1C)	0.0000250	0.0000306	*+	mg/L	122	43 - 117	
Endrin ketone (1C)	0.0000250	0.0000295	*+	mg/L	118	60 - 114	
Heptachlor (1C)	0.0000250	0.0000257		mg/L	103	56 - 120	
Heptachlor epoxide (1C)	0.0000250	0.0000243		mg/L	97	53 - 118	
Methoxychlor (1C)	0.0000250	0.0000267		mg/L	107	46 - 114	

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene (Surr) (1C)	80		39 - 119
Tetrachloro-m-xylene (Surr) (2C)	93		39 - 119
DCB Decachlorobiphenyl (Surr) (1C)	82		46 - 114
DCB Decachlorobiphenyl (Surr) (2C)	98		46 - 114

**Lab Sample ID: LCSD 180-394406/3-A**

**Matrix: Water**

**Analysis Batch: 395076**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 394406**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD
	Added	Result	Qualifier				Limits	
Aldrin (1C)	0.0000250	0.0000248		mg/L	99	54 - 119	1	24
alpha-BHC (1C)	0.0000250	0.0000260		mg/L	104	58 - 116	5	17
beta-BHC (1C)	0.0000250	0.0000249		mg/L	100	54 - 111	2	18
delta-BHC (1C)	0.0000250	0.0000254		mg/L	102	47 - 118	2	18
gamma-BHC (Lindane) (1C)	0.0000250	0.0000247		mg/L	99	57 - 116	2	19
cis-Chlordane (1C)	0.0000250	0.0000235		mg/L	94	50 - 117	2	18
trans-Chlordane (1C)	0.0000250	0.0000239		mg/L	96	43 - 115	4	17
4,4'-DDD (1C)	0.0000250	0.0000269		mg/L	108	57 - 116	3	18
4,4'-DDE (1C)	0.0000250	0.0000264		mg/L	106	55 - 111	2	20
4,4'-DDT (1C)	0.0000250	0.0000249		mg/L	100	45 - 107	4	20
Dieldrin (1C)	0.0000250	0.0000275		mg/L	110	57 - 111	1	21
Endosulfan I (1C)	0.0000250	0.0000244		mg/L	97	50 - 121	3	17
Endosulfan II (1C)	0.0000250	0.0000274		mg/L	110	54 - 116	1	17
Endosulfan sulfate (1C)	0.0000250	0.0000288		mg/L	115	48 - 119	4	18
Endrin (1C)	0.0000250	0.0000268		mg/L	107	58 - 110	3	19
Endrin aldehyde (1C)	0.0000250	0.0000316	*+	mg/L	126	43 - 117	3	23
Endrin ketone (1C)	0.0000250	0.0000302	*+	mg/L	121	60 - 114	3	17
Heptachlor (1C)	0.0000250	0.0000267		mg/L	107	56 - 120	4	18
Heptachlor epoxide (1C)	0.0000250	0.0000244		mg/L	97	53 - 118	0	20
Methoxychlor (1C)	0.0000250	0.0000272		mg/L	109	46 - 114	2	20

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene (Surr) (1C)	82		39 - 119

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8081B LL - Organochlorine Pesticides (GC) (Continued)

**Lab Sample ID:** LCSD 180-394406/3-A

**Client Sample ID:** Lab Control Sample Dup

**Matrix:** Water

**Prep Type:** Total/NA

**Analysis Batch:** 395076

**Prep Batch:** 394406

Surrogate	LCSD	LCSD	
	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene (Surr)	96		39 - 119
(2C)			
DCB Decachlorobiphenyl (Surr)	85		46 - 114
(1C)			
DCB Decachlorobiphenyl (Surr)	100		46 - 114
(2C)			

**Lab Sample ID:** MB 180-395001/1-B

**Client Sample ID:** Method Blank

**Matrix:** Sediment

**Prep Type:** Total/NA

**Analysis Batch:** 397096

**Prep Batch:** 395001

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aldrin (2C)	0.000042	U	0.000042	0.000013	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
alpha-BHC (2C)	0.000042	U	0.000042	0.000010	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
beta-BHC (2C)	0.000042	U	0.000042	0.000011	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
delta-BHC (2C)	0.000042	U	0.000042	0.000013	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
gamma-BHC (Lindane) (2C)	0.000042	U	0.000042	0.000011	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
cis-Chlordane (2C)	0.000042	U	0.000042	0.000010	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
trans-Chlordane (2C)	0.000042	U	0.000042	0.0000097	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
Chlordane (technical) (2C)	0.000042	U	0.000042	0.000018	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
4,4'-DDD (2C)	0.000042	U	0.000042	0.0000088	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
4,4'-DDE (2C)	0.000042	U	0.000042	0.0000085	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
4,4'-DDT (2C)	0.000042	U	0.000042	0.000030	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
Dieldrin (2C)	0.000042	U	0.000042	0.000010	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
Endosulfan I (2C)	0.000042	U	0.000042	0.000011	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
Endosulfan II (2C)	0.000042	U	0.000042	0.0000092	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
Endosulfan sulfate (2C)	0.000042	U	0.000042	0.000019	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
Endrin (2C)	0.000042	U	0.000042	0.0000078	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
Endrin aldehyde (2C)	0.000042	U	0.000042	0.000015	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
Endrin ketone (2C)	0.000042	U	0.000042	0.0000058	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
Heptachlor (2C)	0.000042	U	0.000042	0.000013	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
Heptachlor epoxide (2C)	0.000042	U	0.000042	0.000011	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
Methoxychlor (2C)	0.000042	U	0.000042	0.000016	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
Mirex (2C)	0.000042	U	0.000042	0.0000078	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
Toxaphene (2C)	0.0017	U	0.0017	0.0011	mg/Kg	04/11/22 16:41	04/29/22 18:25		1
Endosulfan, Total (2C)	0.083	U	0.083	0.021	ug/Kg	04/11/22 16:41	04/29/22 18:25		1

Surrogate	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Tetrachloro-m-xylene (Surr) (1C)	56		10 - 105				04/11/22 16:41	04/29/22 18:25	1
Tetrachloro-m-xylene (Surr) (2C)	51		10 - 105				04/11/22 16:41	04/29/22 18:25	1
DCB Decachlorobiphenyl (Surr) (1C)	77		25 - 107				04/11/22 16:41	04/29/22 18:25	1
DCB Decachlorobiphenyl (Surr) (2C)	62		25 - 107				04/11/22 16:41	04/29/22 18:25	1

Analyte	Spike	LCS	LCS	%Rec		
	Added	Result	Qualifier	Unit	D	%Rec
Aldrin (2C)	0.00167	0.000900		mg/Kg	54	25 - 139

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8081B LL - Organochlorine Pesticides (GC) (Continued)

**Lab Sample ID:** LCS 180-395001/2-B

**Matrix:** Sediment

**Analysis Batch:** 397096

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 395001

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				Limits
alpha-BHC (2C)	0.00167	0.000913		mg/Kg		55	30 - 131
beta-BHC (2C)	0.00167	0.00102		mg/Kg		61	26 - 128
delta-BHC (2C)	0.00167	0.000992		mg/Kg		60	20 - 133
gamma-BHC (Lindane) (2C)	0.00167	0.000997		mg/Kg		60	31 - 134
cis-Chlordane (2C)	0.00167	0.000956		mg/Kg		57	25 - 137
trans-Chlordane (2C)	0.00167	0.00101		mg/Kg		60	31 - 131
4,4'-DDD (2C)	0.00167	0.00116		mg/Kg		70	32 - 135
4,4'-DDE (2C)	0.00167	0.000985		mg/Kg		59	28 - 128
4,4'-DDT (2C)	0.00167	0.00122		mg/Kg		73	28 - 121
Dieldrin (2C)	0.00167	0.00105		mg/Kg		63	39 - 124
Endosulfan I (2C)	0.00167	0.000996		mg/Kg		60	24 - 141
Endosulfan II (2C)	0.00167	0.00112		mg/Kg		67	38 - 125
Endosulfan sulfate (2C)	0.00167	0.00117		mg/Kg		70	23 - 130
Endrin (2C)	0.00167	0.00114		mg/Kg		68	32 - 131
Endrin aldehyde (2C)	0.00167	0.00102		mg/Kg		61	27 - 124
Endrin ketone (2C)	0.00167	0.00127		mg/Kg		76	46 - 128
Heptachlor (2C)	0.00167	0.00110		mg/Kg		66	24 - 146
Heptachlor epoxide (2C)	0.00167	0.00101		mg/Kg		60	25 - 142
Methoxychlor (2C)	0.00167	0.00122		mg/Kg		73	31 - 136

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene (Surr) (1C)	56		10 - 105
Tetrachloro-m-xylene (Surr) (2C)	51		10 - 105
DCB Decachlorobiphenyl (Surr) (1C)	78		25 - 107
DCB Decachlorobiphenyl (Surr) (2C)	68		25 - 107

## Method: EPA 8082A - Polychlorinated Biphenyls (PCBs) (GC)

**Lab Sample ID:** MB 180-394406/1-A

**Client Sample ID:** Method Blank

**Matrix:** Water

**Prep Type:** Total/NA

**Analysis Batch:** 394492

**Prep Batch:** 394406

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
PCB-1016 (1C)	0.000010	U	0.000010	0.0000048	mg/L		04/06/22 08:30	04/07/22 10:10	1
PCB-1221 (1C)	0.000010	U	0.000010	0.0000057	mg/L		04/06/22 08:30	04/07/22 10:10	1
PCB-1232 (1C)	0.000010	U	0.000010	0.0000052	mg/L		04/06/22 08:30	04/07/22 10:10	1
PCB-1242 (1C)	0.000010	U	0.000010	0.0000036	mg/L		04/06/22 08:30	04/07/22 10:10	1
PCB-1248 (1C)	0.000010	U	0.000010	0.0000080	mg/L		04/06/22 08:30	04/07/22 10:10	1
PCB-1254 (1C)	0.000010	U	0.000010	0.0000046	mg/L		04/06/22 08:30	04/07/22 10:10	1
PCB-1260 (1C)	0.000010	U	0.000010	0.0000039	mg/L		04/06/22 08:30	04/07/22 10:10	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl (Surr) (1C)	87		48 - 129	04/06/22 08:30	04/07/22 10:10	1
DCB Decachlorobiphenyl (Surr) (2C)	86		48 - 129	04/06/22 08:30	04/07/22 10:10	1
Tetrachloro-m-xylene (Surr) (1C)	82		36 - 117	04/06/22 08:30	04/07/22 10:10	1

Eurofins Environment Testing Philadelphia, LLC

# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8082A - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

**Lab Sample ID:** MB 180-394406/1-A

**Client Sample ID:** Method Blank

**Matrix:** Water

**Prep Type:** Total/NA

**Analysis Batch:** 394492

**Prep Batch:** 394406

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr) (2C)			77		36 - 117	04/06/22 08:30	04/07/22 10:10	1

**Lab Sample ID:** LCS 180-394406/4-A

**Client Sample ID:** Lab Control Sample

**Matrix:** Water

**Prep Type:** Total/NA

**Analysis Batch:** 394492

**Prep Batch:** 394406

Analyte	LCS	LCS	Spike	Result	Qualifier	Unit	D	%Rec	%Rec
Surrogate	%Recovery	Qualifier	Added					Limits	Limits
PCB-1016 (1C)			0.00100	0.00101		mg/L		101	36 - 113
PCB-1260 (1C)			0.00100	0.00103		mg/L		103	33 - 116

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl (Surr) (1C)	82				48 - 129
DCB Decachlorobiphenyl (Surr) (2C)	89				48 - 129
Tetrachloro-m-xylene (Surr) (1C)	87				36 - 117
Tetrachloro-m-xylene (Surr) (2C)	81				36 - 117

**Lab Sample ID:** LCSD 180-394406/5-A

**Client Sample ID:** Lab Control Sample Dup

**Matrix:** Water

**Prep Type:** Total/NA

**Analysis Batch:** 394492

**Prep Batch:** 394406

Analyte	LCSD	LCSD	Spike	Result	LCSD	LCSD	%Rec		RPD			
Surrogate	%Recovery	Qualifier	Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
PCB-1016 (1C)			0.00100	0.000975			mg/L		97	36 - 113	3	35
PCB-1260 (1C)			0.00100	0.000963			mg/L		96	33 - 116	6	35

Surrogate	LCSD	LCSD	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl (Surr) (1C)	85				48 - 129
DCB Decachlorobiphenyl (Surr) (2C)	85				48 - 129
Tetrachloro-m-xylene (Surr) (1C)	84				36 - 117
Tetrachloro-m-xylene (Surr) (2C)	78				36 - 117

**Lab Sample ID:** MB 180-395005/1-C

**Client Sample ID:** Method Blank

**Matrix:** Sediment

**Prep Type:** Total/NA

**Analysis Batch:** 395666

**Prep Batch:** 395005

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016 (1C)			0.00042	U	0.00042	0.00014	mg/Kg		04/11/22 17:17	04/16/22 08:26	1
PCB-1221 (1C)			0.00042	U	0.00042	0.00015	mg/Kg		04/11/22 17:17	04/16/22 08:26	1
PCB-1232 (1C)			0.00042	U	0.00042	0.00010	mg/Kg		04/11/22 17:17	04/16/22 08:26	1
PCB-1242 (1C)			0.00042	U	0.00042	0.000061	mg/Kg		04/11/22 17:17	04/16/22 08:26	1
PCB-1248 (1C)			0.00042	U	0.00042	0.00010	mg/Kg		04/11/22 17:17	04/16/22 08:26	1
PCB-1254 (1C)			0.00042	U	0.00042	0.00013	mg/Kg		04/11/22 17:17	04/16/22 08:26	1
PCB-1260 (1C)			0.00042	U	0.00042	0.00012	mg/Kg		04/11/22 17:17	04/16/22 08:26	1

Eurofins Environment Testing Philadelphia, LLC

# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 8082A - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
DCB Decachlorobiphenyl (Surr) (1C)	99		26 - 170			04/11/22 17:17	04/16/22 08:26	1
DCB Decachlorobiphenyl (Surr) (2C)	99		26 - 170			04/11/22 17:17	04/16/22 08:26	1
Tetrachloro-m-xylene (Surr) (1C)	90		33 - 126			04/11/22 17:17	04/16/22 08:26	1
Tetrachloro-m-xylene (Surr) (2C)	88		33 - 126			04/11/22 17:17	04/16/22 08:26	1

Lab Sample ID: LCS 180-395005/2-C

Matrix: Sediment

Analysis Batch: 395666

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 395005

Analyte	Spike		LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier					
PCB-1016 (1C)	0.0333	0.0290			mg/Kg	87	32 - 126	
PCB-1260 (1C)	0.0333	0.0343			mg/Kg	103	40 - 121	

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
	Added	Result			
DCB Decachlorobiphenyl (Surr) (1C)	90	26 - 170			
DCB Decachlorobiphenyl (Surr) (2C)	91	26 - 170			
Tetrachloro-m-xylene (Surr) (1C)	85	33 - 126			
Tetrachloro-m-xylene (Surr) (2C)	82	33 - 126			

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

Lab Sample ID: MB 180-396208/1-A

Client Sample ID: Method Blank

Matrix: Sediment

Prep Type: Total/NA

Analysis Batch: 396420

Prep Batch: 396208

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier									
Aluminum	3.0	U	3.0		3.0	2.1	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Arsenic	0.050	U	0.050		0.050	0.029	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Barium	0.50	U	0.50		0.50	0.31	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Antimony	0.10	U	0.10		0.10	0.053	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Beryllium	0.050	U	0.050		0.050	0.036	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Cadmium	0.050	U	0.050		0.050	0.028	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Calcium	25	U	25		25	10	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Chromium	0.10	U	0.10		0.10	0.089	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Cobalt	0.025	U	0.025		0.025	0.018	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Copper	0.15	U	0.15		0.15	0.10	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Magnesium	25	U	25		25	2.3	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Manganese	0.25	U	0.25		0.25	0.22	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Iron	2.5	U	2.5		2.5	2.4	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Lead	0.050	U	0.050		0.050	0.033	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Potassium	25	U	25		25	7.3	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Nickel	0.050	U	0.050		0.050	0.047	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Selenium	0.25	U	0.25		0.25	0.061	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Sodium	25	U	25		25	13	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Silver	0.050	U	0.050		0.050	0.014	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Thallium	0.050	U	0.050		0.050	0.035	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Vanadium	0.050	U	0.050		0.050	0.047	mg/Kg	04/21/22 11:10	04/22/22 10:19		1
Zinc	0.25	U	0.25		0.25	0.24	mg/Kg	04/21/22 11:10	04/22/22 10:19		1

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

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

**Lab Sample ID: LCS 180-396208/2-A**

**Matrix: Sediment**

**Analysis Batch: 396420**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 396208**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec
						Limits	
Aluminum	250	233		mg/Kg		93	80 - 120
Arsenic	50.0	42.0		mg/Kg		84	80 - 120
Barium	50.0	46.0		mg/Kg		92	80 - 120
Antimony	12.5	11.5		mg/Kg		92	80 - 120
Beryllium	25.0	22.4		mg/Kg		90	80 - 120
Cadmium	25.0	22.9		mg/Kg		91	80 - 120
Calcium	1250	1260		mg/Kg		101	80 - 120
Chromium	25.0	23.3		mg/Kg		93	80 - 120
Cobalt	25.0	21.4		mg/Kg		86	80 - 120
Copper	25.0	20.7		mg/Kg		83	80 - 120
Magnesium	1250	1190		mg/Kg		95	80 - 120
Manganese	25.0	20.7		mg/Kg		83	80 - 120
Iron	250	256		mg/Kg		102	80 - 120
Lead	25.0	23.2		mg/Kg		93	80 - 120
Potassium	1250	1130		mg/Kg		91	80 - 120
Nickel	25.0	21.5		mg/Kg		86	80 - 120
Selenium	50.0	47.5		mg/Kg		95	80 - 120
Sodium	1250	1220		mg/Kg		97	80 - 120
Silver	12.5	11.4		mg/Kg		91	80 - 120
Thallium	50.0	46.6		mg/Kg		93	80 - 120
Vanadium	25.0	23.1		mg/Kg		93	80 - 120
Zinc	12.5	10.7		mg/Kg		86	80 - 120

**Lab Sample ID: 630-30382-13 MS**

**Matrix: Sediment**

**Analysis Batch: 396420**

**Client Sample ID: SC-4 COMPOSITE (C7+C8)**

**Prep Type: Total/NA**

**Prep Batch: 396208**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec
								Limits	
Aluminum	12000	^2	564	15400	4	mg/Kg	⊗	523	75 - 125
Arsenic	9.6	F1	113	90.3	F1	mg/Kg	⊗	72	75 - 125
Barium	150		113	249		mg/Kg	⊗	84	75 - 125
Antimony	0.84	F1	28.2	13.2	F1	mg/Kg	⊗	44	75 - 125
Beryllium	1.1	F1	56.4	37.2	F1	mg/Kg	⊗	64	75 - 125
Cadmium	2.1	F1	56.4	44.1	F1	mg/Kg	⊗	74	75 - 125
Calcium	3300	F1	2820	5310	F1	mg/Kg	⊗	70	75 - 125
Chromium	40	F1	56.4	79.3	F1	mg/Kg	⊗	70	75 - 125
Cobalt	15	F1	56.4	55.8	F1	mg/Kg	⊗	73	75 - 125
Copper	51	F1	56.4	91.7	F1	mg/Kg	⊗	72	75 - 125
Magnesium	3700	F1	2820	5780	F1	mg/Kg	⊗	74	75 - 125
Manganese	1200		56.4	1210	4	mg/Kg	⊗	-8	75 - 125
Iron	27000		564	27900	4	mg/Kg	⊗	158	75 - 125
Lead	80	F1	56.4	121	F1	mg/Kg	⊗	73	75 - 125
Potassium	1400	F1	2820	3490		mg/Kg	⊗	75	75 - 125
Nickel	25	F1	56.4	67.2	F1	mg/Kg	⊗	74	75 - 125
Selenium	0.80	F1	113	75.9	F1	mg/Kg	⊗	67	75 - 125
Sodium	110	F1	2820	2060	F1	mg/Kg	⊗	69	75 - 125
Silver	0.83	F1	28.2	22.0		mg/Kg	⊗	75	75 - 125
Thallium	0.17		113	84.7		mg/Kg	⊗	75	75 - 125
Vanadium	32	F1	56.4	70.3	F1	mg/Kg	⊗	69	75 - 125

Eurofins Environment Testing Philadelphia, LLC

# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

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

**Lab Sample ID: 630-30382-13 MS**

**Matrix: Sediment**

**Analysis Batch: 396420**

**Client Sample ID: SC-4 COMPOSITE (C7+C8)**

**Prep Type: Total/NA**

**Prep Batch: 396208**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
Zinc	350		28.2	375	4	mg/Kg	⊗	94	75 - 125

**Lab Sample ID: 630-30382-13 MSD**

**Matrix: Sediment**

**Analysis Batch: 396420**

**Client Sample ID: SC-4 COMPOSITE (C7+C8)**

**Prep Type: Total/NA**

**Prep Batch: 396208**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Aluminum	12000	^2	559	14600	4	mg/Kg	⊗	387	75 - 125	5	20
Arsenic	9.6	F1	112	89.6	F1	mg/Kg	⊗	72	75 - 125	1	20
Barium	150		112	238		mg/Kg	⊗	76	75 - 125	4	20
Antimony	0.84	F1	27.9	13.6	F1	mg/Kg	⊗	46	75 - 125	3	20
Beryllium	1.1	F1	55.9	36.7	F1	mg/Kg	⊗	64	75 - 125	1	20
Cadmium	2.1	F1	55.9	43.6	F1	mg/Kg	⊗	74	75 - 125	1	20
Calcium	3300	F1	2790	5110	F1	mg/Kg	⊗	63	75 - 125	4	20
Chromium	40	F1	55.9	74.7	F1	mg/Kg	⊗	63	75 - 125	6	20
Cobalt	15	F1	55.9	54.8	F1	mg/Kg	⊗	72	75 - 125	2	20
Copper	51	F1	55.9	85.6	F1	mg/Kg	⊗	62	75 - 125	7	20
Magnesium	3700	F1	2790	5640	F1	mg/Kg	⊗	70	75 - 125	2	20
Manganese	1200		55.9	1250	4	mg/Kg	⊗	54	75 - 125	3	20
Iron	27000		559	27200	4	mg/Kg	⊗	46	75 - 125	2	20
Lead	80	F1	55.9	113	F1	mg/Kg	⊗	58	75 - 125	8	20
Potassium	1400	F1	2790	3350	F1	mg/Kg	⊗	71	75 - 125	4	20
Nickel	25	F1	55.9	65.7	F1	mg/Kg	⊗	73	75 - 125	2	20
Selenium	0.80	F1	112	75.8	F1	mg/Kg	⊗	67	75 - 125	0	20
Sodium	110	F1	2790	2040	F1	mg/Kg	⊗	69	75 - 125	1	20
Silver	0.83	F1	27.9	21.6	F1	mg/Kg	⊗	74	75 - 125	2	20
Thallium	0.17		112	84.4		mg/Kg	⊗	75	75 - 125	0	20
Vanadium	32	F1	55.9	67.9	F1	mg/Kg	⊗	65	75 - 125	4	20
Zinc	350		27.9	339	4	mg/Kg	⊗	-35	75 - 125	10	20

**Lab Sample ID: MB 180-395804/1-A**

**Matrix: Water**

**Analysis Batch: 396754**

**Client Sample ID: Method Blank**

**Prep Type: Total Recoverable**

**Prep Batch: 395804**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	0.030	U	0.030	0.016	mg/L		04/19/22 09:30	04/26/22 12:25	1
Arsenic	0.0010	U	0.0010	0.00028	mg/L		04/19/22 09:30	04/26/22 12:25	1
Barium	0.010	U	0.010	0.0031	mg/L		04/19/22 09:30	04/26/22 12:25	1
Antimony	0.0020	U	0.0020	0.00051	mg/L		04/19/22 09:30	04/26/22 12:25	1
Beryllium	0.0010	U	0.0010	0.00027	mg/L		04/19/22 09:30	04/26/22 12:25	1
Cadmium	0.0010	U	0.0010	0.00022	mg/L		04/19/22 09:30	04/26/22 12:25	1
Calcium	0.50	U	0.50	0.13	mg/L		04/19/22 09:30	04/26/22 12:25	1
Chromium	0.0020	U	0.0020	0.0015	mg/L		04/19/22 09:30	04/26/22 12:25	1
Cobalt	0.00050	U	0.00050	0.00026	mg/L		04/19/22 09:30	04/26/22 12:25	1
Copper	0.0020	U	0.0020	0.0011	mg/L		04/19/22 09:30	04/26/22 12:25	1
Magnesium	0.50	U	0.50	0.050	mg/L		04/19/22 09:30	04/26/22 12:25	1
Manganese	0.0050	U	0.0050	0.0013	mg/L		04/19/22 09:30	04/26/22 12:25	1
Iron	0.050	U	0.050	0.028	mg/L		04/19/22 09:30	04/26/22 12:25	1
Lead	0.0010	U	0.0010	0.00017	mg/L		04/19/22 09:30	04/26/22 12:25	1

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# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

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

**Lab Sample ID: MB 180-395804/1-A**

**Matrix: Water**

**Analysis Batch: 396754**

**Client Sample ID: Method Blank**

**Prep Type: Total Recoverable**

**Prep Batch: 395804**

**MB MB**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	0.50	U	0.50	0.16	mg/L		04/19/22 09:30	04/26/22 12:25	1
Nickel	0.0010	U	0.0010	0.00052	mg/L		04/19/22 09:30	04/26/22 12:25	1
Selenium	0.0050	U	0.0050	0.00074	mg/L		04/19/22 09:30	04/26/22 12:25	1
Sodium	0.50	U	0.50	0.18	mg/L		04/19/22 09:30	04/26/22 12:25	1
Silver	0.0010	U	0.0010	0.00022	mg/L		04/19/22 09:30	04/26/22 12:25	1
Thallium	0.0010	U	0.0010	0.00047	mg/L		04/19/22 09:30	04/26/22 12:25	1
Vanadium	0.0010	U	0.0010	0.00078	mg/L		04/19/22 09:30	04/26/22 12:25	1
Zinc	0.0050	U	0.0050	0.0029	mg/L		04/19/22 09:30	04/26/22 12:25	1

**Lab Sample ID: LCS 180-395804/2-A**

**Matrix: Water**

**Analysis Batch: 396754**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 395804**

Analyte	Spike			LCS			D	%Rec	Limits
	Added	Result	Qualifier	Unit					
Aluminum	5.00	4.91		mg/L			98	80 - 120	
Arsenic	1.00	0.964		mg/L			96	80 - 120	
Barium	1.00	1.00		mg/L			100	80 - 120	
Antimony	0.250	0.242		mg/L			97	80 - 120	
Beryllium	0.500	0.482		mg/L			96	80 - 120	
Cadmium	0.500	0.510		mg/L			102	80 - 120	
Calcium	25.0	28.1		mg/L			112	80 - 120	
Chromium	0.500	0.485		mg/L			97	80 - 120	
Cobalt	0.500	0.492		mg/L			98	80 - 120	
Copper	0.500	0.477		mg/L			95	80 - 120	
Magnesium	25.0	25.3		mg/L			101	80 - 120	
Manganese	0.500	0.468		mg/L			94	80 - 120	
Iron	5.00	5.09		mg/L			102	80 - 120	
Lead	0.500	0.502		mg/L			100	80 - 120	
Potassium	25.0	25.2		mg/L			101	80 - 120	
Nickel	0.500	0.496		mg/L			99	80 - 120	
Selenium	1.00	0.965		mg/L			96	80 - 120	
Sodium	25.0	26.4		mg/L			105	80 - 120	
Silver	0.250	0.245		mg/L			98	80 - 120	
Thallium	1.00	0.999		mg/L			100	80 - 120	
Vanadium	0.500	0.495		mg/L			99	80 - 120	
Zinc	0.250	0.239		mg/L			95	80 - 120	

**Lab Sample ID: MB 180-397160/1-A**

**Matrix: Water**

**Analysis Batch: 397411**

**Client Sample ID: Method Blank**

**Prep Type: Total Recoverable**

**Prep Batch: 397160**

**MB MB**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.0020	U	0.0020	0.0015	mg/L		04/29/22 10:43	04/30/22 13:11	1
Nickel	0.0010	U	0.0010	0.00052	mg/L		04/29/22 10:43	04/30/22 13:11	1

# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

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

**Lab Sample ID:** LCS 180-397160/2-A

**Matrix:** Water

**Analysis Batch:** 397411

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total Recoverable

**Prep Batch:** 397160

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	0.500	0.505		mg/L		101	80 - 120
Nickel	0.500	0.495		mg/L		99	80 - 120

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

**Lab Sample ID:** MB 180-396384/1-A

**Matrix:** Water

**Analysis Batch:** 396470

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 396384

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.00013	mg/L		04/22/22 12:47	04/23/22 15:48	1

**Lab Sample ID:** LCS 180-396384/2-A

**Matrix:** Water

**Analysis Batch:** 396470

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 396384

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00250	0.00252		mg/L		101	80 - 120

## Method: EPA 7471B - Mercury (CVAA)

**Lab Sample ID:** MB 180-396756/1-A

**Matrix:** Sediment

**Analysis Batch:** 396873

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 396756

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.017	U	0.017	0.011	mg/Kg		04/27/22 06:39	04/27/22 11:17	1

**Lab Sample ID:** LCS 180-396756/2-A

**Matrix:** Sediment

**Analysis Batch:** 396873

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 396756

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.208	0.210		mg/Kg		101	80 - 120

**Lab Sample ID:** MB 180-397220/1-A

**Matrix:** Sediment

**Analysis Batch:** 397390

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 397220

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.017	U	0.017	0.011	mg/Kg		05/01/22 10:20	05/02/22 12:51	1

**Lab Sample ID:** LCS 180-397220/2-A

**Matrix:** Sediment

**Analysis Batch:** 397390

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 397220

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.208	0.241		mg/Kg		116	80 - 120

# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: 2540G - SM 2540G

**Lab Sample ID:** 630-30382-9 DU

**Client Sample ID:** D-9 DISCRETE

**Matrix:** Sediment

**Prep Type:** Total/NA

**Analysis Batch:** 394476

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD Limit
	Result	Qualifier	Result	Qualifier				
Percent Moisture	53.1		52.7		%		0.9	10
Percent Solids	46.9		47.3		%		1	10

## Method: EPA 7196A - Chromium, Hexavalent

**Lab Sample ID:** MB 180-395928/1-A

**Client Sample ID:** Method Blank

**Matrix:** Sediment

**Prep Type:** Total/NA

**Analysis Batch:** 396415

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cr (VI)	0.40	U	0.40	0.21	mg/Kg		04/19/22 10:26	04/22/22 12:03	1

**Lab Sample ID:** LCSI 180-395928/3-A

**Client Sample ID:** Lab Control Sample

**Matrix:** Sediment

**Prep Type:** Total/NA

**Analysis Batch:** 396415

Analyte	Spike	LCSI	LCSI	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Cr (VI)	708	689		mg/Kg		97	80 - 120

**Lab Sample ID:** LCSS 180-395928/2-A

**Client Sample ID:** Lab Control Sample

**Matrix:** Sediment

**Prep Type:** Total/NA

**Analysis Batch:** 396415

Analyte	Spike	LCSS	LCSS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Cr (VI)	20.0	17.2		mg/Kg		86	80 - 120

**Lab Sample ID:** MB 180-396816/1-A

**Client Sample ID:** Method Blank

**Matrix:** Sediment

**Prep Type:** Total/NA

**Analysis Batch:** 397394

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cr (VI)	0.40	U	0.40	0.21	mg/Kg		04/27/22 10:22	05/02/22 16:11	1

**Lab Sample ID:** LCSI 180-396816/3-A

**Client Sample ID:** Lab Control Sample

**Matrix:** Sediment

**Prep Type:** Total/NA

**Analysis Batch:** 397394

Analyte	Spike	LCSI	LCSI	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Cr (VI)	708	637		mg/Kg		90	80 - 120

**Lab Sample ID:** LCSS 180-396816/2-A

**Client Sample ID:** Lab Control Sample

**Matrix:** Sediment

**Prep Type:** Total/NA

**Analysis Batch:** 397394

Analyte	Spike	LCSS	LCSS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Cr (VI)	20.0	18.2		mg/Kg		91	80 - 120

# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 9014 - Cyanide

**Lab Sample ID:** MB 180-394921/4-A

**Matrix:** Water

**Analysis Batch:** 395012

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 394921

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0080	mg/L		04/11/22 13:00	04/11/22 15:28	1

**Lab Sample ID:** HLCS 180-394921/2-A

**Matrix:** Water

**Analysis Batch:** 395012

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 394921

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.250	0.251		mg/L		100	90 - 110

**Lab Sample ID:** LCS 180-394921/3-A

**Matrix:** Water

**Analysis Batch:** 395012

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 394921

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.200	0.197		mg/L		99	85 - 115

**Lab Sample ID:** LLCS 180-394921/1-A

**Matrix:** Water

**Analysis Batch:** 395012

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 394921

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.0500	0.0505		mg/L		101	90 - 110

**Lab Sample ID:** MB 180-395016/4-A

**Matrix:** Sediment

**Analysis Batch:** 395078

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 395016

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.50	U	0.50	0.38	mg/Kg		04/11/22 22:00	04/12/22 00:19	1

**Lab Sample ID:** HLCS 180-395016/2-A

**Matrix:** Sediment

**Analysis Batch:** 395078

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 395016

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.250	0.247		mg/Kg		99	90 - 110

**Lab Sample ID:** LCS 180-395016/3-A

**Matrix:** Sediment

**Analysis Batch:** 395078

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 395016

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	23.1	20.3		mg/Kg		88	25 - 150

**Lab Sample ID:** LLCS 180-395016/1-A

**Matrix:** Sediment

**Analysis Batch:** 395118

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 395016

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.0500	0.0462		mg/Kg		92	90 - 110

Eurofins Environment Testing Philadelphia, LLC

# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Method: EPA 9014 - Cyanide

**Lab Sample ID:** MB 180-395432/4-A

**Matrix:** Sediment

**Analysis Batch:** 395631

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 395432

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cyanide, Total	0.50	U	0.50	0.38	mg/Kg		04/15/22 11:45	04/15/22 14:04	1

**Lab Sample ID:** HLCS 180-395432/2-A

**Matrix:** Sediment

**Analysis Batch:** 395631

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 395432

Analyte	Spike	HLCS	HLCS	Unit	D	%Rec	Limits	Dil Fac
	Added	Result	Qualifier					
Cyanide, Total	0.250	0.265		mg/Kg		106	90 - 110	

**Lab Sample ID:** LCS 180-395432/3-A

**Matrix:** Sediment

**Analysis Batch:** 395631

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 395432

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	Dil Fac
	Added	Result	Qualifier					
Cyanide, Total	23.1	23.6		mg/Kg		102	25 - 150	

**Lab Sample ID:** LLCS 180-395432/1-A

**Matrix:** Sediment

**Analysis Batch:** 395631

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 395432

Analyte	Spike	LLCS	LLCS	Unit	D	%Rec	Limits	Dil Fac
	Added	Result	Qualifier					
Cyanide, Total	0.0500	0.0486		mg/Kg		97	90 - 110	

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

**Lab Sample ID:** MB 180-394511/4

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Matrix:** Sediment

**Analysis Batch:** 394511

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Organic Carbon - Duplicates	1000	U	1000	970	mg/Kg			04/06/22 14:40	1

**Lab Sample ID:** LCS 180-394511/5

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Matrix:** Sediment

**Analysis Batch:** 394511

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	Dil Fac
	Added	Result	Qualifier					
Total Organic Carbon - Duplicates	35000	33300		mg/Kg		95	75 - 125	

**Lab Sample ID:** 630-30382-2 MS

**Client Sample ID:** C-2 GRAB

**Prep Type:** Total/NA

**Matrix:** Sediment

**Analysis Batch:** 394511

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits	Dil Fac
	Result	Qualifier	Added	Result	Qualifier					
Total Organic Carbon - Duplicates	50000		54000	105000		mg/Kg	⊗	102	75 - 125	

# QC Sample Results

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

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

**Lab Sample ID: 630-30382-2 MSD**

**Client Sample ID: C-2 GRAB**

**Matrix: Sediment**

**Prep Type: Total/NA**

**Analysis Batch: 394511**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Total Organic Carbon - Duplicates	50000		56100	103000		mg/Kg	*	95	75 - 125	1	20

## Method: SM 2540D - Solids, Total Suspended (TSS)

**Lab Sample ID: MB 180-394374/2**

**Client Sample ID: Method Blank**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 394374**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Suspended Solids	0.50	U	0.50	0.50	mg/L			04/06/22 08:38	1

**Lab Sample ID: LCS 180-394374/1**

**Client Sample ID: Lab Control Sample**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 394374**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Total Suspended Solids	50.9	48.0		mg/L		94	85 - 115

# QC Association Summary

Client: ST Hudson Engineers, Inc.  
Project/Site: South Jersey Port Corporation, Camden

Job ID: 630-30382-1

## GC/MS Semi VOA

### Prep Batch: 394252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total/NA	Water	3520C	
630-30382-15	SITE WATER	Total/NA	Water	3520C	
MB 180-394252/1-A	Method Blank	Total/NA	Water	3520C	
LCS 180-394252/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 180-394252/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

### Prep Batch: 395091

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	3541	
MB 180-395091/1-A	Method Blank	Total/NA	Sediment	3541	
LCS 180-395091/2-A	Lab Control Sample	Total/NA	Sediment	3541	

### Analysis Batch: 395213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total/NA	Water	EPA 8270E LL	394252
630-30382-15	SITE WATER	Total/NA	Water	EPA 8270E LL	394252
MB 180-394252/1-A	Method Blank	Total/NA	Water	EPA 8270E LL	394252
LCS 180-394252/2-A	Lab Control Sample	Total/NA	Water	EPA 8270E LL	394252
LCSD 180-394252/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 8270E LL	394252

### Analysis Batch: 395441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-395091/1-A	Method Blank	Total/NA	Sediment	EPA 8270E LL	395091
LCS 180-395091/2-A	Lab Control Sample	Total/NA	Sediment	EPA 8270E LL	395091

### Prep Batch: 395442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	3541	
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	3541	
MB 180-395442/1-A	Method Blank	Total/NA	Sediment	3541	
LCS 180-395442/2-A	Lab Control Sample	Total/NA	Sediment	3541	

### Analysis Batch: 395577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	EPA 8270E LL	395091

### Analysis Batch: 395774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-395442/1-A	Method Blank	Total/NA	Sediment	EPA 8270E LL	395442
LCS 180-395442/2-A	Lab Control Sample	Total/NA	Sediment	EPA 8270E LL	395442

### Analysis Batch: 395945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	EPA 8270E LL	395442
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	EPA 8270E LL	395442

## GC Semi VOA

### Prep Batch: 394406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total/NA	Water	3510C	

# QC Association Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## GC Semi VOA (Continued)

### Prep Batch: 394406 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-15	SITE WATER	Total/NA	Water	3510C	
MB 180-394406/1-A	Method Blank	Total/NA	Water	3510C	
LCS 180-394406/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 180-394406/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 180-394406/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 180-394406/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

### Analysis Batch: 394492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total/NA	Water	EPA 8082A	394406
630-30382-15	SITE WATER	Total/NA	Water	EPA 8082A	394406
MB 180-394406/1-A	Method Blank	Total/NA	Water	EPA 8082A	394406
LCS 180-394406/4-A	Lab Control Sample	Total/NA	Water	EPA 8082A	394406
LCSD 180-394406/5-A	Lab Control Sample Dup	Total/NA	Water	EPA 8082A	394406

### Analysis Batch: 394722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total/NA	Water	PCB	
630-30382-15	SITE WATER	Total/NA	Water	PCB	

### Prep Batch: 395001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	3541	
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	3541	
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	3541	
630-30382-13 - RA	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	3541	
MB 180-395001/1-B	Method Blank	Total/NA	Sediment	3541	
LCS 180-395001/2-B	Lab Control Sample	Total/NA	Sediment	3541	

### Prep Batch: 395005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	3541	
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	3541	
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	3541	
MB 180-395005/1-C	Method Blank	Total/NA	Sediment	3541	
LCS 180-395005/2-C	Lab Control Sample	Total/NA	Sediment	3541	

### Analysis Batch: 395076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total/NA	Water	EPA 8081B LL	394406
630-30382-15	SITE WATER	Total/NA	Water	EPA 8081B LL	394406
MB 180-394406/1-A	Method Blank	Total/NA	Water	EPA 8081B LL	394406
LCS 180-394406/2-A	Lab Control Sample	Total/NA	Water	EPA 8081B LL	394406
LCSD 180-394406/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 8081B LL	394406

### Cleanup Batch: 395660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	3665A	395005
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	3665A	395005
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	3665A	395005
MB 180-395005/1-C	Method Blank	Total/NA	Sediment	3665A	395005

# QC Association Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## GC Semi VOA (Continued)

### Cleanup Batch: 395660 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-395005/2-C	Lab Control Sample	Total/NA	Sediment	3665A	395005

### Cleanup Batch: 395661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	3660B	395660
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	3660B	395660
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	3660B	395660
MB 180-395005/1-C	Method Blank	Total/NA	Sediment	3660B	395660
LCS 180-395005/2-C	Lab Control Sample	Total/NA	Sediment	3660B	395660

### Analysis Batch: 395666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	EPA 8082A	395661
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	EPA 8082A	395661
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	EPA 8082A	395661
MB 180-395005/1-C	Method Blank	Total/NA	Sediment	EPA 8082A	395661
LCS 180-395005/2-C	Lab Control Sample	Total/NA	Sediment	EPA 8082A	395661

### Cleanup Batch: 395700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	3640A	395001
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	3640A	395001
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	3640A	395001
630-30382-13 - RA	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	3640A	395001
MB 180-395001/1-B	Method Blank	Total/NA	Sediment	3640A	395001
LCS 180-395001/2-B	Lab Control Sample	Total/NA	Sediment	3640A	395001

### Analysis Batch: 395839

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	PCB	
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	PCB	
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	PCB	

### Analysis Batch: 397096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	EPA 8081B LL	395700
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	EPA 8081B LL	395700
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	EPA 8081B LL	395700
MB 180-395001/1-B	Method Blank	Total/NA	Sediment	EPA 8081B LL	395700
LCS 180-395001/2-B	Lab Control Sample	Total/NA	Sediment	EPA 8081B LL	395700

### Analysis Batch: 397330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-13 - RA	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	EPA 8081B LL	395700

## Metals

### Prep Batch: 395804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total Recoverable	Water	3005A	
630-30382-15	SITE WATER	Total Recoverable	Water	3005A	

# QC Association Summary

Client: ST Hudson Engineers, Inc.  
Project/Site: South Jersey Port Corporation, Camden

Job ID: 630-30382-1

## Metals (Continued)

### Prep Batch: 395804 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-395804/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-395804/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

### Prep Batch: 396208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	3050B	
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	3050B	
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	3050B	
MB 180-396208/1-A	Method Blank	Total/NA	Sediment	3050B	
LCS 180-396208/2-A	Lab Control Sample	Total/NA	Sediment	3050B	
630-30382-13 MS	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	3050B	
630-30382-13 MSD	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	3050B	

### Prep Batch: 396384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total/NA	Water	7470A	
630-30382-15	SITE WATER	Total/NA	Water	7470A	
MB 180-396384/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-396384/2-A	Lab Control Sample	Total/NA	Water	7470A	

### Analysis Batch: 396420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	EPA 6020B	396208
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	EPA 6020B	396208
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	EPA 6020B	396208
MB 180-396208/1-A	Method Blank	Total/NA	Sediment	EPA 6020B	396208
LCS 180-396208/2-A	Lab Control Sample	Total/NA	Sediment	EPA 6020B	396208
630-30382-13 MS	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	EPA 6020B	396208
630-30382-13 MSD	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	EPA 6020B	396208

### Analysis Batch: 396470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total/NA	Water	EPA 7470A	396384
630-30382-15	SITE WATER	Total/NA	Water	EPA 7470A	396384
MB 180-396384/1-A	Method Blank	Total/NA	Water	EPA 7470A	396384
LCS 180-396384/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	396384

### Analysis Batch: 396754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total Recoverable	Water	EPA 6020B	395804
630-30382-15	SITE WATER	Total Recoverable	Water	EPA 6020B	395804
MB 180-395804/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	395804
LCS 180-395804/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	395804

### Prep Batch: 396756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	7471B	
MB 180-396756/1-A	Method Blank	Total/NA	Sediment	7471B	
LCS 180-396756/2-A	Lab Control Sample	Total/NA	Sediment	7471B	

# QC Association Summary

Client: ST Hudson Engineers, Inc.  
Project/Site: South Jersey Port Corporation, Camden

Job ID: 630-30382-1

## Metals

### Analysis Batch: 396873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	EPA 7471B	396756
MB 180-396756/1-A	Method Blank	Total/NA	Sediment	EPA 7471B	396756
LCS 180-396756/2-A	Lab Control Sample	Total/NA	Sediment	EPA 7471B	396756

### Prep Batch: 397160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total Recoverable	Water	3005A	7
MB 180-397160/1-A	Method Blank	Total Recoverable	Water	3005A	8
LCS 180-397160/2-A	Lab Control Sample	Total Recoverable	Water	3005A	9

### Prep Batch: 397220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	7471B	10
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	7471B	11
MB 180-397220/1-A	Method Blank	Total/NA	Sediment	7471B	12
LCS 180-397220/2-A	Lab Control Sample	Total/NA	Sediment	7471B	13

### Analysis Batch: 397390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	EPA 7471B	13
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	EPA 7471B	14
MB 180-397220/1-A	Method Blank	Total/NA	Sediment	EPA 7471B	15
LCS 180-397220/2-A	Lab Control Sample	Total/NA	Sediment	EPA 7471B	12

### Analysis Batch: 397411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total Recoverable	Water	EPA 6020B	397160
MB 180-397160/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	397160
LCS 180-397160/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	397160

### Analysis Batch: 397469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total Recoverable	Water	SM 2340B	1
630-30382-15	SITE WATER	Total Recoverable	Water	SM 2340B	2

## General Chemistry

### Analysis Batch: 394374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total/NA	Water	SM 2540D	1
630-30382-15	SITE WATER	Total/NA	Water	SM 2540D	2
MB 180-394374/2	Method Blank	Total/NA	Water	SM 2540D	3
LCS 180-394374/1	Lab Control Sample	Total/NA	Water	SM 2540D	4

### Analysis Batch: 394476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	2540G	1
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	2540G	2
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	2540G	3
630-30382-9 DU	D-9 DISCRETE	Total/NA	Sediment	2540G	4

# QC Association Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## General Chemistry

### Analysis Batch: 394511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-1	C-1 GRAB	Total/NA	Sediment	EPA-Lloyd Kahn	
630-30382-2	C-2 GRAB	Total/NA	Sediment	EPA-Lloyd Kahn	
630-30382-3	C-3 GRAB	Total/NA	Sediment	EPA-Lloyd Kahn	
630-30382-7	C-7 GRAB	Total/NA	Sediment	EPA-Lloyd Kahn	
630-30382-8	C-8 GRAB	Total/NA	Sediment	EPA-Lloyd Kahn	
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	EPA-Lloyd Kahn	
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	EPA-Lloyd Kahn	
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	EPA-Lloyd Kahn	
MB 180-394511/4	Method Blank	Total/NA	Sediment	EPA-Lloyd Kahn	
LCS 180-394511/5	Lab Control Sample	Total/NA	Sediment	EPA-Lloyd Kahn	
630-30382-2 MS	C-2 GRAB	Total/NA	Sediment	EPA-Lloyd Kahn	
630-30382-2 MSD	C-2 GRAB	Total/NA	Sediment	EPA-Lloyd Kahn	

### Analysis Batch: 394626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-1	C-1 GRAB	Total/NA	Sediment	2540G	
630-30382-2	C-2 GRAB	Total/NA	Sediment	2540G	
630-30382-3	C-3 GRAB	Total/NA	Sediment	2540G	
630-30382-7	C-7 GRAB	Total/NA	Sediment	2540G	
630-30382-8	C-8 GRAB	Total/NA	Sediment	2540G	

### Prep Batch: 394921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total/NA	Water	9010C	
630-30382-15	SITE WATER	Total/NA	Water	9010C	
MB 180-394921/4-A	Method Blank	Total/NA	Water	9010C	
HLCS 180-394921/2-A	Lab Control Sample	Total/NA	Water	9010C	
LCS 180-394921/3-A	Lab Control Sample	Total/NA	Water	9010C	
LLCS 180-394921/1-A	Lab Control Sample	Total/NA	Water	9010C	

### Analysis Batch: 395012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-14	FIELD BLANK	Total/NA	Water	EPA 9014	394921
630-30382-15	SITE WATER	Total/NA	Water	EPA 9014	394921
MB 180-394921/4-A	Method Blank	Total/NA	Water	EPA 9014	394921
HLCS 180-394921/2-A	Lab Control Sample	Total/NA	Water	EPA 9014	394921
LCS 180-394921/3-A	Lab Control Sample	Total/NA	Water	EPA 9014	394921
LLCS 180-394921/1-A	Lab Control Sample	Total/NA	Water	EPA 9014	394921

### Prep Batch: 395016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	9010C	
MB 180-395016/4-A	Method Blank	Total/NA	Sediment	9010C	
HLCS 180-395016/2-A	Lab Control Sample	Total/NA	Sediment	9010C	
LCS 180-395016/3-A	Lab Control Sample	Total/NA	Sediment	9010C	
LLCS 180-395016/1-A	Lab Control Sample	Total/NA	Sediment	9010C	

### Analysis Batch: 395078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	EPA 9014	395016
MB 180-395016/4-A	Method Blank	Total/NA	Sediment	EPA 9014	395016

Eurofins Environment Testing Philadelphia, LLC

# QC Association Summary

Client: ST Hudson Engineers, Inc.  
Project/Site: South Jersey Port Corporation, Camden

Job ID: 630-30382-1

## General Chemistry (Continued)

### Analysis Batch: 395078 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
HLCS 180-395016/2-A	Lab Control Sample	Total/NA	Sediment	EPA 9014	395016
LCS 180-395016/3-A	Lab Control Sample	Total/NA	Sediment	EPA 9014	395016

### Analysis Batch: 395118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LLCS 180-395016/1-A	Lab Control Sample	Total/NA	Sediment	EPA 9014	395016

### Prep Batch: 395432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	9010C	9
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	9010C	10
MB 180-395432/4-A	Method Blank	Total/NA	Sediment	9010C	11
HLCS 180-395432/2-A	Lab Control Sample	Total/NA	Sediment	9010C	12
LCS 180-395432/3-A	Lab Control Sample	Total/NA	Sediment	9010C	13
LLCS 180-395432/1-A	Lab Control Sample	Total/NA	Sediment	9010C	14

### Analysis Batch: 395631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	EPA 9014	395432
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	EPA 9014	395432
MB 180-395432/4-A	Method Blank	Total/NA	Sediment	EPA 9014	395432
HLCS 180-395432/2-A	Lab Control Sample	Total/NA	Sediment	EPA 9014	395432
LCS 180-395432/3-A	Lab Control Sample	Total/NA	Sediment	EPA 9014	395432
LLCS 180-395432/1-A	Lab Control Sample	Total/NA	Sediment	EPA 9014	395432

### Prep Batch: 395928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	3060A	13
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	3060A	14
MB 180-395928/1-A	Method Blank	Total/NA	Sediment	3060A	15
LCSI 180-395928/3-A	Lab Control Sample	Total/NA	Sediment	3060A	
LCSS 180-395928/2-A	Lab Control Sample	Total/NA	Sediment	3060A	

### Analysis Batch: 396415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	EPA 7196A	395928
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	EPA 7196A	395928
MB 180-395928/1-A	Method Blank	Total/NA	Sediment	EPA 7196A	395928
LCSI 180-395928/3-A	Lab Control Sample	Total/NA	Sediment	EPA 7196A	395928
LCSS 180-395928/2-A	Lab Control Sample	Total/NA	Sediment	EPA 7196A	395928

### Prep Batch: 396816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	3060A	13
MB 180-396816/1-A	Method Blank	Total/NA	Sediment	3060A	14
LCSI 180-396816/3-A	Lab Control Sample	Total/NA	Sediment	3060A	15
LCSS 180-396816/2-A	Lab Control Sample	Total/NA	Sediment	3060A	

### Analysis Batch: 397369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	7196A	

# QC Association Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## General Chemistry (Continued)

### Analysis Batch: 397369 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	7196A	

### Analysis Batch: 397394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	EPA 7196A	396816
MB 180-396816/1-A	Method Blank	Total/NA	Sediment	EPA 7196A	396816
LCSI 180-396816/3-A	Lab Control Sample	Total/NA	Sediment	EPA 7196A	396816
LCSS 180-396816/2-A	Lab Control Sample	Total/NA	Sediment	EPA 7196A	396816

### Analysis Batch: 397468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	7196A	

## Geotechnical

### Analysis Batch: 178601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-1	C-1 GRAB	Total/NA	Sediment	D2216-90	
630-30382-2	C-2 GRAB	Total/NA	Sediment	D2216-90	
630-30382-3	C-3 GRAB	Total/NA	Sediment	D2216-90	
630-30382-7	C-7 GRAB	Total/NA	Sediment	D2216-90	
630-30382-8	C-8 GRAB	Total/NA	Sediment	D2216-90	
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	D2216-90	
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	D2216-90	
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	D2216-90	

### Analysis Batch: 179085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
630-30382-1	C-1 GRAB	Total/NA	Sediment	D422	
630-30382-2	C-2 GRAB	Total/NA	Sediment	D422	
630-30382-3	C-3 GRAB	Total/NA	Sediment	D422	
630-30382-7	C-7 GRAB	Total/NA	Sediment	D422	
630-30382-8	C-8 GRAB	Total/NA	Sediment	D422	
630-30382-9	D-9 DISCRETE	Total/NA	Sediment	D422	
630-30382-10	SC-1 COMPOSITE (C1+C2)	Total/NA	Sediment	D422	
630-30382-13	SC-4 COMPOSITE (C7+C8)	Total/NA	Sediment	D422	

## Lab Chronicle

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

### **Client Sample ID: C-1 GRAB**

**Lab Sample ID: 630-30382-1**

**Matrix: Sediment**

Date Collected: 03/30/22 08:52

Date Received: 04/04/22 12:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	394626	04/07/22 17:24	ELS	TAL PIT
Total/NA	Analysis	D2216-90		1	178601	04/08/22 17:35	MAP	TAL BUR
Total/NA	Analysis	D422		1	179085	04/08/22 17:37	MAP	TAL BUR

### **Client Sample ID: C-1 GRAB**

**Lab Sample ID: 630-30382-1**

**Matrix: Sediment**

Date Collected: 03/30/22 08:52

Date Received: 04/04/22 12:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA-Lloyd Kahn		1	394511	04/06/22 18:24	DLF	TAL PIT

### **Client Sample ID: C-2 GRAB**

**Lab Sample ID: 630-30382-2**

**Matrix: Sediment**

Date Collected: 03/30/22 09:25

Date Received: 04/04/22 12:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	394626	04/07/22 17:24	ELS	TAL PIT
Total/NA	Analysis	D2216-90		1	178601	04/08/22 17:35	MAP	TAL BUR
Total/NA	Analysis	D422		1	179085	04/08/22 17:39	MAP	TAL BUR

### **Client Sample ID: C-2 GRAB**

**Lab Sample ID: 630-30382-2**

**Matrix: Sediment**

Date Collected: 03/30/22 09:25

Date Received: 04/04/22 12:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA-Lloyd Kahn		1	394511	04/06/22 18:57	DLF	TAL PIT

### **Client Sample ID: C-3 GRAB**

**Lab Sample ID: 630-30382-3**

**Matrix: Sediment**

Date Collected: 03/30/22 10:25

Date Received: 04/04/22 12:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	394626	04/07/22 17:24	ELS	TAL PIT
Total/NA	Analysis	D2216-90		1	178601	04/08/22 17:35	MAP	TAL BUR
Total/NA	Analysis	D422		1	179085	04/08/22 17:41	MAP	TAL BUR

### **Client Sample ID: C-3 GRAB**

**Lab Sample ID: 630-30382-3**

**Matrix: Sediment**

Date Collected: 03/30/22 10:25

Date Received: 04/04/22 12:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA-Lloyd Kahn		1	394511	04/06/22 19:48	DLF	TAL PIT

# Lab Chronicle

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: C-7 GRAB

Lab Sample ID: 630-30382-7

Matrix: Sediment

Date Collected: 03/30/22 11:50

Date Received: 04/04/22 12:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	394626	04/07/22 17:24	ELS	TAL PIT
Total/NA	Analysis	D2216-90		1	178601	04/08/22 17:35	MAP	TAL BUR
Total/NA	Analysis	D422		1	179085	04/08/22 17:43	MAP	TAL BUR

## Client Sample ID: C-7 GRAB

Lab Sample ID: 630-30382-7

Matrix: Sediment

Date Collected: 03/30/22 11:50

Date Received: 04/04/22 12:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA-Lloyd Kahn		1	394511	04/06/22 20:04	DLF	TAL PIT

## Client Sample ID: C-8 GRAB

Lab Sample ID: 630-30382-8

Matrix: Sediment

Date Collected: 03/30/22 12:24

Date Received: 04/04/22 12:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	394626	04/07/22 17:24	ELS	TAL PIT
Total/NA	Analysis	D2216-90		1	178601	04/08/22 17:35	MAP	TAL BUR
Total/NA	Analysis	D422		1	179085	04/08/22 17:45	MAP	TAL BUR

## Client Sample ID: C-8 GRAB

Lab Sample ID: 630-30382-8

Matrix: Sediment

Date Collected: 03/30/22 12:24

Date Received: 04/04/22 12:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA-Lloyd Kahn		1	394511	04/06/22 20:27	DLF	TAL PIT

## Client Sample ID: D-9 DISCRETE

Lab Sample ID: 630-30382-9

Matrix: Sediment

Date Collected: 03/30/22 11:19

Date Received: 04/04/22 12:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		10	395839	04/11/22 17:17	C1K	TAL PIT
Total/NA	Analysis	2540G		1	394476	04/06/22 18:44	NAF	TAL PIT
Total/NA	Analysis	7196A		1	397369	05/02/22 13:58	DLL	TAL PIT
Total/NA	Analysis	D2216-90		1	178601	04/08/22 17:35	MAP	TAL BUR
Total/NA	Analysis	D422		1	179085	04/08/22 17:47	MAP	TAL BUR

## Client Sample ID: D-9 DISCRETE

Lab Sample ID: 630-30382-9

Matrix: Sediment

Date Collected: 03/30/22 11:19

Date Received: 04/04/22 12:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			395091	04/12/22 09:40	CSC	TAL PIT
Total/NA	Analysis	EPA 8270E LL		10	395577	04/15/22 23:05	VVP	TAL PIT

Eurofins Environment Testing Philadelphia, LLC

## Lab Chronicle

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

### Client Sample ID: D-9 DISCRETE

Date Collected: 03/30/22 11:19

Date Received: 04/04/22 12:25

### Lab Sample ID: 630-30382-9

Matrix: Sediment

Percent Solids: 46.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			395001	04/11/22 16:41	CSC	TAL PIT
Total/NA	Cleanup	3640A			395700	04/16/22 13:40	VJC	TAL PIT
Total/NA	Analysis	EPA 8081B LL		5	397096	04/29/22 20:16	DFE	TAL PIT
Total/NA	Prep	3541			395005	04/11/22 17:17	CSC	TAL PIT
Total/NA	Cleanup	3665A			395660	04/16/22 05:38	JMO	TAL PIT
Total/NA	Cleanup	3660B			395661	04/16/22 05:39	JMO	TAL PIT
Total/NA	Analysis	EPA 8082A		10	395666	04/16/22 11:55	JMO	TAL PIT
Total/NA	Prep	3050B			396208	04/21/22 11:10	RGM	TAL PIT
Total/NA	Analysis	EPA 6020B		1	396420	04/22/22 20:31	RSK	TAL PIT
Total/NA	Prep	7471B			396756	04/27/22 06:39	RJR	TAL PIT
Total/NA	Analysis	EPA 7471B		1	396873	04/27/22 11:19	RJR	TAL PIT
Total/NA	Prep	3060A			395928	04/19/22 10:26	PMH	TAL PIT
Total/NA	Analysis	EPA 7196A		5	396415	04/22/22 12:33	PMH	TAL PIT
Total/NA	Prep	9010C			395016	04/11/22 22:00	CMR	TAL PIT
Total/NA	Analysis	EPA 9014		1	395078	04/12/22 00:58	CMR	TAL PIT
Total/NA	Analysis	EPA-Lloyd Kahn		1	394511	04/06/22 21:00	DLF	TAL PIT

### Client Sample ID: SC-1 COMPOSITE (C1+C2)

Date Collected: 04/04/22 12:05

Date Received: 04/04/22 12:25

### Lab Sample ID: 630-30382-10

Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		10	395839	04/11/22 17:17	C1K	TAL PIT
Total/NA	Analysis	2540G		1	394476	04/06/22 18:44	NAF	TAL PIT
Total/NA	Analysis	7196A		1	397369	05/02/22 13:58	DLL	TAL PIT
Total/NA	Analysis	D2216-90		1	178601	04/08/22 17:35	MAP	TAL BUR
Total/NA	Analysis	D422		1	179085	04/08/22 17:49	MAP	TAL BUR

### Client Sample ID: SC-1 COMPOSITE (C1+C2)

Date Collected: 04/04/22 12:05

Date Received: 04/04/22 12:25

### Lab Sample ID: 630-30382-10

Matrix: Sediment

Percent Solids: 36.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			395442	04/14/22 11:26	CSC	TAL PIT
Total/NA	Analysis	EPA 8270E LL		20	395945	04/19/22 21:50	VVP	TAL PIT
Total/NA	Prep	3541			395001	04/11/22 16:41	CSC	TAL PIT
Total/NA	Cleanup	3640A			395700	04/16/22 13:40	VJC	TAL PIT
Total/NA	Analysis	EPA 8081B LL		5	397096	04/29/22 20:32	DFE	TAL PIT
Total/NA	Prep	3541			395005	04/11/22 17:17	CSC	TAL PIT
Total/NA	Cleanup	3665A			395660	04/16/22 05:38	JMO	TAL PIT
Total/NA	Cleanup	3660B			395661	04/16/22 05:39	JMO	TAL PIT
Total/NA	Analysis	EPA 8082A		10	395666	04/16/22 12:14	JMO	TAL PIT
Total/NA	Prep	3050B			396208	04/21/22 11:14	RGM	TAL PIT
Total/NA	Analysis	EPA 6020B		1	396420	04/22/22 20:35	RSK	TAL PIT

## Lab Chronicle

Client: ST Hudson Engineers, Inc.  
Project/Site: South Jersey Port Corporation, Camden

Job ID: 630-30382-1

### **Client Sample ID: SC-1 COMPOSITE (C1+C2)**

Date Collected: 04/04/22 12:05

Date Received: 04/04/22 12:25

### **Lab Sample ID: 630-30382-10**

Matrix: Sediment

Percent Solids: 36.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			397220	05/01/22 10:20	RJR	TAL PIT
Total/NA	Analysis	EPA 7471B		1	397390	05/02/22 13:17	RJR	TAL PIT
Total/NA	Prep	3060A			395928	04/19/22 10:26	PMH	TAL PIT
Total/NA	Analysis	EPA 7196A		5	396415	04/22/22 12:34	PMH	TAL PIT
Total/NA	Prep	9010C			395432	04/15/22 11:45	CMR	TAL PIT
Total/NA	Analysis	EPA 9014		1	395631	04/15/22 14:28	CMR	TAL PIT
Total/NA	Analysis	EPA-Lloyd Kahn		1	394511	04/06/22 21:17	DLF	TAL PIT

### **Client Sample ID: SC-4 COMPOSITE (C7+C8)**

Date Collected: 04/04/22 12:25

Date Received: 04/04/22 12:25

### **Lab Sample ID: 630-30382-13**

Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		10	395839	04/11/22 17:17	C1K	TAL PIT
Total/NA	Analysis	2540G		1	394476	04/06/22 18:44	NAF	TAL PIT
Total/NA	Analysis	7196A		1	397468	05/03/22 10:12	RSR	TAL PIT
Total/NA	Analysis	D2216-90		1	178601	04/08/22 17:35	MAP	TAL BUR
Total/NA	Analysis	D422		1	179085	04/08/22 17:52	MAP	TAL BUR

### **Client Sample ID: SC-4 COMPOSITE (C7+C8)**

Date Collected: 04/04/22 12:25

Date Received: 04/04/22 12:25

### **Lab Sample ID: 630-30382-13**

Matrix: Sediment

Percent Solids: 44.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			395442	04/14/22 11:26	CSC	TAL PIT
Total/NA	Analysis	EPA 8270E LL		25	395945	04/19/22 22:11	VVP	TAL PIT
Total/NA	Prep	3541			395001	04/11/22 16:41	CSC	TAL PIT
Total/NA	Cleanup	3640A			395700	04/16/22 13:40	VJC	TAL PIT
Total/NA	Analysis	EPA 8081B LL		5	397096	04/29/22 20:48	DFE	TAL PIT
Total/NA	Prep	3541	RA		395001	04/11/22 16:41	CSC	TAL PIT
Total/NA	Cleanup	3640A	RA		395700	04/16/22 13:40	VJC	TAL PIT
Total/NA	Analysis	EPA 8081B LL	RA	5	397330	05/02/22 11:21	DFE	TAL PIT
Total/NA	Prep	3541			395005	04/11/22 17:17	CSC	TAL PIT
Total/NA	Cleanup	3665A			395660	04/16/22 05:38	JMO	TAL PIT
Total/NA	Cleanup	3660B			395661	04/16/22 05:39	JMO	TAL PIT
Total/NA	Analysis	EPA 8082A		10	395666	04/16/22 12:33	JMO	TAL PIT
Total/NA	Prep	3050B			396208	04/21/22 11:14	RGM	TAL PIT
Total/NA	Analysis	EPA 6020B		1	396420	04/22/22 20:39	RSK	TAL PIT
Total/NA	Prep	7471B			397220	05/01/22 10:20	RJR	TAL PIT
Total/NA	Analysis	EPA 7471B		1	397390	05/02/22 13:18	RJR	TAL PIT
Total/NA	Prep	3060A			396816	04/27/22 10:22	PMH	TAL PIT
Total/NA	Analysis	EPA 7196A		10	397394	05/02/22 16:55	PMH	TAL PIT
Total/NA	Prep	9010C			395432	04/15/22 11:45	CMR	TAL PIT
Total/NA	Analysis	EPA 9014		1	395631	04/15/22 14:30	CMR	TAL PIT
Total/NA	Analysis	EPA-Lloyd Kahn		1	394511	04/06/22 21:39	DLF	TAL PIT

Eurofins Environment Testing Philadelphia, LLC

# Lab Chronicle

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

## Client Sample ID: FIELD BLANK

Date Collected: 03/30/22 14:57

Date Received: 04/04/22 12:25

## Lab Sample ID: 630-30382-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			394252	04/07/22 17:36	BJT	TAL PIT
Total/NA	Analysis	EPA 8270E LL		1	395213	04/13/22 19:36	VVP	TAL PIT
Total/NA	Prep	3510C			394406	04/06/22 08:30	CBY	TAL PIT
Total/NA	Analysis	EPA 8081B LL		1	395076	04/12/22 18:43	DFE	TAL PIT
Total/NA	Prep	3510C			394406	04/06/22 08:30	CBY	TAL PIT
Total/NA	Analysis	EPA 8082A		1	394492	04/07/22 10:29	JMO	TAL PIT
Total/NA	Analysis	PCB		1	394722	04/06/22 08:30	SAB	TAL PIT
Total Recoverable	Prep	3005A			395804	04/19/22 09:30	RGM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1	396754	04/26/22 13:02	RSK	TAL PIT
Total Recoverable	Prep	3005A			397160	04/29/22 10:43	RGM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1	397411	04/30/22 13:29	RSK	TAL PIT
Total/NA	Prep	7470A			396384	04/22/22 12:47	KFS	TAL PIT
Total/NA	Analysis	EPA 7470A		1	396470	04/23/22 16:15	KFS	TAL PIT
Total Recoverable	Analysis	SM 2340B		1	397469	05/03/22 10:13	RSR	TAL PIT
Total/NA	Prep	9010C			394921	04/11/22 13:00	CMR	TAL PIT
Total/NA	Analysis	EPA 9014		1	395012	04/11/22 16:14	CMR	TAL PIT
Total/NA	Analysis	SM 2540D		1	394374	04/06/22 08:38	BAC	TAL PIT

## Client Sample ID: SITE WATER

Date Collected: 03/30/22 16:40

Date Received: 04/04/22 12:25

## Lab Sample ID: 630-30382-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			394252	04/07/22 17:36	BJT	TAL PIT
Total/NA	Analysis	EPA 8270E LL		1	395213	04/13/22 19:59	VVP	TAL PIT
Total/NA	Prep	3510C			394406	04/06/22 08:30	CBY	TAL PIT
Total/NA	Analysis	EPA 8081B LL		1	395076	04/12/22 18:59	DFE	TAL PIT
Total/NA	Prep	3510C			394406	04/06/22 08:30	CBY	TAL PIT
Total/NA	Analysis	EPA 8082A		1	394492	04/07/22 10:48	JMO	TAL PIT
Total/NA	Analysis	PCB		1	394722	04/06/22 08:30	SAB	TAL PIT
Total Recoverable	Prep	3005A			395804	04/19/22 09:30	RGM	TAL PIT
Total Recoverable	Analysis	EPA 6020B		1	396754	04/26/22 13:05	RSK	TAL PIT
Total/NA	Prep	7470A			396384	04/22/22 12:47	KFS	TAL PIT
Total/NA	Analysis	EPA 7470A		1	396470	04/23/22 16:16	KFS	TAL PIT
Total Recoverable	Analysis	SM 2340B		1	397469	05/03/22 10:13	RSR	TAL PIT
Total/NA	Prep	9010C			394921	04/11/22 13:00	CMR	TAL PIT
Total/NA	Analysis	EPA 9014		1	395012	04/11/22 16:16	CMR	TAL PIT
Total/NA	Analysis	SM 2540D		1	394374	04/06/22 08:38	BAC	TAL PIT

### Laboratory References:

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

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

## Accreditation/Certification Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

### Laboratory: Eurofins Burlington

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Jersey	NELAP	VT972	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
D2216-90		Sediment	Moisture Content
D422		Sediment	Clay
D422		Sediment	Coarse Sand
D422		Sediment	Fine Sand
D422		Sediment	Gravel
D422		Sediment	Hydrometer Reading 1 - Percent Finer
D422		Sediment	Hydrometer Reading 2 - Percent Finer
D422		Sediment	Hydrometer Reading 3 - Percent Finer
D422		Sediment	Hydrometer Reading 4 - Percent Finer
D422		Sediment	Hydrometer Reading 5 - Percent Finer
D422		Sediment	Hydrometer Reading 6 - Percent Finer
D422		Sediment	Hydrometer Reading 7 - Percent Finer
D422		Sediment	Medium Sand
D422		Sediment	Sand
D422		Sediment	Sieve Size #10 - Percent Finer
D422		Sediment	Sieve Size #100 - Percent Finer
D422		Sediment	Sieve Size #20 - Percent Finer
D422		Sediment	Sieve Size #200 - Percent Finer
D422		Sediment	Sieve Size #4 - Percent Finer
D422		Sediment	Sieve Size #40 - Percent Finer
D422		Sediment	Sieve Size #60 - Percent Finer
D422		Sediment	Sieve Size #80 - Percent Finer
D422		Sediment	Sieve Size 0.375 inch - Percent Finer
D422		Sediment	Sieve Size 0.75 inch - Percent Finer
D422		Sediment	Sieve Size 1 inch - Percent Finer
D422		Sediment	Sieve Size 1.5 inch - Percent Finer
D422		Sediment	Sieve Size 2 inch - Percent Finer
D422		Sediment	Sieve Size 3 inch - Percent Finer
D422		Sediment	Silt

### Laboratory: Eurofins Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Jersey	NELAP	PA005	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
2540G		Sediment	Percent Moisture
2540G		Sediment	Percent Solids
7196A		Sediment	Cr (III)
EPA 8081B LL	3510C	Water	Endosulfan, Total (1C)
EPA 8081B LL	3541	Sediment	Endosulfan, Total (2C)
EPA 8270E LL	3520C	Water	Cresols, Total
EPA 8270E LL	3541	Sediment	Cresols, Total

## Accreditation/Certification Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

### Laboratory: Eurofins Pittsburgh (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
PCB		Sediment	Polychlorinated biphenyls, Total
PCB		Water	Polychlorinated biphenyls, Total
SM 2340B		Water	Calcium hardness as calcium carbonate
SM 2340B		Water	Hardness as calcium carbonate
SM 2340B		Water	Magnesium hardness as calcium carbonate

## Method Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

Method	Method Description	Protocol	Laboratory
EPA 8270E LL	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PIT
EPA 8081B LL	Organochlorine Pesticides (GC)	SW846	TAL PIT
EPA 8082A	Polychlorinated Biphenyls (PCBs) (GC)	SW846	TAL PIT
PCB	Total PCB Calculation	TAL SOP	TAL PIT
EPA 6020B	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
EPA 7471B	Mercury (CVAA)	SW846	TAL PIT
SM 2340B	Total Hardness (as CaCO <sub>3</sub> ) by calculation	SM	TAL PIT
2540G	SM 2540G	SM22	TAL PIT
7196A	Chromium, Trivalent (Colorimetric)	SW846	TAL PIT
EPA 7196A	Chromium, Hexavalent	SW846	TAL PIT
EPA 9014	Cyanide	SW846	TAL PIT
EPA-Lloyd Kahn	Organic Carbon, Total (TOC)	EPA	TAL PIT
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL PIT
D2216-90	Water (Moisture) Content	ASTM	TAL BUR
D422	Grain Size	ASTM	TAL BUR
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
3050B	Preparation, Metals	SW846	TAL PIT
3060A	Alkaline Digestion (Chromium, Hexavalent)	SW846	TAL PIT
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL PIT
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL PIT
3541	Automated Soxhlet Extraction (Low Level)	SW846	TAL PIT
3640A	Gel-Permeation Cleanup	SW846	TAL PIT
3660B	Sulfur Cleanup	SW846	TAL PIT
3665A	Sulfuric Acid/Permanganate Cleanup	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT
7471B	Preparation, Mercury	SW846	TAL PIT
9010C	Cyanide, Distillation	SW846	TAL PIT

### Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

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.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

### Laboratory References:

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

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

## Sample Summary

Client: ST Hudson Engineers, Inc.

Job ID: 630-30382-1

Project/Site: South Jersey Port Corporation, Camden

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	
630-30382-1	C-1 GRAB	Sediment	03/30/22 08:52	04/04/22 12:25	1
630-30382-2	C-2 GRAB	Sediment	03/30/22 09:25	04/04/22 12:25	2
630-30382-3	C-3 GRAB	Sediment	03/30/22 10:25	04/04/22 12:25	3
630-30382-7	C-7 GRAB	Sediment	03/30/22 11:50	04/04/22 12:25	4
630-30382-8	C-8 GRAB	Sediment	03/30/22 12:24	04/04/22 12:25	5
630-30382-9	D-9 DISCRETE	Sediment	03/30/22 11:19	04/04/22 12:25	6
630-30382-10	SC-1 COMPOSITE (C1+C2)	Sediment	04/04/22 12:05	04/04/22 12:25	7
630-30382-13	SC-4 COMPOSITE (C7+C8)	Sediment	04/04/22 12:25	04/04/22 12:25	8
630-30382-14	FIELD BLANK	Water	03/30/22 14:57	04/04/22 12:25	9
630-30382-15	SITE WATER	Water	03/30/22 16:40	04/04/22 12:25	10



5446

Environment Testing  
America213 Witmer Road  
Horsham, PA 19044

Phone: 215-355-3900

Client/Acct. No.  
Address  
~~ST Hudson Engineers~~  
900 Dudley Ave.South Jersey Port Corporation  
101 Joseph N. Batzons Blvd  
Camden, NJCity/State/Zip  
Phone/FaxCherry Hill, NJ 08002  
856-342-6600Client Contact:  
Paul Ferry

P.O. No.

PWSID #:

Quote #

e-mail: *p.ferry@sthe.com*

L A B U S E O N L Y	PROJECT FIELD ID	Collection		Matrix Code	Number of Containers										# _____ DI Water	Field pH, Temp (°C), DO, Cl <sub>2</sub> , Cond. etc.
		Date	Military Time		Total	H <sub>2</sub> S <sub>0</sub> 4	H C I	V i a l s	H N O 3	N a O H	Z n A c H	U n A c R	B A C T E			
C-1	[ ] COMPOSITE	3/30	0852											Inorganics, %H <sub>2</sub> O, TOX, PCB, Lead, SVOCs, Grain Size		
C-2	[ ]	3/30	0925													
C-3	→ 1/2 COMPOSITE	3/30	1025													
C-7	[ ] COMPOSITE	3/30	1150													
C-8	[ ]	3/30	1224													
D-9	→ DISCRETE	3/30	1119													
SC-1	Comp (C1 + C2)	4/4/22	1205													
SC-4	Comp (C7 + C8)	4/4/22	1225													

ANALYSIS REQUESTED

DELIVERED  
BY CUSTOMER

SAMPLED BY: (Name/Company)	TAT: <input type="checkbox"/> STANDARD (10 DAY) or DUE DATE / /	Report Format: <input type="checkbox"/> Standard <input type="checkbox"/> NJ-RDD <input type="checkbox"/> SRP-RDD <input type="checkbox"/> Standard + QC <input type="checkbox"/> Forms <input type="checkbox"/> EDD	Field Parameters Analyzed By: Initials	Date/Time:
----------------------------	--	---	---	------------

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

SAMPLE CUSTODY EXCHANGES				BE DONE BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)			
RELINQUISHED BY SAMPLER 1. <i>Paul Ferry</i>	DATE 3/31	TIME 0944	RECEIVED BY 1. <i>Richard Smith</i>	DATE 3/31/22	TIME 9:44	DELIVERY: <input type="checkbox"/> EQC COURIER <input type="checkbox"/> CLIENT <input type="checkbox"/> UPS <input type="checkbox"/> FEDEX <input type="checkbox"/> OTHER	Custody Seal Number <i>EETP</i>
RELINQUISHED BY 2.	DATE	TIME	RECEIVED BY 2.	DATE	TIME	Rec'd Temp.: <i>17/22°C</i>	Initials: <i>XW</i> Ice Y/N Location: _____
RELINQUISHED BY 3.	DATE	TIME	RECEIVED BY 3.	DATE	TIME	COMMENTS:	
RELINQUISHED BY 4.	DATE	TIME	RECEIVED BY 4.	DATE	TIME		
RELINQUISHED BY 5.	DATE	TIME	RECEIVED BY 5.	DATE	TIME	Hazardous: yes / no	



Environment Testing  
America

213 Witmer Road  
Horsham, PA 19044

Phone: 215-355-3900

Client/Acct. No.  
Address

ST Hudson Engineers  
900 Dudley Ave

City/State/Zip

Cherry Hill, NJ 08002

Phone/Fax

8563426600

Client Contact:

PAUL FERRY

### CHAIN OF CUSTODY

Page 1 of 2

Loc: 630

**30382**

MATRIX CODES

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

Lab LIMS No:

LAB USE ONLY:

# Ascorbic/HCL Vials # HCl Vials

# Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

# Na OH/Zn acetate pH

# HNO<sub>3</sub> pH

# H<sub>2</sub>SO<sub>4</sub> pH

# NaOH pH

# Unpreserved

# HCl # NH<sub>4</sub>Cl # MeOH

# DI Water

ANALYSIS REQUESTED

Field pH, Temp (°C),  
DO, Cl<sub>2</sub>, Cond. etc.

L A B  U S E O N L Y	PROJECT	Collection		Matrix Code	Number of Containers									
		Date	Military Time		G R A B	C O M P	H 2 S O 4	H C I a l s	V i a l s	H N O 3	N a O H	Z a c h	U n a c e	B a c t
Field Blank	3/30/1457													
Site Water	3/30/1640													

SAMPLED BY: (Name/Company)	TAT: <input type="checkbox"/> STANDARD (10 DAY) or DUE DATE / /	Report Format: <input type="checkbox"/> Standard <input type="checkbox"/> NJ-RDD <input type="checkbox"/> SRP-RDD <input type="checkbox"/> Standard + QC <input type="checkbox"/> Forms <input type="checkbox"/> EDD	Field Parameters Analyzed By: Initials _____ Date/Time: _____
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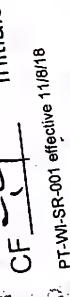
Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER 1. Paul Ferry	DATE 3/31	TIME 0744	RECEIVED BY 1. Vicente Smith	DATE 3/31/22	TIME 9:44	DELIVERY: <input type="checkbox"/> EQC COURIER <input type="checkbox"/> CLIENT <input type="checkbox"/> UPS <input type="checkbox"/> FEDEX <input type="checkbox"/> OTHER	Custody Seal Number
RELINQUISHED BY 2.	DATE	TIME	RECEIVED BY 2.	DATE	TIME	1.7/22	Initials: (initials) Location: EETP
RELINQUISHED BY 3.	DATE	TIME	RECEIVED BY 3.	DATE	TIME	Comments:	
RELINQUISHED BY 4.	DATE	TIME	RECEIVED BY 4.	DATE	TIME		
RELINQUISHED BY 5.	DATE	TIME	RECEIVED BY 5.	DATE	TIME	Hazardous: yes / no	



630-30382 Waybill

TEST AMERICA PITTSBURGH 301 ALPHA DR		ORIGIN ID: SEGA (215) 355-3900 EUROFINS 213 WITMER ROAD HORSHAM, PA 19044 UNITED STATES US	SHIP DATE: 04APR22 ACT WTG: 56.80 LB CADC: 253848/CAFF3313 DIMS: 25x14x13 IN BILL SENDER
<b>PITTSBURGH PA 15238</b> (412) 989-7056 <small>TRN: PO#:</small>		<b>FedEx</b> <b>Express</b>  1791219082001	
 <small>REF: DEP #:</small>		TUE - 05 APR 10:30A PRIORITY OVERNIGHT <b>NA AGCA</b> 15238 PIT SPA - US	
 <small>CF</small>		Uncorrected temp Thermometer ID <small>PT-WI-SR-001 effective 1/18/18</small>	
 <small>RTK# 0201</small>		RT 98 10:30 A <small>FZ</small>	

ORIGIN ID:SEGA (215) 355-3900  
 EUROFINS  
 213 WITMER ROAD  
 HORSHAM, PA 19044  
 SHIP DATE: 04APR22  
 FACTWG: 56-80-LB  
 CAD: 253818/CAFE3313  
 DIMS: 25x14x13 IN  
 BILL SENDER

TEST AMERICA PITTSBURGH  
301 ALPHA DR

PITTSBURGH PA 15238  
(412) 869-7066  
REF:

11 °C  
16 Me

Init  
-4  
CE

**TUE - 05 APR 10:30A  
PRIORITY OVERNIGHT**

PT-WI-SR-001 effective 1/1/2011

TAK  
0201

NAGGA

15238  
PIT





# Eurofins Environment Testing Philadelphia

213 Witmer Road  
Horsham, PA 19044-0962  
Phone: 215-355-3900 Fax: 888-785-8567

## Chain of Custody Record



Environment Testing  
America

<b>Client Information (Sub Contract Lab)</b>		Sampler:		Lab PM: Dougherty, Erin		Carrier Tracking No(s):		COC No: 630-7418.2								
Client Contact Shipping/Receiving		Phone:		E-Mail: Erin.Dougherty@eurofinset.com		State of Origin: New Jersey		Page: Page 2 of 3								
Company: Eurofins Environment Testing Northeast, Address: 301 Alpha Drive, RIDC Park, City: Pittsburgh State, Zip: PA, 15238 Phone: 412-963-7058(Tel) 412-963-2468(Fax) Email:  Project Name: ST Hudson - Dredge Samples - NJ				Due Date Requested: 5/1/2022		Accreditations Required (See note): NELAP - New Jersey				Job #: 630-30382-1						
				TAT Requested (days):		Analysis Requested				Preservation Codes:						
						Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270E_LL/3620C_LL/LI (MOD) 8270 Semivolatiles	8082A_LL/3610C_LL_8082 PCBs	8081B_LL/3610C_LL (MOD) 8081 Pesticides	7470A/7470A_Prep Mercury	6020B/3006A_TAL_Metals	2640D_Total Suspended Solids (Site Water only)	SM2340B_ICPMS/Auto_Total/Reo Total Hardness	Total Number of containers	A - HCl      M - Hexane B - NaOH      N - None C - Zn Acetate      O - AsNaO2 D - Nitric Acid      P - Na2O4S E - NaHSO4      Q - Na2SO3 F - MeOH      R - Na2S2O3 G - Amchlor      S - H2SO4 H - Ascorbic Acid      T - TSP Dodecahydrate I - Ice      U - Acetone J - DI Water      V - MCAA K - EDTA      W - pH 4-5 L - EDA      Z - other (specify) Other:
<b>Sample Identification - Client ID (Lab ID)</b>				Sample Date	Sample Time	Sample Type (C=comp, G=grab) BT=Tissue, AA=Air	Matrix (W=water, S=solid, O=waste/oil, A=air)	Special Instructions/Note:								
C-1 GRAB (630-30382-1)				3/30/22	08:52 Eastern	Sediment									1	
C-2 GRAB (630-30382-2)				3/30/22	09:25 Eastern	Sediment									1	
C-3 GRAB (630-30382-3)				3/30/22	10:25 Eastern	Sediment									1	
C-7 GRAB (630-30382-7)				3/30/22	11:50 Eastern	Sediment									1	
C-8 GRAB (630-30382-8)				3/30/22	12:24 Eastern	Sediment									1	
D-9 DISCRETE (630-30382-9)				3/30/22	11:19 Eastern	Sediment									2	
SC-1 COMPOSITE (C1+C2) (630-30382-10)				4/4/22	12:05 Eastern	Sediment									2	
SC-4 COMPOSITE (C7+C8) (630-30382-13)				4/4/22	12:25 Eastern	Sediment									2	
FIELD BLANK (630-30382-14)				3/30/22	14:57 Eastern	Water	X X X X X X X X								7	
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Philadelphia, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Philadelphia, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Philadelphia, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Philadelphia, LLC.																
<b>Possible Hazard Identification</b>				<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>												
Unconfirmed				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months												
Deliverable Requested: I, II, III, IV, Other (specify)				Primary Deliverable Rank: 2												
				Special Instructions/QC Requirements:												
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:										
Relinquished by:		Date/Time:		Company		Received by: DW		Date/Time: 4-5-22		Company: BETTER DAY						
Relinquished by:		Date/Time:		Company		Received by: DW		Date/Time: 10/31		Company						
Relinquished by:		Date/Time:		Company		Received by:		Date/Time:		Company						
Custody Seals Intact: △ Yes △ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:													

Ver: 06/08/2021

5/3/2022

# Eurofins Environment Testing Philadelphia

213 Witmer Road  
Horsham, PA 19044-0962  
Phone: 215-355-3900 Fax: 888-785-8567

## Chain of Custody Record



Environment Testing  
America

<b>Client Information (Sub Contract Lab)</b>		Sampler:	Lab PM: Dougherty, Erin		Carrier Tracking No(s):		COC No: 630-7418.3						
Client Contact: Shipping/Receiving		Phone:	E-Mail: Erin.Dougherty@eurofinset.com		State of Origin: New Jersey		Page: Page 3 of 3						
Company: Eurofins Environment Testing Northeast,		Accreditations Required (See note): NELAP - New Jersey				Job #: 630-30382-1							
Address: 301 Alpha Drive, RIDC Park, City: Pittsburgh		Due Date Requested: 5/1/2022	Analysis Requested				Preservation Codes:						
State, Zip: PA, 15238		TAT Requested (days):	Field Filtered Sample (Yes or No)	Perform MSI/MSD (Yes or No)	Moisture/ Total Solids, % Moisture	Lloyd_Kahn_Modi/(MOD) Organic Carbon, Total (TOC)	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 - Na2SzO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)					
Phone: 412-963-7058(Tel) 412-963-2468(Fax)		PO #:	Moisture/ (MOD) Total Solids, % Moisture	Moisture/ (MOD) Total Solids, % Moisture	8270E_LL/3641_LL (MOD) 8270 Semivolatiles	8081B_LL/3641_LL (MOD) 8081 Pestides	7471B/7471B_Prep Mercury	7196A_Cr3+ Chromium, Trivalent	9014f8010C Cyanide	Lloyd_Kahn_Modi Organic Carbon, Total (TOC)	Total PCB	Total Number of containers	
Email:		WO #:	8082A_LL/3641_LL 8082 PCBs	8020B/3050B TAL Metals	7196A/3080A Chromium, Hexavalent	8014f8010C Cyanide	7196A_Cr3+ Chromium, Trivalent	9014f8010C Cyanide	8014f8010C Cyanide	7196A_Cr3+ Chromium, Trivalent	7196A_Cr3+ Chromium, Trivalent	7	
Project Name: ST Hudson - Dredge Samples - NJ		Project #: 63005446	SSOW#:	8270E_LL/3641_LL (MOD) 8270 Semivolatiles	8081B_LL/3641_LL (MOD) 8081 Pestides	7471B/7471B_Prep Mercury	7196A_Cr3+ Chromium, Trivalent	9014f8010C Cyanide	7196A_Cr3+ Chromium, Trivalent	7196A_Cr3+ Chromium, Trivalent	7196A_Cr3+ Chromium, Trivalent	7	
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab) BT=Tissue, AA=Air	Preservation Code:	Special Instructions/Note:							
SITE WATER (630-30382-15)		3/30/22	16:40 Eastern	Water		X	X	X	X	X	X	7	
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Philadelphia, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Philadelphia, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Philadelphia, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Philadelphia, LLC.													
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)									
Unconfirmed				<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For	Months						
Deliverable Requested: I, II, III, IV, Other (specify)				Primary Deliverable Rank: 2									
				Special Instructions/QC Requirements:									
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:						1			
Relinquished by:		Date/Time:	Company	Received by:		Date/Time:		Date/Time:		Company			
Relinquished by:		Date/Time:	Company	Received by:		Date/Time:		Date/Time:		Company			
Relinquished by:		Date/Time:	Company	Received by:		Date/Time:		Date/Time:		Company			
Custody Seals Intact: △ Yes △ No		Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks:								

Ver: 06/08/2021

## **Eurofins Environment Testing Philadelphia**

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## **Chain of Custody Record**



Environment Testing  
America

## Eurofins Environment Testing Philadelphia

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Environment Testing  
America



## Chain of Custody Record

<b>Client Information (Sub Contract Lab)</b>		Sampler	Lab PM: Dougherty, Erin	630-30382 Chain of Custody	Page 1 of 1												
Client Contact:	Phone	E-Mail	State of Origin	New Jersey	Job #												
Shipping/Receiving Company:	Accreditations Required (See note) NELAP - New Jersey				630-30382-1												
Address:	Due Date Requested: 5/1/2022		Analysis Requested														
City: South Burlington	TAT Requested (days):																
State/Zip: VT, 05403	PO #:																
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	WO #:																
Email:	Project #: 63005446																
Project Name: ST Hudson - Dredge Samples - NJ	SSOW#:																
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w/water, S=solid, O=waste/oil, B=B-Tissue, A=Air)												
					<input checked="" type="checkbox"/> Filtered Sample (yes or No)												
					<input checked="" type="checkbox"/> Perforated Sample (yes or No)												
					<input checked="" type="checkbox"/> D2216-90/Water (Moisture) Content												
					<input checked="" type="checkbox"/> D422/MOD) Grain Size (Sieve and Hydrometer)												
					<input checked="" type="checkbox"/> D422/G) Grain Size (Sieve and Hydrometer)												
					<input checked="" type="checkbox"/> Total Number of containers												
					<input checked="" type="checkbox"/> Special Instructions/Note:												
					M - Hexane N - None O - AshNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 H - Ascorbic Acid U - Acetone J - Di Water V - MCAA W - pH 4-5 L - EDTA Z - other (specify) Other:												
<p>Note Since laboratory accreditations are subject to change, Eurofins Environment Testing Philadelphia, LLC places the ownership of method, analytic &amp; accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/testis/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Philadelphia, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Philadelphia, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Philadelphia, LLC.</p> <p><b>Possible Hazard Identification</b></p> <p>Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank:2</p> <p><input type="checkbox"/> Empty Kit Relinquished by: <i>[Signature]</i></p> <p><input type="checkbox"/> Relinquished by: <i>[Signature]</i></p> <p><input type="checkbox"/> Relinquished by: <i>[Signature]</i></p> <p><input type="checkbox"/> Custody Seals Intact: <input type="checkbox"/> Custody Seal No.: <input type="checkbox"/> Cooler Temperature(s) °C and Other Remarks</p>																	
<p><b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b></p> <p><input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months</p> <p><input type="checkbox"/> Special Instructions/QC Requirements:</p>																	
<table border="1"> <thead> <tr> <th>Date:</th> <th>Time:</th> <th>Method of Shipment:</th> </tr> </thead> <tbody> <tr> <td>4/4/22 17:00</td> <td>Company</td> <td>Received by <i>[Signature]</i> Date/Time <i>4/5/22 10:30</i> Company</td> </tr> <tr> <td>4/4/22</td> <td>Company</td> <td>Received by <i>[Signature]</i> Date/Time <i>4/5/22 10:30</i> Company</td> </tr> <tr> <td>4/4/22</td> <td>Company</td> <td>Received by <i>[Signature]</i> Date/Time <i>4/5/22 10:30</i> Company</td> </tr> </tbody> </table>						Date:	Time:	Method of Shipment:	4/4/22 17:00	Company	Received by <i>[Signature]</i> Date/Time <i>4/5/22 10:30</i> Company	4/4/22	Company	Received by <i>[Signature]</i> Date/Time <i>4/5/22 10:30</i> Company	4/4/22	Company	Received by <i>[Signature]</i> Date/Time <i>4/5/22 10:30</i> Company
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4/4/22	Company	Received by <i>[Signature]</i> Date/Time <i>4/5/22 10:30</i> Company															

Ver: 06/08/2021

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RECEIVED - BUREAU OF INVESTIGATION  
FEDERAL BUREAU OF INVESTIGATION  
U.S. DEPARTMENT OF JUSTICE  
1311 M STREET, N.W.  
WASHINGTON, D.C. 20535  
TELEGRAMS  
13 MITTER ROAD  
PHILADELPHIA, PA 19044  
UNITED STATES POSTAL SERVICE

SHIP DATE: 04APR22  
ACTWGT: 53.60 LB  
CAD: 253948/CAFE3313  
DIMS: 25x14x13 IN  
BILL SENDER

BILL SENDER

**TESTAMERICA BURLINGTON LABORATORY**  
**30 COMMUNITY DR**

**SOUTH BURLINGTON VT 05403**

(802) 660-1990

100

APPEAL

REF

DEPT



EEEC1 / 11E28 10502

**TUE - 05 APR 10:30A  
PRIORITY OVERNIGHT**

TRK# 0201 6723 0229 8023

**NL BTVA**

05403  
VT-US BTV



Part # 156148-434 MTW EXP 07/22

## Login Sample Receipt Checklist

Client: ST Hudson Engineers, Inc.

Job Number: 630-30382-1

**Login Number:** 30382

**List Source:** Eurofins Environment Testing Philadelphia, LLC

**List Number:** 1

**Creator:** Kurz, Chris

### Question

### Answer

### Comment

Radioactivity wasn't checked or is </= background as measured by a survey meter.

The cooler's custody seal, if present, is intact.

Sample custody seals, if present, are intact.

The cooler or samples do not appear to have been compromised or tampered with.

Samples were received on ice.

Cooler Temperature is acceptable.

Cooler Temperature is recorded.

COC is present.

COC is filled out in ink and legible.

COC is filled out with all pertinent information.

Is the Field Sampler's name present on COC?

There are no discrepancies between the containers received and the COC.

Samples are received within Holding Time (excluding tests with immediate HTs)

Sample containers have legible labels.

Containers are not broken or leaking.

Sample collection date/times are provided.

Appropriate sample containers are used.

Sample bottles are completely filled.

Sample Preservation Verified.

There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Multiphasic samples are not present.

Samples do not require splitting or compositing.

Residual Chlorine Checked.

## Login Sample Receipt Checklist

Client: ST Hudson Engineers, Inc.

Job Number: 630-30382-1

**Login Number:** 30382

**List Source:** Eurofins Burlington

**List Number:** 3

**List Creation:** 04/05/22 04:23 PM

**Creator:** Cunningham, Caroline R

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.	6
The cooler's custody seal, if present, is intact.	N/A	Not present	7
Sample custody seals, if present, are intact.	True		8
The cooler or samples do not appear to have been compromised or tampered with.	True		9
Samples were received on ice.	True		10
Cooler Temperature is acceptable.	True		11
Cooler Temperature is recorded.	True	0.9°C	12
COC is present.	True		13
COC is filled out in ink and legible.	True		14
COC is filled out with all pertinent information.	True		15
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		

## Login Sample Receipt Checklist

Client: ST Hudson Engineers, Inc.

Job Number: 630-30382-1

**Login Number:** 30382

**List Source:** Eurofins Pittsburgh

**List Number:** 2

**List Creation:** 04/05/22 01:18 PM

**Creator:** Watson, Debbie

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A		1
The cooler's custody seal, if present, is intact.	True		2
Sample custody seals, if present, are intact.	True		3
The cooler or samples do not appear to have been compromised or tampered with.	True		4
Samples were received on ice.	True		5
Cooler Temperature is acceptable.	True		6
Cooler Temperature is recorded.	True		7
COC is present.	True		8
COC is filled out in ink and legible.	True		9
COC is filled out with all pertinent information.	True		10
Is the Field Sampler's name present on COC?	N/A		11
There are no discrepancies between the containers received and the COC.	True		12
Samples are received within Holding Time (excluding tests with immediate HTs)	True		13
Sample containers have legible labels.	True		14
Containers are not broken or leaking.	True		15
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		